

# University of Mumbai



**B.Com. (Accounting and Finance)  
Programme  
Guidelines for Project Work  
at  
Third Year  
Semester VI**

**Under Choice Based Credit, Grading and  
Semester System**

*(To be implemented from Academic Year 2018-2019)*

***Board of Studies-in-Accountancy***

## **Introduction**

Inclusion of project work in the course curriculum of the B.Com. (Accounting & Finance) programme is one of the ambitious aspects in the programme structure. The main objective of inclusion of project work is to inculcate the element of research analyse and scientific temperament challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret particular aspect of the study. It is expected that the guiding teacher should undertake the counselling sessions and make the awareness among the learners about the methodology of formulation, preparation and evaluation pattern of the project work.

- There are two modes of preparation of project work
  1. Project work based on research methodology in the study area
  2. Project work based on internship in the study area

## **Guidelines for preparation of Project Work**

### **1. General guidelines for preparation of project work based on Research Methodology**

- The project topic may be undertaken in any area of Elective Courses.
- Each of the learner has to undertake a Project individually under the supervision of a teacher-guide.
- The learner shall decide the topic and title which should be specific, clear and with definite scope in consultation with the teacher-guide concerned.
- University/college shall allot a guiding teacher for guidance to the students based on her / his specialization.
- The project report shall be prepared as per the broad guidelines given below:
  - Font type: Times New Roman
  - Font size: 12-For content, 14-for Title
  - Line Space : 1.5-for content and 1-for in table work
  - Paper Size: A4
  - Margin : in Left-1.5, Up-Down-Right-1
  - The Project Report shall be bounded.
  - The project report should be 80 to 100 pages

# Format

*1<sup>st</sup> page (Main Page)*

*Title of the problem of the Project*

**A Project Submitted to  
University of Mumbai for partial completion of the degree of  
Bachelor in Commerce (Accounting and Finance)  
Under the Faculty of Commerce**

**By**

*Name of the Learner*

**Under the Guidance of**

*Name of the Guiding Teacher*

*Name and address of the College*

*Month and Year*

*2<sup>nd</sup> Page*

*This page to be repeated on 2<sup>nd</sup> page (i.e. inside after main page)*

*On separate page*

## **Index**

Chapter No. 1 (sub point 1.1, 1.1.1, .... And so on)	Title of the Chapter	Page No.
Chapter No. 2	Title of the Chapter	
Chapter No. 3	Title of the Chapter	
Chapter No. 4	Title of the Chapter	
Chapter No. 5	Title of the Chapter	

**List of tables, if any, with page numbers.**

**List of Graphs, if any, with page numbers.**

**List of Appendix, if any, with page numbers.**

**Abbreviations used:**



# Structure to be followed to maintain the uniformity in formulation and presentation of Project Work

## *(Model Structure of the Project Work)*

- **Chapter No. 1: Introduction**

In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner.

- **Chapter No. 2: Research Methodology**

This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc can be incorporated by the learner.

- **Chapter No. 3: Literature Review**

This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue.

- **Chapter No. 4: Data Analysis, Interpretation and Presentation**

This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner.

- **Chapter No. 5: Conclusions and Suggestions**

In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.

*Note: If required more chapters of data analysis can be added.*

- **Bibliography**
- **Appendix**

*On separate page*

*Name and address of the college*

## ***Certificate***

This is to certify that Ms/Mr \_\_\_\_\_ has worked and duly completed her/his Project Work for the degree of Bachelor in Commerce (Accounting & Finance) under the Faculty of Commerce in the subject of \_\_\_\_\_ and her/his project is entitled, “ \_\_\_\_\_ *Title of the Project* \_\_\_\_\_ ” under my supervision.

I further certify that the entire work has been done by the learner under my guidance and that no part of it has been submitted previously for any Degree or Diploma of any University.

It is her/ his own work and facts reported by her/his personal findings and investigations.



Name and Signature of  
Guiding Teacher

Date of submission:

*On separate page*

## ***Declaration by learner***

I the undersigned Miss / Mr. \_\_\_\_\_ *Name of the learner* \_\_\_\_\_ here by,  
declare that the work embodied in this project work titled “ \_\_\_\_\_  
\_\_\_\_\_ *Title of the Project* \_\_\_\_\_ ”,  
forms my own contribution to the research work carried out under the guidance of  
\_\_\_\_\_ *Name of the guiding teacher* \_\_\_\_\_ is a result of my own research work and has  
not been previously submitted to any other University for any other Degree/ Diploma  
to this or any other University.

Wherever reference has been made to previous works of others, it has been clearly  
indicated as such and included in the bibliography.

I, here by further declare that all information of this document has been obtained and  
presented in accordance with academic rules and ethical conduct.

Name and Signature of the learner

Certified by

Name and signature of the Guiding Teacher

*On separate page*

## ***Acknowledgment***

*(Model structure of the acknowledgement)*

To list who all have helped me is difficult because they are so numerous and the depth is so enormous.

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **University of Mumbai** for giving me chance to do this project.

I would like to thank my **Principal**, \_\_\_\_\_ for providing the necessary facilities required for completion of this project.

I take this opportunity to thank our **Coordinator** \_\_\_\_\_, for her moral support and guidance.

I would also like to express my sincere gratitude towards my project guide \_\_\_\_\_ whose guidance and care made the project successful.

I would like to thank my **College Library**, for having provided various reference books and magazines related to my project.

Lastly, I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **my Parents and Peers** who supported me throughout my project.

## 2. Guidelines for Internship based project work

- Minimum 20 days/ 100 hours of Internship with an Organisation/ NGO/ Charitable Organisation/ Private firm.
- The theme of the internship should be based on any study area of the elective courses
- Experience Certificate is Mandatory
- A project report has to be brief in content and must include the following aspects:
  - **Executive Summary:**  
A bird's eye view of your entire presentation has to be precisely offered under this category.
  - **Introduction on the Company:**  
A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis.
  - **Statement and Objectives:**  
The mission and vision of the organization need to be stated enshrining its broad strategies.
  - **Your Role in the Organisation during the internship:**  
The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head.
  - **Challenges:**  
The challenges confronted while churning out theoretical knowledge into practical world.
  - **Conclusion:**  
A brief overview of your experience and suggestions to bridge the gap between theory and practice.
- The project report based on internship shall be prepared as per the broad guidelines given below:
  - Font type: Times New Roman
  - Font size: 12-For content, 14-for Title
  - Line Space : 1.5-for content and 1-for in table work
  - Paper Size: A4
  - Margin : in Left-1.5, Up-Down-Right-1
  - The Project Report shall be bounded.
  - The project report should be of minimum 50 pages

## Evaluation pattern of the project work

The Project Report shall be evaluated in two stages viz.	
<b>• Evaluation of Project Report (Bound Copy)</b>	<b>60 Marks</b>
▪ Introduction and other areas covered	20 Marks
▪ Research Methodology, Presentation, Analysis and interpretation of data	30 Marks
▪ Conclusion & Recommendations	10 Marks
<b>• Conduct of Viva-voce</b>	<b>40 Marks</b>
▪ In the course of Viva-voce, the questions may be asked such as importance / relevance of the study, objective of the study, methodology of the study/ mode of Enquiry (question responses)	10 Marks
▪ Ability to explain the analysis, findings, concluding observations, recommendation, limitations of the Study	20 Marks
▪ Overall Impression (including Communication Skill)	10 Marks

**Note:**


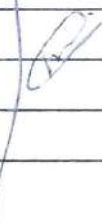

- *The guiding teacher along with the external evaluator appointed by the University/ College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern*

### Passing Standard

- Minimum of Grade E in the project component
- In case of failing in the project work, the same project can be revised for ATKT examination.
- Absence of student for viva voce: If any student fails to appear for the viva voce on the date and time fixed by the department such student shall appear for the viva voce on the date and time fixed by the Department, such student shall appear for the viva voce only along with students of the next batch.

# The SIA College of Higher Education, Dombivili

## PROJECT TOPIC LIST - TY B.COM ( B&I) - SEM V 2016

Name of the Student	Project Guide	Project topics	Sign
SINGH SNEHALATA RAJESH	Mr. Mahesh Kandalkar	Recruitment and selection in AXIS bank	
SALUNKE ANJALI RAMESH		Arogya Vishesh scheme with reference to SVC bank	
RAMYADEVI MURUGAN		Fee based services offered by Central bank	
SINGH KUMARI CHANDANI CHHOTELAL		education loan in ABHudaya bank	
PAULOSE JOVITHA MERY JOY		CRM in banking with reference to Bank od Borada	
RACHHA AAKASH SUBHASH		Functioning of IDBI bank	
WARKAR NIYATI SHREEKANT		Education loan in ABHudaya bank	
SHINDE SHARVAREE UJWAL		Mortgage refinancing scheme og HDFC bank	
EZHAVA RESHMA GIRI		NRI banking with reference to ICICI bank	
SHIRKE SHIVANI SUBHASH		Dr. Delite scheme with reference to Saraswat bank	
RAORANE MANALI RAJENDRA	Mr. Hasit Nagaria	Bancassurance with refernce to SBI bank	
GANDHI SAYLEE SANTOSH		Financial analysis with reference to AXIS bank	
VAIDYA PRIYAM NIKHIL		universal banking services in ICICI bank	
BOBADE SUSHMIT KUMAR		Retail banking in SBI bank	
VIJAYLAKSHMI NAGARAJAN		schemes provided by banks in rural areas	
JAYALAXMI DEVANATHAN		Mastercards with reference to HSBC bank	
YADHAVA CHENTHY VEL MURUGAN			
MUTHUSWAMY		Cross selling in SBI	
SONEJI KUNAL NARESH		E- Banking in Vijaya bank	
YADAV ANKITA		Performance Appraisal system in HDFC bank	
GUPTA SURAJ BHALCHANDRA		Awareness about Mutual fund in Manpada area	





BHOSTEKAR TUSHAR KISHOR	<b>Mrs. Ranjana mhalgi</b>	Comparison of DEMAT account provided ICICI bank & Angel broking	<i>Ranjana</i>
GAWANDE MAYURI NARAYAN		Comparison of financial statement of BOI and DNS bank	
DESHMA SURESH		Role of finaancial institution for industrial development	
GADA HIRAL RASHMI		Merchant banking services provided by SBI and DCB bank	
ACHARYA POORNIMA RAGHAVENDRA		Information technology in Banks	
GAWADE SHRADDHA GANESH		Audit in Banks	
BANGERA SAURABH KRISHNA		Use of ATM/ DEBIT card & credit card in Sagareli area	
DHUMAL PRATHAMESH MANGESH		Comparative study of Loan products of two banks	
KHANAPURKAR SHRUTI PRASHANT	<b>Ms. Salochana Nagdev</b>	Popularity of Post office scheme	<i>Salochana</i>
MANTA SALONI MAHESHBHAI		Loans & Advances by bank of Maharashtra	
MAURYA PRIYANKA RAMNICHINT		customer satisfaction regarding ICICI bank	
JADHAV KOMAL SURESH		Indian banking System	
JADHAV MADHURI SAHEBRAO		Comparative study of Vijaya bank and Kotak Mahindra bank	
KANOJIYA SUNIL RAMKUMAR		Pradhan mantri jan dhan Yoghana with reference to Union bank of India	
KAMBLI SHRIKANT SHRIPAD		Credit control of RBI through monetary policy	
KHAN SABA NURU		Housing finance with refence to SBI	
JADHAV MEHUL SURENDRASING		The study of NBFC with refernce to Muthoot Finance	
MHATRE PRANALI AVINASH	<b>Mrs. Renu Verma</b>	E- pricing and Online shopping with reference to ICICI bank	<i>Renu</i>
PATIL SHIVANI POPAT		Customer awareness	
PATIL JAGRUTI BALARAM		Role of Digital CRM in Banking with reference to SBI bank	
NIKAM ARTI ANIL		Awareness about bank product and service among auto rickshaw drivers with reference to SBI bank	
PANDEY ANUPKUMR AJAYKUMAR		Customer satisfaction regarding HDFC bank	





PARMAR AMIT KHETARAM
PANICKER ARJUN BHASKARAN
PATIL MAYUR BALARAM
SHENOY ROHIT NARENDRA
NARWADE MAYURI MUKUND

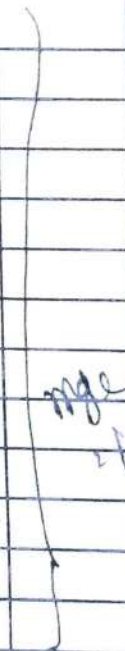
Micro finance Bandhan bank with respect to Azale goan	<i>Menu</i>
Customer experience in Disbursement of Home loan	
Marketing of Banking services in Rural area with reference	
Financial services in banking with referenc to DNS bank	
Customer perception towards Online banking with reference to HDFC bank	

*Menu*



# The S.I.A College of Higher Education, Dombivili

## PROJECT TOPIC LIST - TY B.COM (B&I)- SEM VI 2016-17

Name of the Student	Project Guide	Project topics	Sign
SINGH SNEHALATA RAJESH	<b>Mr. Mahesh Kandalkar</b>	Comparison between traditional life insurance plans and ULIP with ICICI and LIC	 28/11/17
SALUNKE ANJALI RAMESH		Money back policy with reference to LIC	
RAMYADEVI MURUGAN		Comparative study of ICL and BAJAJ ALLIANCE	
SINGH KUMARI CHANDANI CHHOTELAL		Travel insurance of Reliance company	
PAULOSE JOVITHA MERY JOY		Postal insurance scheme	
RACHHA AAKASH SUBHASH		Human resource management in LIC	
WARKAR NIYATI SHREEKANT		Group insurance products of Bajaj alliance	
SHINDE SHARVAREE UJWAL		Accident insurance	
EZHAVA RESHIMA GIRI		Re- insurance	
SHIRKE SHIVANI SUBHASH		Pradhan mantri sureksha Bima yojana with reference to Corporation bank	
KAMBLI SHRIKANT SHRIPAD		Role of advertisement in Insurance sector	
KHAN SABA NURU		Reliance Life Insurance	
JADHAV MEHUL SURENDRASING		Insurance is a tax saving tool with reference to PNB Met Life	
RAORANE MANALI RAJENDRA		<b>Mr. Hasit Nagaria</b>	
GANDHI SAYLEE SANTOSH	Training and development in Kottak life insurance		
VAIDYA PRIYAM NIKHIL	Comparative study of public and private and public insurance company		
BOBADE SUSHMIT KUMAR	study of customer perception towards LIC of India		
VIJAYLAKSHMI NAGARAJAN	Marketing of insurance products with reference to Bajaj Alliance Co.		
JAYALAXMI DEVANATHAN	Impact of FDI on insurance sector with SBI life		
YADHAVA CHENTHY VEL MURUGAN	Analysis of Micro insurance in SBI		
MUTHUSWAMY			





SONEJI KUNAL NARESH
YADAV ANKITA
KANOJIYA SUNIL RAMKUMAR
JADHAV MADHURI SAHEBRAO
GUPTA SURAJ BHALCHANDRA
BHOSTEKAR TUSHAR KISHOR
GAWANDE MAYURI NARAYAN
DESHMA SURESH
GADA HIRAL RASHMI
ACHARYA POORNIMA RAGHAVENDRA
GA WADE SHRADDHA GANESH
BANGERA SAURABH KRISHNA
DHUMAL PRATHAMESH MANGESH
KHANAPURKAR SHRUTI PRASHANT
MANTA SALONI MAHESHBHAI
MHATRE PRANALI AVINASH
PATIL SHIVANI POPAT
PATIL JAGRUTI BALARAM
NARWADE MAYURI MUKUND
NIKAM ARTI ANIL
PANDEY ANUPKUMR AJAYKUMAR
PARMAR AMIT KHETARAM
PANICKER ARJUN BHASKARAN

**Mrs. Ranjana mhalgi**

**Mrs. Renu Verma**



Analysis of Fire insurance products with reference to Bajaj Alliance Co.
Property insurance
Analysis of consumer Buying behaviour of Kotak life insurance
career opportunities in LIC
A comparative analysis of ULIP with Mutual fund
Awareness of life insurance product of LIC in Dombivili city
Awareness of Sukany samridhi yogana of post office
comparision of Financial statements of Two Insurance companies ( Bajaj Allianz insurance and aviva life insurance )
Employee insurance
comparison of product of oriental and national insurance company
Awareness of insurance products among students
Awareness of vehicle insurance in Dombivili city
Awareness of Insurance products in Dombivili area
Study of Mediclaim policy and its responsiveness among dombivili residents
ULIP as an Investmment tool
IT in Insurance se ctor
Awareness about PM Jeevan Bima Yojana
Recruitment and Selection Process of KOTAK Life insurance
Importance of Fire Insurance to Shopkeepers
Awareness of mobile insurance
comparative study of ICICI lombard and BAJAJ ALLIANCE
Motar insurance with reference to LIC
General insurance with respect to TATA AIG

Handwritten signatures and dates: 2/5/17, 2/5/17, 2/5/17.

**The SIA College of Higher Education**  
**P-88, MIDC Residential Area, Dombivli Gymkhana Road,**  
**Near Balaji Mandir, Dombivli (East), 421 203.**

Date: 1<sup>st</sup> Nov, 2017

**Project Notice**

All TYB&I students are hereby informed that the last date for submission of Semester –V

Projects is 20<sup>th</sup> Nov, 2017 failing which Projects will not be accepted and students will not be

allowed to appear for Viva.



Convener



Principal



**PRINCIPAL**  
The SIA College of Higher Education  
Dombivli (E)

Semester - 5

SR. NO.	Roll No.	Name of the student	Project Guide	TOPIC
1	BF14020	Jagani Himani Dinesh	Mrs Ranjana Mhalgi	"Awareness of banking services among non working women
2	BF14064	Saphalya Dhvani Sudhakar		Loans provided to Womwn Entrepreneur by SBI
3	BF15001	Aley Darshana Santosh		Mobile Banking Apps
4	BF15002	Amin Mithun Jayakar		Comparative Study of Financial Statements of Cooperative Banks
5	BF15003	Amin Dishank Ranchoandra		Traning provided in banks
6	BF15004	Anjarlekar Siddhi Sanjay		Customer Awareness & Satisfaction On Use Of Pass Book Printing & Cash Deposit Machine
7	BF15005	Bandre Sonali Prabhakar		Mutual fund services provided by banks
8	BF15006	Bhoir Viraj Kantilal		Financial services provided by cooperative banks
9	BF15007	Chavan Advait Shyam		Finance provided to SME s by banks
10	BF15010	Dhanawade Siddhi Ganesh		Consumer Finance
11	BF15012	Dubey Bhavika Udaybhan		Role of women executive in banks
12	BF15013	Durgavale Neha Vijay		Importance Of Kyc
13	BF15014	Gurud Ashwini Shyam		Audit In Banks
14	BF15058	Veena Jayaprasad Premalatha		Awareness Of Mf As An Investment Alternative
15	BF15059	Vishwakarma Sunita Ramkeval		E Banking Services
16	BF15070	Kumnavat Natwar Ranchoदाराम		





1	BF15015	Gounder Priyadarshini	Mudra Scheme As Tool Of Microfinance -- Bob
2	BF15016	Gowda Uday Ramesh	MF Of Sbi
3	BF15017	Gupta Pooja Rajnarayan	Ppf Scheme Of Icici Bank
4	BF15018	Ingawale Dipali Balasahab	Corporation Banks New Pension Scheme
5	BF15019	Iyer Vaishak Seshadri	Comparative Study On customer satisfaction in private & public banks
6	BF15020	Kannaujya Reena A	Gold Monetisation Scheme Of Icici Bank
7	BF15021	Kashyam Shubham Abhimanyu	Hrm In Banks-- Union Bank Of India
8	BF15022	Kulal Jatin Devadas	Comparison of service in cooperative banks
9	BF15023	Kunder Sushmita Sudhakar	Pradhan Mantri Jan Dhan Yojana
10	BF15024	Laxmi Balkrishnan Ramani	Tqm In Hdfc Bank
11	BF15025	Maurya Priti Omkar	Video Banking Indusnd Bank
12	BF15026	Menon Anjali Anilkumar	Demonetisation Effect On Co Operative Banks
13	BF15027	Meta Mounita Sunil	Products & Services Of Cosmos Bank
14	BF15056	Shriwardhanekar Shaubham Pradeep	New Saving Account Schemes In Nkgsb Bank
15	BF15057	Tripathi Vaishali Premkumar	Loan Against Property - Bank Of Maharashtra
16	BF15068	Koli Suraj Ramu Anjamma	Home loan with reference to HDFC
17	BT17075	Lakshmi Murugesh Iyer	Comparative Study On Services Provided By Icic & Hdfc Bank



2018

The SIA College of Higher Education

Project Guide List 2017-18 (TYB&I)

1	BF15028	Mhatre Prasad Bharat	Finnacle & Omni Banking Software
2	BF15029	Mijar Aniket Narayan	HRM with respect to ICICI & PNB
3	BF15030	Mishra Diya Rajesh	Sukanya Samrudhi Yojana Scheme
4	BF15031	Moolya Vidisha Hannappa	Innovation In Banking System Of Icici Bank
5	BF15032	Morye Akshata Narendra Namita	Crm In Kotak Bank
6	BF15033	Nair Ankarsha Suresh	Study On Core Banking Of Sbi
7	BF15034	Nair Rhea Saijeev	Pradhan Amntri Gramin Nivas Yojana Icici Bank
8	BF15035	Pandey Upasana Vinodkumar	RERA ACT
9	BF15036	Pandharkame Madhuri Narendra	Retail Banking In Sbi
10	BF15037	Pathade Pranita Shivaji	Customer Satisfaction With Reference To Use Of Dmat A/C
11	BF15038	Pawar Rohan Shivaji	Impact Of Online Banking On Customer Satisfaction
12	BF15039	Pawar Pooja Raju	Awareness Of E Banking Among The Auto Rickshaw Drivers
13	BF15040	Pawar Hema Chandrakant	Service Quality Mgmt Of Icici Bank
14	BF15042	Poojary Yashita Shankar	comparative analysis of banks in terms of services
15	BF15060	Yadav Chandresh Shyamabhari	
16	BF16074	Rakhecha Ajay Govindlal	
14	BF15061	Sawant Akshata Vinayak	Wholesale Banking In Hdfc Bank

Mrs. Renu Verma



*Renu Verma*

The SIA College of Higher Education

Project Guide List 2017-18 (TYB&D)

1	BF15043	Prajapati Seema Kanhaiyalal	Career Opportunities In Banking Sector
2	BF15044	Prajapati Anajati Devital	Analysis Of Services Of Smart Vault Of Icici Bank
3	BF15045	Pujare Nikhil Sunil	Financial Analysis Of Axis Bank
4	BF15046	Salian Ashika Anand	Marketing Strategies Of Financial Services
5	BF15047	Sawant Sameer Chandrakant	CUSTOMER SATISFACTION OF DEBIT CARDS OF hdfc Bank
6	BF15048	Shaikh Sakina Rajyak	Mobile Banking Of Andhra Bank
7	BF15049	Sharma Darshana Vinod	Knowlwdge Management In Banks
8	BF15050	Shinde Shubham Sachin	Working Capital Mgmt Of Bank Of Maharashtra
9	BF15051	Shinde Dhanashri Deshraj	Analysis Of New Services Of Sbi
10	BF15052	Shinde Siddhesh Sanjay	Analysis Of Npa
11	BF15053	Singh Pooja Narendra	Marketing Strategies Of Financial Products & Services
12	BF15054	Singh Kavita Avadhesh	Employee Training In Dnsb
13	BF15055	Singh Kajal Rajesh	Comparative Analysis Of Home Loans By Icici & Pnb Bank
15	BF15062	Pedhekar Manali Jayprakash	Analysis Of Recruitment & Selection Process Of Icici Bank
16	BF15063	Bane Sarvesh Subodh	Analysis Of Bancassurance -- Icici Bank

Mr. Hasitkumar Nagariya

Hasit





The SIA College of Higher Education  
Project Guide List 2017-18 (TYB&I)

Semester - 5

SR.NO.	Roll No.	Name of the student	Project Guide
1	BF14020	JAGANI HIMANI DINESH	
2	BF14064	SAPHALYA DHVANI SUDHAKAR	
3	BF15001	Aley Darshana Santosh	
4	BF15002	AMIN MITHUN JAYAKAR	
5	BF15003	AMIN DISHANK RAMCHANDRA	
6	BF15004	Anjarlekar Siddhi Sanjay	
7	BF15005	BANDRE SONALI PRABHAKAR	
8	BF15006	Bhoir Viraj Kantilal	Mrs Ranjana Mhalgi
9	BF15007	Chavan Advait Shyam	
10	BF15010	DHANAWADE SIDDHI GANESH	
11	BF15012	DUBEY BHAVIKA UDAYBHAN	
12	BF15013	DURGAVALE NEHA VIJAY	
13	BF15014	Gurud Ashwini Shyam	
14	BF15058	Veena Jayaprasad Premalatha	
15	BF15059	Vishwakarma Sunita Ramkeval	
16	BF15070	KUMAVAT NATWAK RANCHO DARAM	
1	BF15015	Gounder Priyadarshini Somasundaram	
2	BF15016	GOWDA UDAY RAMESH	
3	BF15017	Gupta Pooja Rajnarayan	
4	BF15018	Ingawale Dipali Balasaheb	
5	BF15019	Iyer Vaishak Seshadri	
6	BF15020	KANNAUJIYA REENA A	
7	BF15021	Kashyam Shubham Abhimanyu	
8	BF15022	Kulal Jatin Devadas	Mr. Mahesh Kandalkar
9	BF15023	Kunder Sushmita Sudhakar	
10	BF15024	LAXMI BALKRISHNAN RAMANI	
11	BF15025	MAURYA PRITI OMKAR	
12	BF15026	Menon Anjali Anilkumar	
13	BF15027	Meta Moumita Sunil	
14	BF15056	Shriwardhankar Shubham Pradeep	
15	BF15057	Tripathi Vaishali Premkumar	
16	BF15068	Koli Suraj Ramu Anjamma	
17	BT17075	Lakshmi Murugesh Iyer	



**The SIA College of Higher Education****Project Guide List 2017-18 (TYB&I)**

1	BF15028	Mhatre Prasad Bharat	
2	BF15029	MIJAR ANIKET NARAYAN	
3	BF15030	MISHRA DIVYA RAJESH	
4	BF15031	Moolya Vidisha Hannappa	
5	BF15032	Morye Akshata Narendra Namita	
6	BF15033	NAIR AAKARSHA SURESH	
7	BF15034	Nair Rhea Sajeev	
8	BF15035	Pandey Upasana Vinodkumar	<b>Mrs.Renu Verma</b>
9	BF15036	Pandharkame Madhuri Narendra	
10	BF15037	PATHADE PRANITA SHIVAJI	
11	BF15038	Pawar Rohan Shivaji	
12	BF15039	PAWAR POOJA RAJU	
13	BF15040	PAWAR HEMA CHANDRAKANT	
14	BF15042	POOJARY YASHITA SHANKAR	
15	BF15060	Yadav Chandresh Shyambihari	
16	BF16074	RAKHECHA AJAY GOVINDLAL	
1	BF15043	Prajapati Seema Kanhaiyalal	
2	BF15044	PRAJAPATI ANAJALI DEVILAL	
3	BF15045	Pujare Nikhil Sunil	
4	BF15046	Salian Ashika Anand	
5	BF15047	Sawant Sameer Chandrakant	
6	BF15048	SHAIKH SAKINA RAJYAK	
7	BF15049	Sharma Darshana Vinod	
8	BF15050	Shinde Shubham Sachin	<b>Mr.Hasitkumar Nagariya</b>
9	BF15051	Shinde Dhanashri Deshraj	
10	BF15052	SHINDE SIDDHESH SANJAY	
11	BF15053	SINGH POOJA NARENDRA	
12	BF15054	SINGH KAVITA AVADHESH	
13	BF15055	SINGH KAJAL RAJESH	
14	BF15061	SAWANT AKSHATA VINAYAK	
15	BF15062	Pednekar Manali Jayprakash	
16	BF15063	Bane Sarvesh Subodh	





B  
Life

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**The S.I.A College of Higher Education**  
P-88, MIDC Residential Area, Dombivili Gymkhana Road,  
Near Balaji Mandir, Dombivili (East), 421 203.

Academic Year 2017-18

SEMESTER V PROJECT VIVA ATTENDANCE RECORD

CLASS TY B COM ( BANKING & INSURANCE

DATE : 11TH DEC, 201

SR NO	Student ID	HALL TICKET NO	Student Name	SIGN
1	BF14020	2010452	Jagani Himani Dinesh	Himani
2	BF14064	2010595	Saphalya Dhvani Sudhakar	Sonali
3	BF15001	2010359	Aley Darshana Santosh	ARHANA
4	BF15002	2010363	Amin Mithun Jayakar	
5	BF15003	2010362	Amin Dishank Ramchandra	
6	BF15004	2010364	Anjarlekar Siddhi Sanjay	SSA
7	BF15005	2010369	Bandre Sonali Prabhakar	Sonali
8	BF15006	2010376	Bhoir Viraj Kantilal	V. Bhoir
9	BF15007	2010388	Chavan Advait Shyam	Advait
10	BF15010	2010405	Dhanawade Siddhi Ganesh	Siddhi
11	BF15012	2010411	Dubey Bhavika Udaybhan	Bhavika
12	BF15013	2010413	Durgavale Neha Vijay	Neha
13	BF15014	2010433	Gurud Ashwini Shyam	Ashwini
14	BF15015	2010422	Gounder Priyadarshini Somasundaram	Priya
15	BF15016	2010423	Gowda Uday Ramesh	Uday
16	BF15017	2010428	Gupta Pooja Rajnarayan	Pooja
17	BF15018	2010440	Ingawale Dipali Balasaheb	Dipali
18	BF15019	2010443	Iyer Vaishak Seshadri	
19	BF15020	2010467	Kannaujiya Reena Achechhelal	Reena
20	BF15021	2010474	Kashyam Shubham Abhimanyu	Shubham
21	BF15022	2010491	Kulal Jatin Devadas	Jatin
22	BF15023	2010493	Kunder Sushmita Sudhakar	Sushmita
23	BF15024	2010352	Laxmi Balkrishnan Ramani	Laxmi
24	BF15025	2010509	Maurya Priti Omkar	Priti



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# The S.I.A College of Higher Education

P-88, MIDC Residential Area, Dombivili Gymkhana Road,  
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Academic Year 2017-18

SEMESTER V PROJECT VIVA ATTENDANCE RECORD

CLASS TY B COM (BANKING & INSURANCE)

DATE: 11TH DEC, 2017

25	BF15026	2010511	Menon Anjali Anilkumar	Anjali
26	BF15027	2010513	Meta Moumita Sunil	Moumita
27	BF15028	2010516	Mhatre Prasad Bharat	Prasad
28	BF15029	2010519	Mijar Aniket Narayan	Aniket
29	BF15030	2010521	Mishra Divya Rajesh	Divya
30	BF15031	2010523	Moolya Vidisha Hennappa	Vidisha
31	BF15032	2010526	Morye Akshata Narendra Namita	Akshata
32	BF15033	2010528	Nair Aakarsha Suresh	Aakasha
33	BF15034	2010535	Nair Rhea Sajeev	Rhea
34	BF15035	2010547	Pandey Upasana Vinodkumar	Upasana
35	BF15036	2010548	Pandharkame Madhuri Narendra	Madhuri
36	BF15037		Pathade Pranita Shivaji	Pranita
37	BF15038	2010564	Pawar Rohan Shivaji	Rohan
38	BF15039	2010563	Pawar Pooja Raju	Pooja
39	BF15040	2010561	Pawar Hema Chandrakant	Hema
40	BF15042	2010573	Poojary Yashita Shankar	Yashita
41	BF15043	2010575	Prajapati Seema Kanhaiyalal	Seema
42	BF15044	2010574	Prajapati Anjali Devilal	Anjali
43	BF15045	2010577	Pujare Nikhil Sunil	Nikhil
44	BF15046	2010592	Salian Ashika Anand	Ashika
45	BF15047	2010601	Sawant Sameer Chandrakant	Sameer
46	BF15048	2010605	Shaikh Sakina Rajyak	Sakina
47	BF15049	2010608	Sharma Darshana Vinod	Darshana
48	BF15050	2010618	Shinde Shubham Sachin	Shubham
49	BF15051	2010614	Shinde Dhanashri Deshraj	Dhanashri



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P-88, MIDC Residential Area, Dombivili Gymkhana Road,  
Near Balaji Mandir, Dombivili (East), 421 203,  
Academic Year 2017-18

SEMESTER V PROJECT VIVA ATTENDANCE RECORD  
CLASS TY B COM ( BANKING & INSURANCE  
DATE : 11TH DEC, 201

50	BF15052	2010619	Shinde Siddhesh Sanjay	<i>Siddhesh</i>
51	BF15053	2010628	Singh Pooja Narendra	<i>Pooja</i>
52	BF15054	2010626	Singh Kavita Avadhesh	<i>Kavita</i>
53	BF15055	2010625	Singh Kajal Rajesh	<i>Kajal</i>
54	BF15056	2010623	Shriwardhankar Shubham Pradeep	<i>Shubham</i>
55	BF15057	2010651	Tripathi Vaishali Premkumar	<i>Vaishali</i>
56	BF15058		Veena Jayaprasad Premalatha	<i>AB</i>
57	BF15059	2010658	Vishwakarma Sunita Ramkeval	<i>Sunita</i>
58	BF15060	2010663	Yadav Chandresh Shyambihari	<i>Chandresh</i>
59	BF15061	2010599	Sawant Akshata Vinayak	<i>Akshata</i>
60	BF15062	2010566	Pednekar Manali Jayprakash	<i>Manali</i>
61	BF15063	2010370	Bane Sarvesh Subodh	<i>Sarvesh</i>
62	BF15068	2010482	Koli Suraj Ramu Anjamma	<i>Suraj Koli</i>
63	BF15070	2010492	Kumavat Natwar Ranchodaram	<i>Natwar</i>
64	BS16074		Rakhecha Ajay Govindlal	<i>AB</i>
65	BT17075	2010442	Iyer Lakshmi Muruges	<i>Lakshmi</i>

*S. K. Kulkarni*  
11/12/17

Coordinator



**The SIA College of Higher Education  
P-88, MIDC Residential Area, Dombivli Gymkhana Road,  
Near Balaji Mandir, Dombivli (East), 421 203.**

**Department of Banking & Insurance**

Date: 12<sup>th</sup> March, 2018

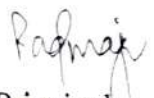
**Notice**

**Semester VI Project submission**

All TYB&I students are hereby informed that the last date for submission of Semester -VI Projects is 25<sup>th</sup> March, 2018 failing which Projects will not be accepted and students will not be allowed to appear for Viva.

  
Convener



  
Principal  
The SIA College of Higher Education  
Dombivli (East), 421 203

THE SIA COLLEGE OF HIGHER EDUCATION

Department of Banking & Insurance

T.Y. B.COM(Banking & Insurance)

Project detail - Semester - VI 2017-18

Student Roll No	Student Name	university seat no	project title	sign
BF14020	Jagani Himani Dinesh		Awareness of insurance policy among students	
BF14064	Saphalya Dhvani Sudhakar		<del>Awareness of insurance in Rural Areas</del>	
BF15001	Aley Darshana Santosh		Insurance Appr of LIC, HDFC, NIA & Oriental	
BF15002	Amin Mithun Jayakar		Awareness of insurance in Rural Areas	
BF15003	Amin Dishank Ramchandra		Role of agents with reference to LIC	
BF15004	Anjarlekar Siddhi Sanjay			
BF15005	Bandre Sonali Prabhakar		Shopkeepers Insurance	
BF15006	Bhoir Viraj Kantilal		Financial Analysis of Private Insurance Companies	
BF15007	Chavan Advait Shyam		Children's Insurance Plan	
BF15010	Dhanawade Siddhi Ganesh		Insurance for self help group.	
BF15012	Dubey Bhavika Udaybhan		Role of women executive in Insurance Sector	
BF15013	Durgavale Neha Vijay		Study on ULIP	
BF15014	Gurud Ashwini Shyam		Employee insurance in Companies	
BF15015	Gounder Priyadarshini S		Retirement pension insurance a seed for goldmine	
BF15016	Gowda Uday Ramesh		Product offered by Reliance Life Insurance	
BF15017	Gupta Pooja Rajnarayan		Aam Aadmi Bima yojana with reference to LIC	
BF15018	Ingawale Dipali Balasaheb		Customer satisfaction in Bajaj Allianz general Ins.co.	
BF15019	Iyer Vaishak Seshadri		Awareness of insurance among construction labor	
BF15020	Kannaujiya Reena Achechhelal		Postal insurance life	
BF15021	Kashyam Shubham Abhimanyu		Future Prospects of M and A Reference to UTI, PI and	



NT



Student Roll No	Student Name	university seat no	project title	sign
BF15022	Kulal Jatin Devadas		Product of New India Assurance	Jainewar
BF15023	Kunder Sushmita Sudhakar		Bancassurance with reference to Kotak life insurance	Kunder
BF15024	Laxmi Balkrishnan Ramani		Study on Report on study & future prospect of LIC	Laxmi
BF15025	Maurya Priti Omkar		Life Insurance for senior citizens	Priti
BF15026	Menon Anjali Anilkumar		Career opportunities in insurance sector with reference to LIC	Anjali
BF15027	Meta Moumita Sunil		Money back policy in LIC	Moumita
BF15028	Mhatre Prasad Bharat		Awareness Among People About Birla <sup>life insurance</sup> Sunil	Prasad
BF15029	Mijar Aniket Narayan		Performance appraisal of HDFC Bank & Term	Aniket
BF15030	Mishra Divya Rajesh		New Bima Gold policy in LIC	Divya
BF15031	Moolya Vidisha Hanappa		Trade Credit Insurance	Vidisha
BF15032	Morye Akshata Narendra		Pradhan Mantri Jeevan Jyoti Bima Yojana	Akshata
BF15033	Nair Aakarsha Suresh		Awareness regarding Umbrella Insurance	Aakarsha
BF15034	Nair Rhea Sajeer		Accident claim Settlement procedure with LIC	Rhea
BF15035	Pandey Upasana Vinodkumar		Bharat Bhraman Travel Insurance. Bajaj Allianz	Upasana
BF15036	Pandharkame Madhuri Narendra		Student Travel Insurance. ICICI Lombard	Madhuri
BF15037	Pathade Pranita Shivaji			Pranita
BF15038	Pawar Rohan Shivaji		Awareness Among People about Birla <sup>insurance</sup> Sunil	Rohan
BF15039	Pawar Pooja Raju		CRM in Reliance Life Insurance	Pooja
BF15040	Pawar Hema Chandrakant		Recruitment & Selection process of Kotak Insurance	Hema
BF15042	Poojary Yashita Shankar		Influence of Advertisement in LIC	Yashita
BF15043	Prajapati Seema Kanhaiyalal		Life insurance of United India Insurance Co.	Seema
BF15044	Prajapati Anajali Devilal		Vehicle Insurance in Bajaj Allianz Insurance Comp.	Anajali
BF15045	Pujare Nikhil Sunil			Nikhil



Student Roll No	Student Name	university seat no	project title	sign
BF15046	Salian Ashika Anand		children Policy & its future prospects	
BF15047	Sawant Sameer Chandrakant		comparative study of customer satisfaction on service provided by LIC	Sameer
BF15048	Shaikh Sakina Rajyak		Micro-Insurance in India	Sakina
BF15049	Sharma Darshana Vinod		AI based. Accidents - Policy Katerine Kotaki Maharashtra	DARSHANA
BF15050	Shinde Shubham Sachin		Compani Comparison of Health Insurance in India	Sshinde
BF15051	Shinde Dhanashri Deshraj		Customer Relation Management in LIC	Sshinde
BF15052	Shinde Siddhesh Sanjay		popularity of life insurance	Sshinde
BF15053	Singh Pooja Narendra		Analysis of Reliance Home Insurance	Ssingh
BF15054	Singh Kavita Avadhesh		Analysis of Training and Development in Bajaj Allianz Insurance	Singh
BF15055	Singh Kajal Rajesh		Digital insurance trends & opportunities in India	Singh
BF15056	Shriwardhankar Shubham Pradeep		Future general insurance or career protect plan	Sshriwardhankar
BF15057	Tripathi Vaishali Premkumar		Health insurance subjective to united india	Vaishali
BF15058	Veena Jayaprasad Premalatha			
BF15059	Vishwakarma Sunita Ramkeval			
BF15060	Yadav Chandresh Shyambihari		Product Penetration strategies refernce to AIG	Chandresh
BF15061	Sawant Akshata Vinayak		Insurance awareness among housewives	Akshata
BF15062	Pednekar Manali Jayprakash		Personal Accident Insurance of Star health Ins.	Manali
BF15063	Bane Sarvesh Subodh		Insurance is a subject matter of solicitation	Bane
BF15068	Koli Suraj Ramu Anjamma		Consumer Buying Behaviors Towards Life Insurance	Koli
BF15070	Kumavat Natwar Ranchodaram		Awareness of vehicle Insurance Policy	Kumavat
BS16074	Rakhecha Ajay Govindlal		Jeevan Akshay Policy reference to LIC	Ajay
BT17075	Iyer Lakshmi Murugesh			

Kulkeji

Convener



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 The S.I.A College of Higher Education  
 Academic Year 2017-18

SEMESTER VI PROJECT VIVA ATTENDANCE RECORD  
 CLASS TY B COM ( BANKING & INSURANCE  
 DATE : 3rd May, 2018

SR NO	Student I	HALL TICKET NO	Student Name	SIGN
1	BF14020	3189323	Jagani Himani Dinesh	Himani
2	BF14064	3189483	Saphalya Dhvani Sudhakar	Saphalya
3	BF15001	3189230	Aley Darshana Santosh	Darshana
4	BF15002	3189234	Amin Mithun Jayakar	Mithun
5	BF15003	3189233	Amin Dishank Ramchandra	Dishank
6	BF15004	3189284	Anjarlekar Siddhi Sanjay	Siddhi
7	BF15005	3189240	Bandre Sonali Prabhakar	Sonali
8	BF15006	3189246	Bhoir Viraj Kantilal	Viraj
9	BF15007	3189258	Chavan Advait Shyam	Advait
10	BF15010	3189275	Dhanawade Siddhi Ganesh	Siddhi
11	BF15012	3189281	Dubey Bhavika Udaybhan	Bhavika
12	BF15013	3189283	Durgavale Neha Vijay	Neha
13	BF15014	3189304	Gurud Ashwini Shyam	Ashwini
14	BF15015	3189293	Gounder Priyadarshini Somasundaram	Priyadarshini
15	BF15016	3189294	Gowda Uday Ramesh	Uday
16	BF15017	3189299	Gupta Pooja Rajnarayan	Pooja
17	BF15018	3189311	Ingawale Dipali Balasaheb	Dipali
18	BF15019	3189314	Iyer Vaishak Seshadri	Vaishak
19	BF15020	3189340	Kannaujiya Reena Achechhelal	Reena
20	BF15021	3189347	Kashyam Shubham Abhimanyu	Shubham
21	BF15022	3189362	Kulal Jatin Devadas	Jatin
22	BF15023	3189364	Kunder Sushmita Sudhakar	Sushmita
23	BF15024	3189221	Laxmi Balkrishnan Ramani	Laxmi
24	BF15025	3189381	Maurya Priti Omkar	Priti
25	BF15026	3189383	Menon Anjali Anilkumar	Anjali
26	BF15027	3189384	Meta Moumita Sunil	Moumita
27	BF15028	3189387	Mhatre Prasad Bharat	Prasad
28	BF15029	3189390	Mijar Aniket Narayan	Aniket
29	BF15030	3189392	Mishra Divya Rajesh	Divya
30	BF15031	3189397	Moolya Vidisha Hannappa	Vidisha
31	BF15032	3189397	Morye Akshata Narendra Namita	Akshata
32	BF15033	3189398	Nair Aakarsha Suresh	Aakarsha
33	BF15034	<del>BF150</del> 3189404	Nair Rhea Sajeev	Rhea
34	BF15035	3189415	Pandey Upasana Vinodkumar	Upasana
35	BF15036	3189416	Pandharkame Madhuri Narendra	Madhuri





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The S.I.A College of Higher Education  
Academic Year 2017-18

SEMESTER VI PROJECT VIVA ATTENDANCE RECORD  
CLASS TY B COM ( BANKING & INSURANCE  
DATE : 3rd May, 2018

SR NO	Student I	HALL TICKET NO	Student Name	SIGN
36	BF15037		Pathade Pranita Shivaji	
37	BF15038	3189432	Pawar Rohan Shivaji	Rohan
38	BF15039	3189431	Pawar Pooja Raju	Pooja
39	BF15040	3189429	Pawar Hema Chandrakant	H.Pawar
40	BF15042	3189440	Poojary Yashita Shankar	Yashita
41	BF15043	3189443	Prajapati Seema Kanhaiyalal	Seema
42	BF15044	3189442	Prajapati Anjali Devilal	Anjali
43	BF15045	3189445	Pujare Nikhil Sunil	Nikhil
44	BF15046	3189460	Salian Ashika Anand	Ashika
45	BF15047	3189469	Sawant Sameer Chandrakant	Sameer
46	BF15048	3189473	Shaikh Sakina Rajyak	Sakina
47	BF15049	3189476	Sharma Darshana Vinod	DARSHANA
48	BF15050	3189485	Shinde Shubham Sachin	S.Shinde
49	BF15051	3189483	Shinde Dhanashri Deshraj	D.Shinde
50	BF15052	3189486	Shinde Siddhesh Sanjay	Siddhesh
51	BF15053	3189495	Singh Pooja Narendra	Pooja
52	BF15054	3189493	Singh Kavita Avadhesh	Kavita
53	BF15055	3189492	Singh Kajal Rajesh	Kajal
54	BF15056	3189490	Shriwardhankar Shubham Pradeep	Shubham
55	BF15057	3189515	Tripathi Vaishali Premkumar	Vaishali
56	BF15058		Veena Jayaprasad Premalatha	
57	BF15059	3189522	Vishwakarma Sunita Ramkeval	Sunita
58	BF15060	3189527	Yadav Chandresh Shyambihari	Chandresh
59	BF15061	3189467	Sawant Akshata Vinayak	Akshata
60	BF15062	3189434	Pednekar Manali Jayprakash	Manali
61	BF15063	3189241	Bane Sarvesh Subodh	Sarvesh
62	BF15068	3189353	Koli Suraj Ramu Anjamma	Suraj Koli
63	BF15070	3189363	Kumavat Natwar Ranchodaram	Natwar
64	BS16074	3189454	Rakhecha Ajay Govindlal	Ajay
65	BT17075	3189313	Iyer Lakshmi Murugesh	Lakshmi

Coordinator



Principal

PRINCIPAL  
The S.I.A. College of Higher Education  
Dombivli

**The South Indian Association's  
The SIA College of Higher Education  
P-88, MIDC Residential Area, Dombivli Gymkhana Road,  
Near Balaji Mandir, Dombivli (East), 421 203.**

**Department of Banking & Insurance**

Date: 10<sup>th</sup> March, 2019

**Notice**

**Semester VI Project submission**

All TYB&I students are hereby informed that the last date for submission of Semester –VI Projects is 31st March, 2019 failing which Projects will not be accepted and students will not be allowed to appear for Viva.

Convener



Principal

**PRINCIPAL**  
The S.I.A. College of Higher Education  
DOMBIVLI (E)

**The South Indian Association's  
The SIA College of Higher Education  
P-88, MIDC Residential Area, Dombivli Gymkhana Road,  
Near Balaji Mandir, Dombivli (East), 421 203.**

**Department of Banking & Insurance**

Date: 10<sup>th</sup> April, 2019


**Project Viva Notice**

All TYB&I students are hereby informed that the project viva for Semester –VI is scheduled on 15<sup>th</sup> April, 2019 from 7.30 am onwards.

All the students should be present with their project books in the formal attire at 7.30 am in their classroom.

  
Convener



  
Principal  
PRINCIPAL  
The S.I.A. College of Higher Education  
DOMBIVLI (E)

Date:

Sr.No	Roll No.	Name of the student	Topics	SIGN
1	BF16055	Rai Ruchita Ashok	Financial literacy among youth	Ruchita 21/4/19
2	BF16058	Singh Jyoti Ramkaran	Popular tax-saving Investment among service people	Jyoti Singh 21/4/19
3	BF16028	Kizhakemadam Saraswathy	Health insurance & its significance	Saraswathy 21/4/19
4	BF16027	Kavilvalappil Varsha Venu	Building business - A case study on women entrepreneurs	Varsha 21/4/19
5	BF16044	Padwal Ruchita Sandeep	A study on Consumer Perception Towards Insurance Policy.	Ruchita 02/04/19
6	BT18074	Iyer Radhika Ganesan	Awareness of Banking services among housewives	Radhika
7	BF15011	Dongare Apeksha Vishnu	Popular Insurance Products with Agents	Apeksha
8	BF15066	Panchal Darshan Shashikant		
9	BF15067	Shetty Shreenidhi Sudhakar	Loan for Women Entrepreneur Given By Banks	Shetty





10	BF16001	Achary Harikaran Krishnan	Mobile Banking Applications	<u>Harikaran</u>
11	BF16002	Agrahari Dashrath Hariram	Investors perceptions towards stock market	<u>Das</u>
12	BF16003	Ambade Soniya Pradeep	Awareness of Insurance among auto rickshaw driver.	<u>Soniya</u>
13	BF16004	Bagadiya Honey Jayesh	Career opportunities in Insurance sector	<u>Honey</u>
14	BF16005	Bagate Monika Uttam	Survey on fire insurance among shopkeeper	<u>Monika</u>
15	BF16006	Bhandi Anita Purusothama	Awareness and investment in post office schemes	<u>Anita</u>
16	BF16007	Bhoga Pooja Narayan	Awareness on banking and insurance products among students.	<u>Pooja</u>
17	BF16008	Chandora Mayur Bhagaram	Popular mutual fund products among consumers.	<u>Mayur</u>
18	BF16012	Deo Siddhi Nitin	Investment Avenues preferred by working people	<u>Siddhi</u>
19	BF16013	Deshmukh Varsha Ajit	Study of comparative Analysis of financial statement of banks (SBI & ICICI Bank)	<u>Varsha</u>
20	BF16014	Devadiga Tejaswi Jayant	Online bill Payment with reference to TISSB	<u>Tejaswi</u>



21	BF16015	Pratibha Himantkumar A	Study of Property insurance	H
22	BF16016	Garud Manish Pramod	Plastic money	Manish 11/04/19
23	BF16017	Ghag Pritesh Pravin	A study on awareness of SSF among the eim child Parents	Pritesh 01/04/19
24	BF16019	Gupta Rahul Shambhu	whatsapp Banking Services with reference to Saraswat Bank	Rahul
25	BF16020	Harijan Krishnayya Vyankatayya	A Project on SBI YONO Banking Application	Krishna
26	BF16021	Hulsar Aniket Balu	A Study on Usage of paytm Services	Aniket
27	BF16022	Iyer Krupa Nagasundaram	Human Resources practices in Bank	Krupa
28	BF16023	Jadyal Siddhi Anil	Effects of Demonetization on Banks & its customers	Siddhi
29	BF16024	Jaiswal Ankita Ashok	Unified Payment Interface with reference to axis bank	Ankita
30	BF16025	Jaiswar Satish Harilal	Various scheme offered by DCS Bank	SATISH
31	BF16026	Kannaujiya Vibha Umashankar	Consumer perception towards ATM service	Vibha





32	BF16029	Korpe Pranali Haridas	A comparative study of loan products of PNB & DNS Bank	<u>Pranali</u>
33	BF16030	Kotara Shivam Maansingh	Products & services offered by HDFC Standard Life Insurance	<u>Shivam</u>
34	BF16031	Kundar Priyanka Kailash	Aware among the people with respective riders in life insurance policy	<u>Kundar</u>
35	BF16032	Malhari Jyoti Devendra	Awareness among investors towards mutual fund apps.	<u>Malhari</u>
36	BF16033	Mandlik Vignesh Kumar	Role of Advertisement in life insurance corporation	<u>Vignesh</u>
37	BF16034	Mayekar Siddhesh Vijay	Awareness of health insurance among women	<u>Siddhesh</u>
38	BF16035	Mhaske Yogeshwar Vishnu	A study on Awareness of LIC daughter marriage plan.	<u>Yogeshwar</u>
39	BF16037	Moolya Deepika Krishna	CRM Related to Insurance	<u>Deepika</u>
40	BF16038	Dhuraj Muthuswamy	Awareness of House & life life Insurance Policy	<u>Dhuraj</u> 11/01/19
41	BF16039	Nadar Cynthia Anthonyraj	Awareness of maternity insurance among women	<u>Cynthia</u>
42	BF16040	Naik Deepika Ravindra	Awareness of Health insurance among senior citizens	<u>Deepika</u>




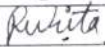





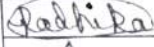


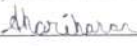



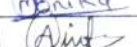




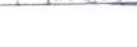

43	BF16041	Naik Yash Maruti	Awareness of Trade Finance among people.	<del>Naik</del> *
44	BF16042	Harini Natarajan	Cyber Crime in Banking Sector	Harini 02/04/19
45	BF16043	Nikam Prajktta Anil	Awareness of Online Banking Services among the Senior Citizens	Rikam
46	BF16045	Pandey Rachana Omprakash	Consumer awareness related to google payments	En
47	BF16046	Panjani Karan Vijay	Awareness of Postal Life Insurance among People	<del>Karan</del>
48	BF16047	Parab Ekta Ragho	Motivational Practices in Axis Bank	<del>Ekta</del>
49	BF16051	Pawar Kumaribhagyashree Bharat	marketing Strategy in Axis Bank	<del>Bhagy</del>
50	BF16052	Pawar Neha Chandrakant	Analysis of ESIC Policy for employees.	<del>Neha</del>
51	BF16053	Poojary Kavitha Narayan	Products and Services of Bharat (Co-operative Bank (2014-19))	<del>Poojary</del> 1/4/19
52	BF16054	Poojary Tajnya Vasu	IT USES IN BHARAT CO-OPERATIVE (MUMBAI) LIMITED	Tajnya.
53	BF16059	Singh Ragini Jaiprakash	Impact of SBI Retail banking of customer satisfaction.	<del>Ragini</del>



54	BF16060	Singh Sneha Chandrashekh	A study of vehicle loan activities of PNB Banks	<u>Sneha</u>
55	BF16063	Swain Reshma Uddhav	A study on LIC child Plan	<u>Reshma</u>
56	BF16065	Verma Priti Sunil	Pradhan mantri mudra yojana with State bank of India.	<u>Priti</u>
57	BF16066	Vishwakarma Pradeep Rajbali	A study on CRM in Karnataka Bank	<u>Pradeep</u>
58	BF16067	Yadav Anita Ramkrishna	A study of Kotak life Insurance plan.	<u>Anita</u>
59	BF16068	Yadav Nisha Omprakash	A study on Analysis of HRM on tata AIG life Insurance.	<u>Nisha</u> ✓
60	BF16071	Kammalar Murugan Eshwaramoorthi	The Study of E-Banking facilities in reference with IOB Bank	<u>Murugan</u>
61	BF16072	Parmar Ravina Mohanlal	Customer Satisfaction towards E-banking facility with reference to Bank of Baroda.	<u>Ravina</u> ✓
62	BS16073	Gala Dhvani Jayesh	—	

P. K. G.  
Convener



Sr.No	Roll No.	Name of the student	Project Guide	Sign of guide	Sign of students
1	BF16055	Rai Ruchita Ashok	Dr Padmaja Arvind		
2	BF16058	Singh Jyoti Ramkaran			
3	BF16028	Kizhakemadam Saraswathy			
4	BF16027	Kavilvalappil Varsha Venu			
5	BF16044	Padwal Ruchita Sandeep			
6	BT18074	Iyer Radhika Ganesan	Mrs Ranjana Mhalgi		
7	BF15011	Dongare Apeksha Vishnu			
8	BF15066	Panchal Darshan Shashikant			
9	BF15067	Shetty Shreenidhi Sudhakar			
10	BF16001	Achary Harikaran Krishnan			
11	BF16002	Agrahari Dashrath Hariram			
12	BF16003	Ambade Soniya Pradeep			
13	BF16004	Bagadiya Honey Jayesh			
14	BF16005	Bagate Monika Uttam			
15	BF16006	Bhandi Anita Purusothama			
16	BF16007	Bhoga Pooja Narayan			
17	BF16008	Chandora Mayur Bhagaram			
18	BF16012	Deo Siddhi Nitin			
19	BF16013	Deshmukh Varsha Ajit			





Sr.No	Roll No.	Name of the student	Project Guide	Sign of guide	Sign of students
20	BF16014	Devadiga Tejaswi Jayant	Mr Mahesh Kandalkar	mke	Tejaswi
21	BF16015	Dubey Hemantkumar A			H
22	BF16016	Garud Manish Pramod			Manish
23	BF16017	Ghag Pritesh Pravin			Pritesh
24	BF16019	Gupta Rahul Shambhu			Rahul
25	BF16020	Harijan Krishnaya Vyankata			Krishna
26	BF16021	Hulsar Aniket Balu			Aniket
27	BF16022	Iyer Krupa Nagasundaram			Krupa
28	BF16023	Jadyal Siddhi Anil			Siddhi
29	BF16024	Jaiswal Ankita Ashok			Ankita
30	BF16025	Jaiswar Satish Harilal			SATISH
31	BF16026	Kannaujiya Vibha Umashanka			Vibha
32	BF16029	Korpe Pranali Haridas			Pranali
33	BF16030	Kotara Shivam Maansingh	Shivam		
34	BF16031	Kundar Priyanka Kailash	Mrs Renu Verma	Renu	Priyanka
35	BF16032	Malhari Jyoti Devendra			Jyoti
36	BF16033	Mandlik Vignesh Kumar			Vignesh
37	BF16034	Mayekar Siddhesh Vijay			Siddhesh
38	BF16035	Mhaske Yogeshwar Vishnu			Yogeshwar
39	BF16037	Moolya Deepika Krishna			Deepika
40	BF16038	Dhuraj Muthuswamy			Dhuraj
41	BF16039	Nadar Cynthia Anthonyra			Cynthia
42	BF16040	Naik Deepika Ravindra			Deepika



## SEMESTER VI

Sr.No	Roll No.	Name of the student	Project Guide	Sign of guide	Sign of students
43	BF16041	Naik Yash Maruti			<i>Yash</i>
44	BF16042	Harini Natarajan			<i>Harini</i>
45	BF16043	Nikam Prajka Anil			<i>Nikam</i>
46	BF16045	Pandey Rachana Omprakash			<i>Rachana</i>
47	BF16046	Panjani Karan Vijay			<i>Karan</i>
48	BF16047	Parab Ekta Ragho			<i>Ekta</i>
49	BF16051	Pawar Kumaribhagyashree Bh			<i>Bagy</i>
50	BF16052	Pawar Neha Chandrakant	<i>Neha</i>		
51	BF16053	Poojary Kavitha Narayan	<i>Kavitha</i>		
52	BF16054	Poojary Tajnya Vasu	<i>Tajnya</i>		
53	BF16059	Singh Ragini Jaiprakash	<i>Ragini</i>		
54	BF16060	Singh Sneha Chandrashekhar	<i>Sneha</i>		
55	BF16063	Swain Reshma Uddhav	<i>Reshma</i>		
56	BF16065	Verma Priti Sunil			
57	BF16066	Vishwakarma Pradeep Rajbali	<i>Pradeep</i>		
58	BF16067	Yadav Anita Ramkrishna	<i>Anita</i>		
59	BF16068	Yadav Nisha Omprakash	<i>Nisha</i>		
60	BF16071	Kammalar Murugan Eshwaran	<i>Murugan</i>		
61	BF16072	Parmar Ravina Mohanlal	<i>Ravina</i>		
62	BS16073	Gala Dhvani Jayesh			

Mr Hasit Kumar  
Nagariya

*Hasit*

Convener: *Rehabs*



The SIA College of Higher Education, Dombivili - East  
Department of Banking & Insurance

TY B COM (Banking & Insurance) SEM-VI

Project Viva Attendance 2018-19

Date-15-4-2019

Sr.No	Roll No.	Name of the student	SIGN
1	BF 15011	Dongre Apeksha	
2	BF15066	Panchal Darshan Shashikant	
3	BF15067	Shetty Shrinidhi	
4	BF18074	Iyer Radhika	
5	BF16001	Achary Hariharan Krishnan	
6	BF16002	Agrahari Dashrath Hariram	
7	BF16003	Ambade Soniya Pradeep	
8	BF16004	Bagadiya Honey Jayesh	
9	BF16005	Bagate Monika Uttam	
10	BF16006	Bhandi Anita Purushottam	
11	BF16007	Bhoga Pooja Narayan	
12	BF16008	Chandora Mayur Bagaram	
13	BF16012	Deo Siddhi Nitin	
14	BF16013	Deshmukh Varsha Ajit	
15	BF16014	Devadiga Tejaswi Jayant	
16	BF16015	Dubey Hemant Kumar Ashokkumar	
17	BF16016	Garud Manish Pramod	
18	BF16017	Ghag Pritesh Pravin	
19	BF16019	Gupta Rahul Shambhu	
20	BF16020	Krishnayya Vyankatayya	
21	BF16021	Hulsar Aniket Balu	
22	BF16022	Iyer Krupa Sundaram	
23	BF16023	Jadyal Siddhi	
24	BF16024	Jaiswal Ankita Ashok	
25	BF16025	Jaiswar Satish Harilal	





The SIA College of Higher Education, Dombivili - East  
 Department of Banking & Insurance  
 TY B COM (Banking & Insurance) SEM-VI  
 Project Viva Attendance 2018-19 Date-15-4-2019

26	BF16026	Vibha Umashankar Kannaujiya	Vibha
27	BF16027	Kavilvalappil Varsha Venu	Kavil
28	BF16028	Kizhakemadam Saraswathy	Sara
29	BF16029	Korpe Pranali Haridas	Korpe
30	BF16030	Kotara Shivam Maansingh	Shivam
31	BF16031	Kundar Priyanka Kailash	Kundar
32	BF16032	Malhari Jyoti Devendra	Malhari
33	BF16033	Mandlik Vignesh Kumar	Vignesh
34	BF16034	Mayekar Siddhesh Vijay	Siddhesh
35	BF16035	Mhaske Yogeshwar Vishnu	Yogesh
36	BF16037	Moolya Deepika Krishna	Deepika
37	BF16038	Dhuraj Muthuswamy	Dhuraj
38	BF16039	Nadar Cynthia Anthonyraj	Cynthia
39	BF16040	Naik Deepika Ravindra	Naik
40	BF16041	Naik Yash Maruti	Yash
41	BF16042	Natarajan Harini	Harini
42	BF16043	Nikam Prajka Anil	Prajka
43	BF16044	Padval Ruchita Sandeep	Ruchita
44	BF16045	Pandey Rachna Omprakash	Rachna
45	BF16046	Panjani Karan Vijay	Karan
46	BF16047	Parab Ekta Ragho	Ekta
47	BF16048	Parab Omkar Deepak	Omkar
48	BF16051	Pawar Kumaribhagyashree Bharat	Bhagyashree
49	BF16052	Pawar Neha Chandrakant	Neha
50	BF16053	Poojari Kavita Narayan	Kavita
51	BF16054	Poojary Tajnya Vasu	Tajnya





The SIA College of Higher Education, Dombivili - East  
Department of Banking & Insurance

TY B COM (Banking & Insurance) SEM-VI

Project Viva Attendance 2018-19

Date-15-4-2019

52	BF16055	Rai Ruchita Ashok	Ruchita
53	BF16058	Singh Jyoti Ramakarn	Jyoti
54	BF16059	Singh Ragini Jayaprakash	Ragini
55	BF16060	Singh Sneha Chandrashekhar	Sneha
56	BF16063	Swain Reshma Uddhav	Reshma
57	BF16065	Verma Priti Sunil	Priti
58	BF16066	Vishwakarma Pradeep Rajbali	Pradeep
59	BF16067	Yadav Anita Ramkrishna	Anita
60	BF16068	Yadav Nisha Omprakash	Nisha
61	BF16071	Kammalar Murugan E.	Murugan
62	BF16072	Parmar Ravina Mohanlal	Ravina
63	BF16073	Gala Dhvani	AS

  
Convener

  
Principal

PRINCIPAL  
The S.I.A. College of Higher Education  
DOMBIVLI (E)





The South Indian Association's

Tel.: 0251 2449891 / 92

# The S.I.A. College of Higher Education

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P-88, MIDC Residential Area, Dombivli Gymkhana Road, Near Balaji Mandir, Dombivli (East), 421 203.

Email : office@thesiacollege.com Website : www.thesiacollege.com

Ref. No: 313/2019-20

Date: 19/10/19

To,  
Prof. Mrs. Vrunda Rajesh Yadwad,  
Manjunatha College of Commerce,  
Khanbhalpada, Thakurli (East)

Dear Madam

On behalf of The S.I.A. College of Higher Education, we are very much thankful for accepting our invitation as external examiner of AIKT project viva voce for TY B&I Semester VI, Oct'2019. We hope you will continue the same in future.

Thanking you,

Respectfully,

*B. K. Halgi*

Convener

Dept of B&I

*R. Raj*

Principal  
PRINCIPAL

The S.I.A. College of Higher Education,  
DOMBIVLI (E)



received  
*R. Raj*



The South Indian Association's

Tel. : 0251 2449861 / 92

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Ema.l : office@thesiacollege.com Website : www.thesiacollege.com

Ref. No : 312/2019-20

Date : 19/10/19

To,  
Prof. Mrs. Vrunda Rajesh Yadwad,  
Manjunatha College of Commerce,  
Khambalpada, Thakurli (East)

Dear Sir/Madam,

We are pleased to inform you that you have been appointed as External Examiner for ATKIT Project Assessment and Viva Voce of B&I.(with Credits)-Regular-C75-25-T.Y.B&I.-Sem-VI for October, 2019

The College has arranged Viva on 19/10/2019 at 12.30pm.

kindly accept the invitation and acknowledge.

Yours truly,

*Rohalgi*  
Convener

B&I Department

*Rafmaj*  
Principal

PRINCIPAL

The S.I.A. College of Higher Education,  
DOMBIVLI (E)



Received  
*[Signature]*



Sr.No	Roll No.	Name of the student	Project Guide
1	BF16056	SALVI SHUBHAM SUBHASH	Mrs Ranjana Mhalgi
2	BF17001	AYAASWAMY ARVINDSWAMY KRISHNA	
3	BF17002	BARIYA RESHMA MAHIPATBHAI	
4	BF17004	BHOSALE TANVI MANOHAR	
5	BF17005	BISHWAKARMA KOKILA MEEN	
6	BF17007	CHAUDHARY PRIYANKA PREMENDRA	
7	BF17008	CHAUKEKAR SNEHA NANDKUMAR	
8	BF17009	CHAVAN ABHISHEK PRAKASH	
9	BF17011	CHOUDHARY SHOBHA DUNGARAM	
10	BF17013	DSOUZA RITU NAVNATH	
11	BF17014	DUBEY SHRUTI UDAYBHAN	
12	BF17015	GAIKWAD LATIKA SHARAD	
13	BF17017	GAONKAR KSHITIJ SHASHIKANT	Mahesh Kandalkar
14	BF17019	GUPTA MAMTA ACHHELAL	
15	BF17020	GUPTA VIKAS SANTOSH	
16	BF17022	JAIN RISHABH HASTIMAL	
17	BF17023	KADAM GANESH BHIKAJI	
18	BF17024	KADAM VRUSHALI JAYRAM	
19	BF17025	KONAR JAISRINIVAS BALASUBRAMANI	
20	BF17026	KOTAL NEHA MOHAN	
21	BF17027	KUTE ASHWINI BALASAHEB	
22	BF17028	LODAYA ZEEL KHUSHAL	
23	BF17029	MAURYA JALENDRA MATADEEN	
24	BF17030	MEWADA VARSHA MULARAM	



The S.I.A. College of Higher Education, Dombivili - East  
 Department of Banking & Insurance  
 Project Guide List 2019-20  
 TY B.Com (Banking & Insurance)  
 SEMESTER VI



Sr.No	Roll No.	Name of the student	Project Guide	
25	BF17031	MHATRE SIDDHI SANDEEP	Mrs Renu Verma	
26	BF17033	MORE APARNA GANESH		
27	BF17035	NIMISHIKA MANIKANTAN		
28	BF17036	NIRMAL RAHUL RAMLAL		
29	BF17037	PILLAI MADHUMITHA RAMESH		
30	BF17038	PILLAI VISMAAYA VIJAYAN		
31	BF17039	POOJARY SWARAJ RAMESH		
32	BF17040	PRADHAN VAISHNAVI SACHIN		
33	BF17041	PUJARE DIPTI SUHAS		
34	BF17042	RAKSHE TEJAL ARUN		
35	BF17044	SAKAT SIMRAN BALU		
36	BF17045	SIVARAMAKRISHNAN SAMRUDHA		
37	BF17046	SELVA SUGANTHI VENKAT RAMAN		Mr Hasit Kumar Nagariya
38	BF17047	SHAW SATYA LALLAN		
39	BF17049	SHINDE SHRIKANT PRAMOD		
40	BF17050	SHINGNE SWAPNALI PRAKASH		
41	BF17051	SINGH SHRADDHA BIJENDRA		
42	BF17055	TIWARI RAJNEE NARENDRA		
43	BF17056	TORASKAR POOJA PRAKASH		
44	BF17058	PRAJAPATI AJAY MAHENDRA		
45	BF17059	SHIRKE KOMAL DAGADU		
46	BF17061	NARVEKAR AKANKSHA NITIN		
47	BF16062	PARAB OMKAR		
48	BF16050	PAWAR AKSHAY		
49	BF16069	BADELA RAHUL		



Sr.No	Roll No.	Name of the student	Project Guide & Sign	Sign of the students
1	BF16056	SALVI SHUBHAM SUBHASH	Mrs Ranjana Mhalgi <i>Ranjana Mhalgi</i>	<i>Subham</i>
2	BF17001	AYAASWAMY ARVINDSWAMY KRISHNA		<i>Arvind</i>
3	BF17002	BARIYA RESHMA MAHIPATBHAI		<i>Nhosals</i>
4	BF17004	BHOSALE TANVI MANOHAR		<i>Bhosale</i>
5	BF17005	BISHWAKARMA KOKILA MEEN		<i>Dhinge</i>
6	BF17007	CHAUDHARY PRIYANKA PREMENDRA		<i>Chaudhary</i>
7	BF17008	CHAUKEKAR SNEHA NANDKUMAR		<i>A.P. Chavan</i>
8	BF17009	CHAVAN ABHISHEK PRAKASH		<i>Shobha</i>
9	BF17011	CHOUHDARY SHOUBHA DUNGARAM		<i>Ritika</i>
10	BF17013	DSOUZA RITU NAVNATH		<i>Shrut</i>
11	BF17014	DUBEY SHRUTI UDA YBHAN		<i>Patil</i>
12	BF17015	GAIKWAD LATIKA SHARAD		<i>Patil</i>
13	BF17017	GAONKAR KSHITIJ SHASHIKANT		<i>Patil</i>



The S.I.A. College of Higher Education, Dombivili - East  
 Department of Banking & Insurance  
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 SEMESTER VI



Sr.No	Roll No.	Name of the student	Project Guide & Sign	Sign of the students
14	BF17019	GUPTA MAMTA ACHHELAL	Mahesh Kandalkar Prof.	
15	BF17020	GUPTA VIKAS SANTOSH		
16	BF17022	JAIN RISHABH HASTIMAL		
17	BF17023	KADAM GANESH BHIKAJI		
18	BF17024	KADAM VRUSHALI JAYRAM		
19	BF17025	KONAR JAISRINIVAS BALASUBRAMANI		
20	BF17026	KOTAL NEHA MOHAN		
21	BF17027	KUTE ASHWINI BALASAHEB		
22	BF17028	LODAYA ZEEL KHUSHAL		
23	BF17029	MAURYA JALENDRA MATADEEN		
24	BF17030	MEWADA VARSHA MULARAM		
25	BF17031	MHATRE SIDDHI SANDEEP		Renu Verma
26	BF17033	MORE APARNA GANESH		










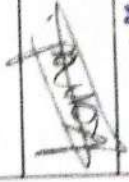



The S.I.A. College of Higher Education, Dombivili - East  
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 SEMESTER VI



Sr.No	Roll No.	Name of the student	Project Guide & Sign		Sign of the students
25	BF17031	MHATRE SIDDHI SANDEEP			
26	BF17033	MORE APARNA GANESH			
27	BF17035	NIMISHIKA MANIKANTAN			
28	BF17036	NIRMAL RAHUL RAMLAL			
29	BF17037	PILLAI MADHUMITHA RAMESH			
30	BF17038	PILLAI VISMAYA VIJAYAN			
31	BF17039	POOJARY SWARAJ RAMESH			
32	BF17040	PRADHAN VAISHNAVI SACHIN			
33	BF17041	PUJARE DIPTI SUHAS			
34	BF17042	RAKSHE TEJAL ARUN			
35	BF17044	SAKAT SIMRAN BALU			
36	BF17045	SIVARAMAKRISHNAN SAMRUDHA			
37	BF17046	SEI VA SUGANTHI VENKAT RAMAN			

Mrs Renu Verma

The S.I.A. College of Higher Education, Dombivili - East  
 Department of Banking & Insurance  
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 TY B.Com (Banking & Insurance)  
 SEMESTER VI

Sr.No	Roll No.	Name of the student	Project Guide & Sign	Sign of the students
38	BF17047	SHAW SATYA LALLAN	Mr Hasit Kumar Nagariya 	
39	BF17049	SHINDE SHRIKANT PRAMOD		
40	BF17050	SHINGNE SWAPNALI PRAKASH		
41	BF17051	SINGH SHRADDHA BIJENDRA		
42	BF17055	TIWARI RAJNEE NARENDRA		
43	BF17056	TORASKAR POOJA PRAKASH		
44	BF17058	PRAJAPATI AJAY MAHENDRA		
45	BF17059	SHIRKE KOMAL DAGADU		
46	BF17061	NARVEKAR AKANKSHA NITIN		
47	BF16062	<del>PARAB</del> OMKAR Sutar Shubham		
48	BF16050	PAWAR AKSHAY		
49	BF16069	BADELA RAHUL		





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Near Balaji Mandir, Dombivili (East), 421 203.

**Department of Banking & Insurance**

**Notice**

Date: 10/04/2020

The Project Viva for TY B&I SEM 6 will be held on 15TH April,2020 . All the students are requested to be ready with their Projects e copy.

All the guides are here by informed to schedule and the Viva and send the same to students under respective guides.



Convenor

Ranjana Mhalgi






Principal

Dr Padmaja Arvind

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The S.I.A. College of Higher Education  
DOMBIVLI (E)

The S.I.A. College of Higher Education, Dombivili - East  
 Department of Banking & Insurance  
 Project Guide List 2020-21  
 TY B.Com (Banking & Insurance)  
 SEMESTER VI  
 Project Guide List 2020-21

Sr No	Roll No.	Name of the student	Name of Project Guide & Sign
1	BF18001	PADMAPRIYA JAGANATH	<p>Ranjana Mhalgi</p> 
2	BF18003	MEGHNA RAJENDRAN	
3	BF18004	APANKAR RUTUJA GANESH	
4	BF18005	BANDADE NIRANJAN DATTARAM	
5	BF18006	BANDODKAR ANUJA ANIL	
6	BF18007	BHATT CHETAN ARVIND	
7	BF18008	CHAUDHARY NISHA BABULAL	
8	BF18009	CHAUDHARY JUHI SUBODH	
9	BF18010	CHAVAN AISHWARYA VIKAS	
10	BF18011	CHAVAN LAXMI ANIL	
11	BF18012	CHOUDHARI NAMRATA ARUN	
12	BF18013	GAIKAR SHRADDHA SANJAY	
13	BF18014	GOWDA KOMAL DEVANNA	
14	BF18015	GUPTA ANJALI BALBADRA	
15	BF18016	GUPTA KUMARI SHILPA MOTILAL	
16	BF18017	JAT MANISHA LEHRULAL	
17	BF18018	JATOLIYA BARKHA RAJESH	
18	BF18019	JETHVA HEMAL BHARATBHAI	
19	BF18021	JOSHI PAYAL SHAILESH	
20	BF18022	KAPSE RUTHIK ASHOK	
21	BF18023	KEER NIKITA VASUDEV	
22	BF18024	KHAN ARBUNNISHA ISTIYAK AHMED	
23	BF18025	KOLEY PRIYANKA PRADIP	
24	BF18026	KOTHARI VARSHA NANDLAL	
25	BF18028	PARIYAR KARPAGAVALLI SWAMIDURAI	
26	BF18029	PATEL KAVITAKUMARI SHIWAILAL	
27	BF18030	PATIL YOGINI DNYANESHWAR	
28	BF18031	PATIL SAYLI RAJU	
29	BF18032	PATIL PALLAVI GANGARAM	
30	BF18033	RAJPUT SANGEETA DALUSINGH	





31	BF18034	SAHU KOMAL PRADEEP
32	BF18035	SARODE NISHA RAMDAS
33	BF18036	SAWANT MAKARAND RANJIT
34	BF18037	SAWANT TUSHAR CHANDRAKANT
35	BF18038	SAWANT SIDDHI SATYAWAN
36	BF18039	SHELKE RENUKA BABASAHEB
37	BF18040	SHETTY TRISHIKA SADASHIV
38	BF18041	SINGH SHALINI RAJESH
39	BF18042	SINGH ANKITA RAJESH
40	BF18043	SUTAR SHRUTI SHANKAR
41	BF18045	TATKARE PRANIYA CHANDRAKANT
42	BF18046	VICHARE VAISHNAVI MAKARAND
43	BF18047	YADAV PRIYA VIRENDRA
44	BF18048	PAWAR BHARAT CHANDRAKANT
45	BF18101	PRIYADARSHINI MATHI
46	BF18102	BHOIR HEENA SOMNATH
47	BF18103	DEVADIGA NAVAMI NARSIMHA
48	BF18105	DSOUZA MARITA MAXIM
49	BF18106	DUBEY KAJAL BRIJESH
50	BF18107	GANGURDE KAJAL RAJU
51	BF18109	IYENGAR VIJAY DILEEP
52	BF18111	KADAM MANSI SUNIL
53	BF18113	MEDHE SAKSHI SURESH
54	BF18116	PANDEY ANJALI JHARKHANDE
55	BF18118	PATIL RUTUJA MADHUKAR
56	BF18119	PAWAR PRANAV PRAKASH
57	BF18120	PUTHRAN ABHISHEK BALAKRISHNA
58	BF18121	RASAL TANUJA VALMIK
59	BF18122	SAKPAL SHWETA SUDEEN
60	BF18125	SHARMA VIKAS SURENDRA
61	BF18126	SHELAR SONAL PRAKASH
62	BF18127	SHIGVAN AMISHA ARVIND
63	BF18128	SHINDE SALONI DILIP
64	BF18129	SHIYAL KAJAL KAMLESH
65	BF18130	SHUKLA RIYA RAJESH
66	BF18132	SUTAR DIPIKA MANIK
67	BF18133	TELGOTE VAISHNAVI PRAKASH
68	BF18134	THEVAR KARTHIK NAGRAJAN
69	BF18135	THORAT RONEEL RAJESH
70	BF18136	VARMA AASANI AJAY
71	BF18138	YADAV USHA TILBAHADUR
72	BS19139	PANDHARE AJAY BABAN

Mahesh Kandalkar

*Mahesh*

Renu Verma

*Renu*

Hasitkumar Nagariya

*Hasit*



73	BF17032	MISHRA RAJENDRA NANDKUMAR	
74	BF16009	CHAUGULE YASHASWI UMESH	
75	BF17018	GHADIGAONKAR ASHISH PRAMOD	

*P. Kelkar*  
Convener



*h*  
Principal  
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 P-88, MIDC Residential Area Dombivli Gymkhana Road,  
 Near Balaji Mandir, Dombivli (East), 421203.

Program Name  
 Course in which project is compulsory  
 Sem  
 Year

Bachelor of Management Studies  
 Project work  
 V  
 2016-17

SNO	ROLL NO	NAME OF THE STUDENTS	SPECIALISATION	TITLE OF THE PROJECT
1	MF14005	Daware Shubham	MARKETING	Consumer Perception Towards Online Shopping
2	MF14007	Ghadge Mahesh	MARKETING	CRM In Bajaj Finserv
3	MF14009	Gupta Sandeep	MARKETING	The Role of Bajaj Finserv in Consumer Durable Sale
4	MF14015	Kadu Atul	MARKETING	Personal Selling in Kotak Life Insurance
5	MF14018	Katti Sameer	MARKETING	Online shopping Habits of Working Women
6	MF14021	Mishra Rahul	MARKETING	Service Product And Complaint Handling Process of D-Vois Company
7	MF14029	Patil Dhanraj	MARKETING	Marketing Investment Product
8	MF14037	Rahul Prasad	MARKETING	Customer Buying Behaviour Towards Loans
9	MF14045	Shetty Raunak	MARKETING	Products And Services of Kotak Life Insurance
10	MF14057	Yadav Pramila	MARKETING	Brand Loyalty Towards Smartphone
11	MF14060	Yadav Anjali	MARKETING	Products of Home Credit
12	MF14063	Tiwari Archana	MARKETING	Loan Approval Process in Bajaj Finserv
13	MF14002	Chari Niyathi Sridharan	FINANCE	Finance Analysis on Portfolio Management
14	MF14017	Karkera Suraksha Bhasi	FINANCE	Awareness of Investment Opportunities of Non Working Women
15	MF14030	Pereira Misha Trinita W.	FINANCE	Analysis of Financial Literacy among Working Women



16	MF14038	Rawool Shailesh S.	FINANCE	A study of Loan Procedure of Consumer Durable Product at Bajaj Finance
17	MF14042	Saraswathi Venkataram	FINANCE	Awareness of Banking among Students
18	MF14062	Shetty Nikshita Shekhar	FINANCE	Impact of Goods & Service Tax on Consumers and Traders
19	MF14032	Jansi Anand Potanapalli	HR	Employee Motivation
20	MF14010	Balaji Thanumorthy Iyer	HR	Pre-recruitment activities in New Resolution India NGO
21	MF14014	Monisha Bhimnisen Jalul	HR	Recruitment & selection
22	MF14013	Pooja Ramawadh Jaiswar	HR	Training & Development
23	MF14022	Pooja suryakant Mondkar	HR	Recruitment & selection
24	MF14028	Priyanka Shyam Nimkar	HR	Recruitment & selection in Phalcomm Infrassolution pvt ltd co.
25	MF14041	Neha Anil Saliian	HR	Performance Appraisal in Raychem RPG
26	MF14040	Kajal Purandar Saliian	HR	Recruitment & selection in BPO
27	MF14024	Krithika Elengeeshwara	HR	Leadership & Motivation
28	MF14053	Uday Sing Solanki	HR	Change Management
29	MF14061	Priya Ajit Mishra	HR	Strategic HRM in Birla Sun Life Insurance Company
30	MF14026	Priyadarshini Nairajan Nadar	HR	Job Satisfaction among employees
31	MF14023	Aishwarya Gajanan More	HR	Recruitment & selection in BPO
32	MF14016	Pooja Ramesh Kandar	HR	Compensation Benefits
33	MF14006	Kanchan Pramod Ganpatil	HR	Retention of employees
34	MF14053	Mahendra Chandrakant Tompe	HR	Employee training in Birla Sun Life Insurance Co.
35	MF14055	Bhavesh Preenchand Vishwakarma	HR	Career planning and development of employees in Bank.
36	MF14058	Dimple Ramkesh Yadav	HR	Performance Management

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Program Name  
 Course in which project is compulsory  
 Sem  
 Year

Bachelor of Management Studies  
 Project work  
 V  
 2017-18

Sr no	Roll No	Name of the students	SPECIALISATION	Topic
1	MF15028	KHANDARE SACHIN MAHADEV	FINANCE	A study on Investment Avenue for the Purpose of Wealth Advice
2	MF15025	KAMATHE SANDESH SANJAY	FINANCE	A study on preparing project report for project financing at M/S A.H.Nagda and associates
3	MF15001	ADHATRAO PRAKISHA PRABHAKAR PRIYAN	FINANCE	VAT in Maharashtra
4	MF15012	GUPTA JEETKUMAR NANDKUMAR	FINANCE	A Project Report on Consumer Satisfaction at ICICI Bank
5	MF15041	RANE ADITYA VILAS	FINANCE	Public Survey of Life Insurance
6	MF15042	RANE HARSHAL ATMARAM	HR	Indirect Taxes
7	MF15006	DESA RICKY JOCKEY MONIKA	FINANCE	Recruitment and Selection
8	MF15021	JHA SARVESH SANDIP	FINANCE	Mutual Fund Investor: their expectations and strategies in changing scenario
9	MF15020	JEDHE PRANAV RAMDAS	FINANCE	Awareness of banking habits among students
10	MF15017	JAGTAP PRAJAKTA RAGHUNATH	FINANCE	Mutual fund in comparison to other investment avenues
11	MF15043	RAUT VISHAL LALAN	FINANCE	A study on loan procedure of Consumer Durable Products of Bajaj Finance
12	MF15069	YADAV SANJITA TIRTHRAJ	FINANCE	Health Insurance- Cigna TTK Health Insurance Company
13	MF15049	SAWANT ANIRUDDHA GOVIND	FINANCE	Functioning of Share Market and Mutual Fund
14	MF15011	GAWADE VAIDHAVI VIJAY	FINANCE	Value added tax and its impact
15	MF15008	DURGAM STUTI SHRINIVAS LATA	FINANCE	Fluctuations in Exchange Rate US Dollar v/s INR
16	MF15027	KAUSHIK KRISHNAN DEVI	FINANCE	Financial Statement Analysis of WIPRO Ltd.
17	MF15065	TOTANI SAGAR MUKESH	FINANCE	A Study on wealth planning and management
18	MF15068	YADAV AKASH SABHAJEET	FINANCE	Awareness of banking habits among students
19	MF15058	TAK BHAVESHKUMAR HEMARAM	FINANCE	mutual funds an investment options
20	MF15055	SINGH SHUBHAM NARPAT	FINANCE	A study on health insurance awareness preference among people in India
21	MF15033	MISHRA RASHMI RADHEMOHAN	FINANCE	Impact of GST on consumers
22	MF15044	RIMAL HEMANT GOKARNA	FINANCE	A study on filing of Income Tax return and working on computerised accounting
23	MF15071	MORE RAHUL RAMCHANDRA	FINANCE	public Survey of Mutual funds



24	MF15019	JALLA ANKITA DHIRAI	HR	Incentives and Wages
25	MF15039	POOJARY VIKAS KRISHNA	HR	Competency Mapping
26	MF15048	SATRA DOLLY KETAN	HR	Training and Development
27	MF15066	VICHARE KAJAL SANJAY	HR	Compensation Management
28	MF15004	BHANDIGARE SAYALI RAMCHANDRA	HR	Changing Trends in Recruitment Process
29		CHOUHDHARY SHOBHA DHAGLARAM CHAMP	HR	Recruitment and Selection Process
30		RATHOD SARASWATI MAHESH	HR	Recruitment and Selection
31	MF15051	SHETTY REEMA SHANKAR	HR	Importance of Team Building in HRM
32	MF15067	VORA MAYURI VINOD	HR	Recruitment Process in Eminent Minds
33	MF15072	NAIK MANSI SURESH	HR	Recruitment and Selection
34		BHOSALE JAYESH NAGESH RENEUKA	HR	Recruitment Process in Eminent Minds
35	MF15018	JAIN DIMPLE LAXMILAL	HR	Contract Labour Problem and Issues
36	MF15050	SHARMA MEENAL JITENDRA	HR	Job Satisfaction
37	MF15034	NADAR VICTOR DANIEL	HR	Performance Appraisal
38	MF15010	GANESH KRISHNA REVATHI	HR	Job Portal
39	MF15040	SESHADRI RAM USHA	MARKETING	Advertising & Social Media
40	MF15009	GANDHI PRASAD CHANDRAKANT	MARKETING	An Internship Project Report on Event Management Using Digital Media
41	MF15035	PANICKER KIRTANA VISHWAMBHARAN	MARKETING	A study on Patanjali Products with reference to Patanjali Ghee
42	MF15032	MEHTA DEVIKA RAINEESH	MARKETING	Customer Attitude towards the re-launch of Maggi (Survey)
43	MF15037	PAWAR RUGVED SUNIL	MARKETING	Marketing Strategies of Celogen Pharma
44	MF15052	SHINDE SAHIL AIT	MARKETING	Consumer Perception towards LLC
45	MF15026	KASTURI RAJESH RAYMALLU	MARKETING	Consumer Attitude towards Online Marketing
46	MF15002	ANTONY ARLEN ANSELAM	MARKETING	Consumer Buying Behaviour Towards Surf Excel
47	MF15003	BALYAPPELLI DEEPA VISHWANATH	MARKETING	Consumer Behaviour Towards D-mart
48	MF15024	KALE PALLAVI LAXMAN	MARKETING	Consumer Behaviour towards Made in China products
49	MF15070	CHAVAN PARINEETA PRADEEP	MARKETING	Impact of mobile phone marketing on youngsters
50	MF15045	SALUNKE KARUNA RAMAKANT	MARKETING	To study the Marketing Strategy with respect to Hike Messenger
51	MF15046	SANAP PRAVIN TUKARAM	MARKETING	A study on Online Shopping
52		SHARMA MAYANK HIRALAL PRITI	MARKETING	Consumer Behaviour towards Amazon
53	MF15029	KUMARAN ASHITA SUKESH	MARKETING	Consumer Behaviour towards smartphones
54	MF15062	THEVAR GAYATHRI RAMASWAMY	MARKETING	To understand the Impact of Point of Purchase in the hypermarkets
55	MF15013	GUTKA ANKIT PRAVINCHANDRA	MARKETING	Customer Service Provided by Amazon
56		SINGH RIYA DINESH KAJAL	MARKETING	To study Marketing Strategies of Bislari
57	MF15015	JADHAV DIPESH VIJAY	MARKETING	CUSTOMER SATISFACTION ON AMAZON BASICS PRODUCTS

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Program Name Bachelor of Management Studies  
 Course in which project is compulsory Project work  
 Sem VI  
 Year 2018-19

Sr no	Roll Number	Name of the students	Specialisation	Title of the Project
1	MF15056	Sushma Rendra Singh	HR	Stress Management Among the Employees Working in SBI Bank
2	MF16001	Ambika Palanisadayam	MARKETING	Internship project Report on INDO AMINES LTD
3	MF16063	Vaniyar Chitra	HR	Internship project Report on INDO AMINES LTD
4	MF16002	Aniket Bhangre	MARKETING	A project on "Study on Aditya Birla Capital
5	MF16005	Pratiksha Chauhan	MARKETING	Internship on Pest O Stop Pest Control Servis
6	MF16021	Greeshma Kotian	HR	The Study on Performance Appraisal in Bharat Co-Op Bank
7	MF16030	Manasi Upendra Nandedkar	HR	An Internship Project Report On R&S Practices in Tata Memorial Hospital
8	MF16033	Aarti Pandit	FINANCE	Impact of Microfinance on living standard empowerment of economically backward people
9	MF 16034	yogita Ganesh Parab	FINANCE	A Study on Cyber Crime in banking Sectors
10	MF16038	Rakshita B Poolari	HR	A study on Employee Satisfaction At L&T
11	MF16039	Swathi Ramesh Poolary	FINANCE	A Study on Comparative Analysis Of Mutual Fund and ULIP
12	MF16040	Pravinkumar Ganeshan	FINANCE	A Study Report on Trading in Sharekhan Trade Tiger
13	MF16041	Nikitha Rajkesh Rai	FINANCE	The Study Of Equity financing and Debt Financing at Birla Sun Life Insurance
14	MF16043	Mayuri Salunkhe	FINANCE	The Study of Investor's Perception towards investment alternatives
15	MF16046	Salman Shaikh	FINANCE	Equity Research of Fast Moving Consumer Goods Sector(Aditya Birla Group)
16	MF16047	Madhu Sharma	FINANCE	A study Report on FDI in Retail Sector
17	MF16052	Sneha Shetty	HR	A Study on Work Life Balance Among Employees in Bharat Co-Op Bank
18	MF16056	Raghvendra Rajesh Singh	FINANCE	A Study on Emergence of Cashless Economy
19	MF16058	Suraj Singh	FINANCE	Investment Banking and its Work(Aditya Birla Sunlife Insurance)
20	MF16051	Rupesh Ravindra Shetty	FINANCE	A Study on Investor's Perception Regarding Investment Alternative in Stock market
21	MF16060	Shreya Shrinivasan	FINANCE	A project report on Working of Treasury department in ALKEM LABORATORIES LTD
22	MF16066	Vivek Yadav	FINANCE	A study report on Loan Procedure of consumer durable product at Bajaj Finance
23	MF16067	Mihika Rajendra Yeole	HR	A Project Report on Problem Faced by Women in Information Technology Sector
24	MF16069	Keval Patel	FINANCE	Security Ananlysis and Portfolio Management
25	MF16072	Venkateshwari Devendran	FINANCE	A Study on Consumer Perception Towards GST in Kalyan & dombivli
26		Yash More	HR	Internship Report on HR function of Birla Sunlife Insurance
27		Shantanu Pramod Saswade	HR	Internship Report On GR function at Aditya Birla Capital
28	MF16011	Jyoti Rajendra gupta	MARKETING	A Project on Consumer Perception and Buying Behaviour Towards Lakme
29	MF16009	Amey Deshmukh	MARKETING	A project on Consumer Satisfaction Measurement



30	MF16008	Ashwini Desale	MARKETING	A Study on Birla Sun Life Insurance
31		Usha Suryakant Parthi	FINANCE	A Project Report On A Study on Factors that influence the investors to invest in Mutual Funds
32		Abhay Pathani	FINANCE	A Project Report on Derivatives Market in India
33	MF16022	Priya Chandrabas Kotian	FINANCE	Customer's Perception on Life Insurance Policy in Mumbai
34	MF16019	Dhiraajbomur Karajia	MARKETING	Project Report on Marketing Sales & Services with reference to Bajaj Finserv
35	MF16071	Narain Veljankar Nadar	MARKETING	A Study on Consumer Buying Behaviour and Satisfaction level of Two wheeler with reference to Bajaj Auto
36	MF16042	Alvika Rodrigues	MARKETING	A Project on Marketing Strategy of Aditya Birla Sunlife Insurance
37	MF16048	Ajay Jaywant Shet	MARKETING	Youtube Advertising
38	MF16053	Pravintra Raju Shinde	MARKETING	A project on Niche Marketing Segmentation and Segment Analysis
39		Vijayshankar Neelamaheshwaran	HR	A study on Recruitment and Selection at Choose us Multi Services
40	MF16015	Swathi Harsharan	HR	Organizational Study on Employee Motivation in Banking Sector
41		Sneha Madhukar Mohatre	HR	A Project Report on "A Study on Employee Attitude in the Organization with respect to Tata Memorial Hospital
42	MF16014	Angali Soundarajan Iyer	FINANCE	A Study on Financial Instruments and Derivative Market at Birla Sun Life Insurance
43	MF16015	Shravyabharati Shekhar Iyer	FINANCE	Study on Investors Awareness Towards Mutual Fund Investment
44	MF16003	Rashmita Faghu Chandan	FINANCE	An analysis of the use of plastic money among salaried people
45	MF16031	Seema Narkar	FINANCE	A project on "Customer Preference Towards Various Investment Alternatives" (ULIP Plan Post Office Deposit, Commodity Market, Real Estate and Life Insurance
46	MF16023	Yash Rajesh Madhav	FINANCE	
47	MF16020	Sayali Vijay Khnolbar	HR	Analysis of problem of layoff in Axis Bank
48	MF16024	Maidra Pooja Lalithai	HR	Recruitment Policy of Reliance
49	MF16027	Mare Rudra Anant	HR	Training & Development Program of TATA
50	MF16050	Shetty Neminitha Jagadeesh	FINANCE	An analysis of ICICI Bank with Axis Bank
51	MF16059	Soni Sumera Narendra	HR	Compensation Structure of Bajaj Finance

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Program Name  
 Course in which project is compulsory  
 Sem  
 Year

Bachelor of Management Studies  
 Project work  
 VI  
 2019-20

Sno	Roll no	Name	Specialisation	Title
1	MF17001	sweettha saki	Finance	The Impact of gst on automobile industry in india
2	MF17006	Ashutosh Choudhary	Finance	Derivatives market in india
3	MF17011	Anjali Gupta	Finance	Report on life insurance in india
4	MF17028	Saboni Nagda	Finance	Study on Impact of gst on tour & travels
5	MF17035	Urmila Pralapsu	Finance	FDI in Retail Sector
6	MF17031	Rupali Parab	Finance	Cashless Economy
7	MF17035	Pratibha Khandekar	Finance	Currency market rupee vs dollar
8	MF17005	Isaac Borra	Finance	Diversification application in portfolio management
9	MF17021	Shikhar Jaiswal	Finance	Customer perception towards e - banking services
10	MF17003	Mansuri Behera	Finance	Effects of inflation on business profitability
11	MF17026	Umadesai kuntawar	Finance	Analysis of financial services of axis bank
12	MF17007	Nikhil Dabude	Finance	Study of customer satisfaction of hdfc pri lid
13	MF14033	Ashra prabudesai	Finance	project on bitcoin
14	MF17113	GHADGE SHEETAL DRUP	FINANCE	SERVICES OFFERED BY HDFC MOBILE BANKING
15	MF17127	KURTNAYAR PARVATEE ASHAPPA	FINANCE	ANALYSIS OF FINANCIAL SERVICE OF KOTAK MAHINDRA BANK
16	MF17131	MORVEKAR MITHIL GOPAL	FINANCE	A STUDY ON THE AWARENESS AND USAGE OF CASHLESS TRANSACTIONS AMONG CUSTOMERS
17	MF17139	PALANI MEGHANA SANJEEVA	FINANCE	A STUDY OF INVESTORS PERCEPTION TOWARDS INVESTMENT IN SHARES
18	MF17141	PANDEIT PRADHYA DINESH	FINANCE	THE STUDY OF STOCK MARKET
19	MF17142	PANT AMRUDHA SUBHASH	FINANCE	INDIAN CAPITAL MARKET
20	MF17146	RAJIBHAR SHEHA CHANDRAKANT	FINANCE	INTERNETBANKINGSTATEBANKOFINDIA(SBI)
21	MF17147	RAMDAS SAKSHI BHASKAR	FINANCE	TO STUDY THE FOREIGN EXCHANGE MARKET RISK
22	MF17150	SHETTY SUSHMITA SACHIDANANDA	FINANCE	PORTFOLIO MANAGEMENT
23	MF17154	TOTANI AVINASH SANTOSH	FINANCE	WEALTH MANAGEMENT AND PLANNING AMONG INDIVIDUALS
24	MF17159	ZINGADE SOURABH NAGESH	FINANCE	POPULAR MUTUAL FUND PRODUCTS AMONG CONSUMERS
25	MF17160	DESHPANDE KARUNA ASHOK	FINANCE	MERCHANT BANKING IN INDIA
26	MF17053	Pooja Thakker	FINANCE	A Project on Share Broking Firms (Comparison between Motilal Oswal & Zerodha)
27	MF17050	Radhika Suroshi	FINANCE	Comparative Analysis between the health insurance Company Bajaj Allianz & ICICI Lombard
28	MF17111	Surekha Koli	FINANCE	A study on life insurance w.r.t Kotak Life Insurance





29	MF17044	Pratiksha Shinde	FINANCE	A study on various investment opportunities for salaried people
30	MF17057	Neha Udange	FINANCE	A study on Housing loan by HDFC Bank
31	MF17036	Nidhi Rajgor	FINANCE	A study on Mutual Fund
32	MF17102	Aman Bhanushali	FINANCE	A Comparative study between SBI & HDFC Bank
33	MF17108	Varun Dytaram	FINANCE	Impact of Financial Derivatives & hedge Funds in Indian Financial Market
34	MF17049	Pooja Sulakhi	FINANCE	An Analysis of awareness level of people about micro finance in India
35	MF17040	Navami Shah	FINANCE	A Comparative study on Customer awareness on banking services provided by SBI & ICICI Bank
36	MF17046	Sachin Shukla	FINANCE	a study on comparative analysis between Private & Public Health Insurance Company
37	MF17056	Pratibha Twarl	FINANCE	A Study on awareness of Demat Account
38	MF17002	KASTHURI	MARKETING	CUSTOMER SATISFACTION WITH SWIGGY
39	MF17004	NEEDHI BHARADWAI	MARKETING	CUSTOMER SATISFACTION OF DOMINO'S PIZZA IN DOMBIVLI
40	MF17008	NIDHI DHIRWANI	MARKETING	CONSUMER SATISFACTION TOWARDS AMUL MILK
41	MF17009	SWAROOP DURGAM	MARKETING	INFLUENCER MARKETING WITH REFERENCE TO THUMBSUP
42	MF17010	GOND SURAKUMAR SURENDRA	MARKETING	"STUDY OF ONLINE FOOD DELIVERY APPLICATION WITH RESPECT TO ZOMATO"
43	MF17012	DEEPAK GUPTA	MARKETING	SALES PROMOTION OF CADBURY DIARY MILK
44	MF17017	LAVANYA NER	MARKETING	UNDERSTANDING THE FACTORS INFLUENCING BUYING DECISIONS OF CONSUMERS IN ORGANISED FOOD AND GROCERY RETAIL IN DOMBIVLI CITY
45	MF17020	JAIN PARIDHI ANIL	MARKETING	CONSUMER PERCEPTION AND BUYING BEHAVIOUR TOWARDS MAYBELLINE COSMETICS
46	MF17024	HRISHIKESH VIJAY KADAM	MARKETING	SALES PROMOTION OF DETTOL
47	MF17032	PARTE AKSHAY DATTARAM	MARKETING	"CONSUMER SATISFACTION TOWARDS BAJAJ BIKE"
48	MF17042	VARDHAN SHEJWAL	MARKETING	MERGER OF IDEA & VODAFONE
49	MF17043	NIKHIL SHETY	MARKETING	ONLINE SHOPPING AND APPLICATIONS
50	MF17047	SINGH ADARSH RAMAKANT	MARKETING	A STUDY ON INTERMEDIARY PERCEPTION OF RETAILERS AND DISTRIBUTORS TOWARDS RAYMONDS
51	MF17051	PAVITHRA S	MARKETING	MARKETING OF AYURVEDIC PRODUCTS
52	MF17054	VIRAU THORAT	MARKETING	INSTAGRAM MARKETING
53	MF17055	TIWARI ASHITOSH RAKESH	MARKETING	AN INTERNSHIP REPORT ON WAREHOUSING OF FLIPKART COMPANY
54	MF17058	ADARSH UPADHYAY	MARKETING	Pricing policy of Idea
55	MF17059	NIKETTA VISHWAKARMA	MARKETING	ECO FRIENDLY PACKAGING
56	MF17060	SIDDHARTH VORA	MARKETING	RETAIL INDUSTRY
57	MF17104	BIND ROHITKUMARKUMARCHAND	MARKETING	MARKETING STRATEGY OF COFFEE
58	MF17105	CHAUHAN KARAN SAMIR	MARKETING	Customer Satisfaction of Zomato
59	MF17112	GAUTAM SHASHIKANT RAMBALL	MARKETING	MARKETING STRATEGY OF MAGGI
60	MF17116	GUPTA JITENDRA NANDKUMAR	MARKETING	"ONLINE ADVERTISING DEFINING RELEVANT MARKETS"
61	MF17117	GUPTA RAHUL LALU	MARKETING	A STUDY OF MARKET ANALYSIS AND SALES DEVELOPMENT IN DOMBIVLI
62	MF17121	SASHANK JAISWAL	MARKETING	CUSTOMER SATISFACTION OF RELIANCE JIO PRODUCTS AND SERVICES
63	MF17122	ROBIN JANGID	MARKETING	MARKETING STRATEGIES OF PIZZA HUT & DOMINOS
64	MF17123	MANISH JOSHI	MARKETING	ABSENT
65	MF17124	KAUSTUBH KADAM	MARKETING	DIRECT MARKETING WITH REFERENCE TO AMWAY
66	MF17126	KRINAL KENIYA	MARKETING	MARKETING STRATEGIES OF MCDONALDS
67	MF17128	MADAV ARVIND SANJAY	MARKETING	"A STUDY ON SERVICE MARKETING OF ONLINE FOOD DELIVERY SECTOR WITH REFERENCE TO DOMBIVLI CITY"
68	MF17133	NADAR GANESH SHANMUGAVEL	MARKETING	TOSTUDY MARKETING STRATEGY OF NIKE VS ADIDAS





69	MF17136	NEHERE SHRUTI SUBASH	MARKETING	EFFECTIVENESS OF MARKETING STRATEGIES OF OMEPLUS
70	MF17143	PATIL DATTU RAVINDRA	MARKETING	MARKETING STRATEGY OF BAJAJ AUTO LTD
71	MF17145	RAIBHAR ROHIT LALLAN	MARKETING	Sales and promotions and strategy of amul ice cream
72	MF17148	SAHASRABUDDHEY NEEL VILAS	MARKETING	OVER THE TOP(OTT) PLATFORMS AND ITS COMPARATIVE ANALYSIS
73	MF17153	VAISHNAVI SONKARS	MARKETING	MARKETING STRATEGIES OF PACKAGED WATER INDUSTRY WITH REFERENCE TO BISLERI
74	MF17155	SHUBHAM VAKHARE	MARKETING	UPI PAYMENT APPS
75	MF17157	SACHINI YADAV	MARKETING	MARKETING STRATEGIES OF AMUL
76	MF17158	SURENDRA YADAV	MARKETING	ABSENT
77	MF15063	ADITYA IWARI	MARKETING	BASICS OF INVESTMENT
78	MF16032	PADAYACHI SURESH KALYANMOORTHY	MARKETING	A STUDY OF COSNUMER PERCEPTION TOWARDS PATANJALI PRODUCT
79	MF16045	SURAJ SEN	MARKETING	MUTUAL FUNDS PRODUCTS
80	MF16055	NIKITA SINGH	MARKETING	KELLOGGS
81	MF17013	GUPTA MANJU SHIVMURAT	HRM	A Study on Employee Retention Strategies adopted in Indian IT Sector
82	MF17014	GUPTA PRIYA UDAY	HRM	An Internship Report on Statutory Compliance followed in Tech Mahindra
83	MF17022	JEEVANRAJ MURUGAN	HRM	A Project report on Employee Satisfaction in Loco Buzz, Chakal, Andheri
84	MF17023	JYALA USHA LALISINGH	HRM	An Internship Report on HR Process in Vortex Engineering Works India Pvt. Ltd.
85	MF17027	MALAVADE RIJUTA MILIND	HRM	A Study on Workforce Diversity and Inclusion in Service Sector in Mumbai.
86	MF17029	NAIK ROSHNI RAMESH	HRM	An Internship report on E - Recruitment and its implications in A & A Associates.
87	MF17030	NATHWANI KRUNALI MAHESH	HRM	Internship Report - A Study on Employee Onboarding in Tech Mahindra
88	MF17039	ROGAHA JYOTI KUMARI BUDDHIRAM	HRM	A Study on Employee Satisfaction in IT Sector
89	MF17041	SHAHU GAYATRI MUNNALAL	HRM	An Internship Report on Recruitment and Selection Process at A & A Associates.
90	MF17045	SHINDE RAMESH NAGARAJARAO	HRM	A Study on Employee State Insurance as a Social Security measure w.r.t. Employees residing in Kalyan - Dombivli
91	MF17052	TAWADE SHIVANI RAJENDRA	HRM	A Study on Employee Welfare facilities at APAR Industries Ltd.
92	MF17101	ALENZO SHRUTIMARV RICHARD	HRM	A Study on Job Web Portals w.r.t. Naukri . Com
93	MF17106	DALVI HRUVI UMAKANT	HRM	A Study on Impact of Motivational Strategies on Productivity
94	MF17110	GAIKWAD RUTUJA JAYWANT	HRM	A Study on Rotation / Night Shift
95	MF17119	JADHAV SAKSHI RAVINDRA	HRM	A Study on Stress Management among Employees in Kalyan Dombivli Area
96	MF17140	PANDEY AMAN CHHOTELAL	HRM	A Study on Performance Management in Vijaycott Company.
97	MS18061	SHINDE BHAGYASHREE VUAY	HRM	An Internship report on Recruitment and Selection in Tech Mahindra
98	MF17149	SAROI MANISHKUMAR LOKARAKNATH	HRM	STUDY OF TRAINING AND DEVELOPMENT IN BSNL
99	MF17135	NANDOSKAR SHREEYA RAJESH	HRM	A STUDY OF E-RECRUITMENT
100	MF17129	SURESH MEDATYA	HRM	EMPLOYEE RELATION
101	MF17120	VAIBHAV JADHAV	HRM	REWARDS AND COMPENSATION POLICY
102	MF17132	AISHWARYA MUDALIAR	HRM	RECRUITMENT AND SELECTION IN ICICI BANK
103	MF17130	SURAJ MHATRE	HRM	EMPLOYEE ENGAGEMENT IN TECH MAHINDRA
104	MF17134	RENIS NADAR	HRM	WORKLIFE BALANCE OF A WORKING WOMEN

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DOMBIVLI (E)

The South Indian Association's  
**The S.I.A. College of Higher Education**  
 Affiliated to University of Mumbai  
 Accredited B+ by NAAC  
 P-88, MIDC Residential Area Dombivli Gymkhana  
 Near Balaji Mandir, Dombivli (East), 421203.

Program Name: Bachelor of Management Studies  
 Course in which project is compulsory: Project work  
 Sem: VI  
 Year: 2020-21

SNO	Name	Roll no	Specialisation	Title of the Project
1	Akash Mamdapur	MF15031	Marketing	Internship in Hindustan Unilever
2	Tanvi Rane	MF17037	HR	The Role & Significance of HR In Change Management w.r.t. Attradus India
3	Aishwarya Gadhave	MF17109	HR	Employee Satisfaction
4	Abhishek Gupta	MF17115	Marketing	Project on stock market or financial market
5	Vaishali laxman gonty	mf17114	HR	Recruitment and selection of meera enterprise
6	Sanket wable	MF17156	Marketing	To study marketing strategy of nike vs adidas
7	Aathira Ramesh	MF18001	Finance	Internship report on Birla sunlife insurance
8	Phlominai Viswasam	MF18002	HR	A report on Internship at Future Generali Organization
9	Velladurai Chitra	MF18005	HR	Stress Management in working women
10	Rema Hemanto Ash	MF18006	Finance	Aditya birla sunlife insurance
11	Suraj Narsingh Bai	MF18007	HR	Employee job satisfaction w.r.t Tata AIG
12	Pratiksha ravindra bawkar	MF18008	Marketing	Market analysis on cosmetics
13	Nikki Rohit Bheda	MF18009	Marketing	Internship on Aditya Birla SunLife Insurance
14	Divya Azad Bohat	MF18011	HR	An internship report on future Generali
15	Sheryl Cabral	MF18012	Finance	A report on product portfolio Birla Life Insurance Co Ltd
16	Akshata Shashikant Chorge	MF18013	Finance	Study on Paytm services promoting cashless economy
17	Rahul Dangar	MF18015		Survey on Bajaj Auto Ltd.
18	Mithir M. Dhamankar	MF18017	Finance	Comparative Study of Investment of Mutual Fund Nid Fixed Deposit
19	Bhagyashri Gangaram Ghadigaon	MF18019	Marketing	Understanding consumer attitude towards green consumerism
20	Swati D.Gupta	MF18020	HR	Project on Future Generali
21	Gyanendra Gupta	MF18021	Finance	Survey of GST
22	Hardik Vint Jain	MF18022	Marketing	A study on marketing strategies in event management sector towards consumers with reference to Kalyan-Dombivli city.
23	Shalu ashok jaiswal	MF18023	Marketing	Amul milk
24	Pratik kanouliya	MF18024	Marketing	Sales promotion of Cadbury dairy milk
25	Divya Chandrakant kshirsagar	MF18025	Finance	Survey / UPI Reference To Axis Bank
26	Kaushiki Kulkarni	MF18026	Finance	Perception and attitude towards digital payment among urban society
27	Shubham Ganpat Manjrekar	MF18027	Marketing	INTERNSHIP REPORT ON A SALES,MARKETING STRATEGY ADITYA BIRLA CAPITAL& A
28	Chaitra mayekar	MF18029	HR	Internship black book
29	Maghashree Kathirvelu Mudaliyar	MF18031	Finance	A Report on internship with Birla Sun Life Insurance on comparative equity research analysis
30	Kavya Sadanand Mulya	MF18032	Finance	Study on services provided by Punjab National Bank through internet.
31	NADAR JEBESH REO ARUL RAJAN	MF18033	Marketing	àçva Study On Customer Perception On Service Quality With Reference To Life Insurance Company&c
32	Jasinth Selvarajamani Nadar	MF18034	Marketing	Supply chain management and Distribution Channel
33	Swetha Jayaseelan Nadar	MF18035	HR	Challenges faced by working women w.r.t.kalyan Dombivli.
34	Karthik Kannan Naidu	MF18037	Marketing	Study on Netflix's Market Penetration In India
35	Devika NAIR	MF18038	Finance	A comparative Analysis on Insurance Product on Aditya Birla Company.





36	Krutika Nalawade	MF18040	Marketing	Effect of Mobile marketing on youngsters
37	Padgaonkar Dhanashree Shrirang	MF18041	Marketing	A Study Report On Customer Satisfaction With Reference To Suzuki Motors
38	Nanhe rajnath gal	MF18042	Marketing	Event management
39	Adwait Phadke	MF18043	Finance	Comparison of Aditya Birla Health Insurance
40	Saraswati Murugan pilisi	MF18044	Finance	To study on Investors' perception towards various investment products. (Internship project)
41	Poolary Varsha Ravi	MF18045	Marketing	A Report on Insurance Products with reference to Aditya Birla SunLife Insurance
42	SAMITH GANESH RAI	MF18046	Marketing	Report on internship in future general
43	Shridar krishna rao	MF18047	Finance	Perception of customer for systematic investment plan (SIP?)
44	Rahul Rathod	MF18048	HR	Investors in mutual fund
45	Jugal Parresh Sampat	MF18050	Marketing	Consumer Perception Towards Bewakoof.com Online Shopping Site
46	Shabana Shaikh	MF18053	Finance	UPI payment
47	Dimple hitesh sharma	MF18054	HR	A study on employee engagement with respect to BHARTIAXA insurance company.
48	Chaitali Shettigar	MF18055	Marketing	Internship Report on "Marketing Strategies and Marketing mix of insurance Sector"
49	SHETTY RAMYA SHANKAR	MF18056	HR	An Internship Report on training and development of EMBCL Company
50	Neha sampat shinde	MF18057	Finance	A Report on overview of Future General Insurance company
51	Aanchal Shrivast	MF18058	Finance	Investment pattern of the salaried individuals
52	Priya Gyan Singh	MF18059	Finance	An Internship Report on Future General Insurance company
53	Yash Singh	MF18060	Marketing	A Study on Online Shopping and Consumer Buying Behavior on Mynta.com
54	Sonu solanki	MF18061	HR	HR issue in merger and acquisition in banking sector
55	Sonal Sonawane	MF18062	Finance	The Study of Recruitment and Selection Practices in Axis bank
56	karishma v thakker.	MF18063	HR	INTERNSHIP- H & R JOHNSON LTD.
57	Alash Santosh Tiwari	MF18064	Finance	Internship project report on Customers perception and attitude towards Health insurance at Aditya Birla Capital
58	Tanaya vichare	MF18065	HR	Work-life balance of employees during covid19
59	Sneha Yadav	MF18066	Finance	Consumer feedback
60	Nandkishor Bhat	mf18101	Finance	Cryptocurrency
61	Pavan Ravi Chama	MF18104	Finance	Application of IT in stock market
62	Pradi pramod chaudhari	MF18105	Marketing	Consumer Behaviour towards different toothpaste brands
63	Tanushree Chavan	MF18106	Marketing	Comparative study on consumer behaviour of online and offline shopping.
64	Divya sambhaji chavan	MF18107	HR	A study on various employee welfare facilities provided by Tata consultancy services mumbai
65	Shrilesh Dharan	MF18109	Marketing	Marketing strategies of D-Mart
66	Shrikant Suhas Dharmadhikari	MF18110	Marketing	Business process of Outsourcing
67	Rahul Rajendra Gaud	MF18111	Marketing	About Aditya Birla Group
68	Rahul Tukaram Harale	MF18114	Marketing	Sale on health insurance in Aditya birla group
69	RUTUJA SURESH HAASHE	MF18115	HR	A study on recruitment and selection in Yaashakrishni Food Science Ltd.
70	Gayatri jawaharlal kanojiya	MF18116	Marketing	Internship project Aditya birla capital
71	Chinmay Kardam	MF18117	Marketing	Marketing strategies of McDonald's
72	Atharva khot	MF18119	HR	Work life balance among teacher/bank employees/BPO/KPO employees/ women professionals
73	Abhishek Kulkarni	MF18121	Marketing	STUDY OF TRADITIONAL AND DIGITAL MARKETING
74	Shivani Mukund Lokhande	MF18122	Marketing	Internship project on future general life insurance company
75	SONICA MAANDIKAR	MF18123	HR	A STUDY ON ABSENTEEISM OF WORKERS WITH RESPECT TO ARMADA DISTRIBUTION COMPANY.
76	KEVAL MOTI	MF18126	Marketing	COMPETITIVE ANALYSIS of FROOTI and its COMPETITORS
77	Abhinav Jagannath Nigade	MF18129	Finance	Needs & Benefits of insurance policy
78	Poonam Pasi	MF18131	HR	Internship in Digital Marketing
79	Mahendra patel	mf18132	Finance	Study on bombay stock exchange
80	Shubham Shivdhari Patel	MF18133	Marketing	A study on Sales and Marketing strategy of Amara Raja Batteries Ltd
81	Aditya Poddar	MF18136	Finance	Consumer Feedback
82	Sapna Rajesh Prajapati	MF18137	HR	Performance management system
83	Kalpesh Salunke	MF18139	Finance	Awareness of health insurance among people



84	Disha Arun sangoi	MF18141	HR	A INTERNSHIP REPORT ON RECRUITMENT AND SELECTION IN CONSULTANCY. ECG HR SOLUTIONS PVT LTD.
85	Kaveri Narasappa Shirakanahalli	MF18147	Finance	Internship report on Aditya Birla Sun Life Insurance
86	Neeraj Solanki	MF18148	Marketing	Consumer Feedback
87	Thevar Bhanumathi selvam	MF18150	HR	Work life balance of employees residing kalyan -dombivli area
88	Manisha Upadhyay	MF18152	Marketing	Black book
89	Shubham Yadav	MF18153	Finance	Aditya Birla sunlife insurance
90	Yash zare	MF18154	Finance	ECOMMERCE IN INDIA
91	Ajinkya Dhuri	MF18155	Finance	A study on Good Service and taxes
92	Pranjal Arun Nandgaonkar.	MF18157	Finance	Study on customer satisfaction from HDFC E-Banking services.
93	Suman sahu	MF18158	Marketing	Study on insurance in detail
94	VANAPNOOR STELLA BHANMITRA	MF18159	HR	"Suditi Industries" "Training And Health & Safety Of The Employee"
95	Jayesh Shridhar Barve	Ms19160	HR	Recruitment in organization

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**THE S.I.A COLLEGE OF HIGHER EDUCATION  
TYB.SC.IT PROJECT DETAILS 2018-2019**

srno	Roll No	Student Name	Project Topic	Technology	Project Guide
1	IF16028	MEHENDALE NIDHI UDAY	Business Card Reader	Android	Archana Kshirsagar
2	IF16042	PAWAR POONAM PRAKASH	Business Card Reader	Android	Archana Kshirsagar
3	IF16019	KADECHA HEMANSHU KIRTI	C++ and Java Tutorials App	Android	Archana Kshirsagar
4	IF16070	RANE ANIKET ANIL	C++ and Java Tutorials App	Android	Archana Kshirsagar
5	IF16018	JHA SHIWANI RAMESHKUMAR	Online Food Ordering App	Android	Archana Kshirsagar
6	IF16023	KULKARNI VAIDEHI RAGHAVENDRA	Online Groccry ordering App	Android	Archana Kshirsagar
7	IF15039	SAWANT PRIYAL BALKRISHNA	Student Teacher App	Android	Archana Kshirsagar
8	IF16039	PATANKAR AMARJA PRADEEP	Art Auction site	.NET	Nandini Kadam
9	IF16031	MORYE PRAPTI SHANKAR	online super market	.NET	Nandini Kadam
10	IF16072	SHETTY SUDHIR SANTOSH	online super market	.NET	Nandini Kadam
11	IF16015	GUPTA POOJA UDAY	S.I.A College of Health Sciences Website	PHP	Nandini Kadam
12	IF16057	SINGH SANGRAM LAUHAR	S.I.A College of Health Sciences Website	PHP	Nandini Kadam
13	IF16063	WAGHELA DIMPLE RAMESH	S.I.A College Website	PHP	Nandini Kadam
14	IF16016	JADHAV RAHUL SAGARMAL	Training and Placement	.NET	Nandini Kadam
15	IF16066	YADAV SATYAM SURENDRA	Training and Placement	.NET	Nandini Kadam
16	IF16048	SALIAN SHAURYA DAS	Cake Shop Management	.NET	Rashmi Chindarkar
17	IF16071	RATHOD VIRAJ MAGAN	Cake Shop Management	.NET	Rashmi Chindarkar
18	IF16041	PAWAR PARAG PRASENJIT	Catch up	Java	Rashmi Chindarkar
19	IF16054	SHINDE VIGNESH VIJAY	Catch up	Java	Rashmi Chindarkar
20	IF16021	KARKERA MONISHA DAMODAR	Online Fest Management	.NET	Rashmi Chindarkar
21	IF16013	GUPTA AMIT VIKRAM	Online Renting of car	Java	Rashmi Chindarkar
22	IF16061	UPADHYAY NITESH MANOJ	Online Renting of car	Java	Rashmi Chindarkar
23	IF16036	LAD MIHIR RAJESH	Selling online spices	Java	Rashmi Chindarkar
24	IF16045	R BALAKRISHNAN	Selling online spices	Java	Rashmi Chindarkar
25	IF16059	THARWAL SHREYAS SANTOSH	Selling online spices	Java	Rashmi Chindarkar
26	IF16017	JAIWAR SANDEEP RAJKUMAR	Laundry Management System	.NET	S. Saisree





srno	Roll No	Student Name	Project Topic	Technology	Project Guide
27	IF16024	KUMBHAR DHIRAJ VILAS	Laundry Management System	.NET	S. Saisree
28	IF16014	GUPTA HARSHAD TRIVENI	Society Management System	.NET	S. Saisree
29	IF16043	POOJARY PALLAVI SURESH	Time Table Generator	Java	S. Saisree
30	IF16058	SONI KIRAN SHANKARLAL	Time Table Generator	Java	S. Saisree
31	IF16062	WADER SHWETA SHANKAR	Time Table Generator	Java	S. Saisree
32	IF16003	CHAUHAN DHIRAJ RAMAKANT	Cyber Café Management	.NET	Sandhya Pandey
33	IF16004	CHAUHAN PRATIK SHYAMSUNDAR	Cyber Café Management	.NET	Sandhya Pandey
34	IF16033	NAIR SRUTHI SREEKUMAR	Insurance Boat	.NET	Sandhya Pandey
35	IF16035	NASKAR NIKITA BABLU	Insurance Boat	.NET	Sandhya Pandey
36	IF16064	YADAV AJAY BANARASI	Online Gym Registration	.NET	Sandhya Pandey
37	IF16065	YADAV NEERAJ JEELAJEET	Online Gym Registration	.NET	Sandhya Pandey
38	IF16022	KONAR JAIPARAMESHWARI BALASUBRAMANI	Virtual Classroom	.NET	Sandhya Pandey
39	IF16055	SINGH PRATIBHA DHARMENDRA	Virtual Classroom	.NET	Sandhya Pandey
40	IF16010	DIXIT ANIKET SURYAPRAKASH	Akshay Sales Corporation	Java	Sandhya Thakkar
41	IF16047	RODE SAPNA PARSHURAM	Akshay Sales Corporation	Java	Sandhya Thakkar
42	IF15033	RAJBHAR MANGESH RAMSUBHASH	E- Ticketing	Java	Sandhya Thakkar
43	IF16006	CHAVAN CHINMAY KISHOR	E- Ticketing	Java	Sandhya Thakkar
44	IF16007	DESAI PRASAD PRADEEP	E- Ticketing	Java	Sandhya Thakkar
45	IF16050	SHELAR DASHMI ANANT	MIS	Java	Sandhya Thakkar
46	IF16020	KAMBLE UTKARSH SANJAY	S.I.A Athenaeum	Java	Sandhya Thakkar
47	IF16026	MANKAR ABHISHEK SAMPAT	S.I.A Athenaeum	Java	Sandhya Thakkar
48	IF16056	SINGH SAMAR LAUHAR	S.I.A Athenaeum	Java	Sandhya Thakkar
49	IF16032	NAIK DARSHAN RAMKRISHNA	S.I.A Granthalaya	Java	Sandhya Thakkar
50	IF16034	BHAVESH PRAKASH NARANG	S.I.A Granthalaya	Java	Sandhya Thakkar
51	IF16001	BHANDARI CHAITANYA PRAKASH	Attendance Management System	Embedded	Tejaswini Shivsharan
52	IF16030	MORE ONKAR PRAMOD	Attendance Management System	Embedded	Tejaswini Shivsharan



srno	Roll No	Student Name	Project Topic	Technology	Project Guide
53	IF16008	DESHPANDE AISHWARYA MILIND	Automatic Bell System	Python	Tejaswini Shivsharan
54	IF16051	SHETTIGAR MADHUPRIYA SUBHASH	Automatic Bell System	Python	Tejaswini Shivsharan
55	IF16053	SHINDE SHREEJIT RAJAN	Automatic Bell System	Embedded	Tejaswini Shivsharan
56	IF16037	NAYAK DEEPA DAMODAR	Dustbin Monitoring System	Embedded	Tejaswini Shivsharan
57	IF16044	PUDURKARA ANVIN IGNATIUS	Dustbin Monitoring System	Embedded	Tejaswini Shivsharan
58	IF16002	CHAUDHARI RAVINA PARESH	Smart Stice	Embedded	Tejaswini Shivsharan

CLASS TEACHER



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*Padma*  
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DOMBIVLI (E)



THE S.I.A College Of Higher Education  
TYB.SC.IT PROJECT DETAILS 2019-2020

Sr.No.	CollegeCode	PRN No	Name of the Student	Project Title and Brief Description
1	521	2015016400182523	JAYESH PURSHOTTAM RANE	<b>C Tutorials</b> -The Era of Mobile Technology opens the windows to the Android app. The websites are vanishing and mobile phones are emerging. It's time to change from conventional websites to android applications, which has become the part of our daily routine. So, we are Introducing 'C Tutorial.' In android application.
2	521	2016016401780957	TAIJAS SANTOSH THARWAL	<b>C Tutorials</b> -The Era of Mobile Technology opens the windows to the Android app. The websites are vanishing and mobile phones are emerging. It's time to change from conventional websites to android applications, which has become the part of our daily routine. So, we are Introducing 'C Tutorial.' In android application.
3	521	2017016400762284	GEETA KOTRAGOUDA ADAVI	<b>S.I.A Admission Module</b> The project will help students to fill their admission form online from anywhere and also it will help college to store the data of the students .The project will provide an online mode of transaction where the students will pay the admission form fee through online process.
4	521	2017016400760695	BHAVIKA HANUMANT AGRE	<b>Health monitoring system using Arduino &amp; Android</b> - The modern visionary of healthcare industry is to provide better healthcare to people in a more economic and patient friendly manner.Therefore for increasing the patient care efficiency, there arises a need to
5	521	2017016400760254	YAMINI KISHOR AHIRRAO	<b>Inventory module</b> main idea is to develop a software interface for godowns for managing total transactions of goods and delivers and money management. Users are provided with graphical GUI for





6	521 2017016400761122	POOJA PITAMBER BHUNYA	<p><b>TIMETABLE GENERATOR MODULE</b> Most colleges have a number of different courses and each course has a number of subjects. Now there are limited faculties, each faculty teaching more than one subjects. This time table generation system helps to manage all the periods automatically and also will be helpful for faculties to get automatic timetable in their phone by using this application.</p>
7	521 2017016400760327	PUSHPAK UDAY BILAYE	<p><b>Online Lawyer Application</b> There is a rise in the amount of crime in our country and most of the people are unaware of the criminal laws under IPC (Indian Penal Code). Therefore it becomes necessary to make the citizens aware of all kinds of laws put forth by our constitution against crime so that people come forward to register</p> <p><b>SIA-ATHENAEUM</b> is the Library Management System for Physiotherapy. The SIA-ATHENAEUM is meant to reduce the queue in the Library. It makes the Librarian and User's transaction online that is both are aware of availability of the books from anywhere.</p>
8	521 2017016400760873	NARESH YADGIRI BINVENI	<p><b>Hybrid Cloud Approach For Security Authorised deduplication -</b> Data deduplication is one of important data compression techniques for eliminating duplicate copies of repeating data, and has been widely used in cloud storage to reduce the amount of storage space and save bandwidth. To protect the confidentiality of sensitive data while supporting deduplication, the convergent encryption technique has been proposed to encrypt the data before</p> <p><b>SIA-ATHENAEUM</b> is the Library Management System for Physiotherapy. The SIA-ATHENAEUM is meant to reduce the queue in the Library. It makes the Librarian and User's transaction online that is both are aware of availability of the books from anywhere.</p>
9	521 2017016400760544	MAHALAXMI PARMESHWAR BIRAJDAR	
10	521 2017016400762164	SHANI JAGDISHCHANDRA CHANDRAVANSHI	



11	521	2017016400761764	MAHESH DEVENDRA CHOWDHARI	<b>Travel and Tourism</b> -The Tours and Travel Management System is a web based application. The main purpose of "Tours and travels management system" is to provide a convenient way for a customer to book hotels, flight, train and bus for tour purposes.
12	521	2017016400761934	HRUTVI UMAKANT DALVI	<b>TIMETABLE GENERATOR MODULE</b> Most colleges have a number of different courses and each course has a number of subjects. Now there are limited faculties, each faculty teaching more than one subjects. This time table generation system helps to manage all the periods automatically and also will be helpful for faculties to get automatic timetable in their phone by using this application.
13	521	2017016400761153	VAISHALI RAMCHANDRA DUBBA	<b>S.I.A Admission Module</b> The project will help students to fill their admission form online from anywhere and also it will help college to store the data of the students .The project will provide an online mode of transaction where the students will pay the admission form fee through online process.
14	521	2017016400762477	AMEYA DINESH GAMARE	<b>Vehicle Management System</b> is used to store and manage information of vehicle owners(students,staff,guest) entering and leaving from the college campus.It uses a scanner to scan the barcode provided to every vehicle owner (only to students and staff members)Barcode is auto generated for every vehicle owner(student and staff members)
15	521	2017016400760343	JAGRUTI RAMBACHAN GUPTA	<b>Travel and Tourism</b> -The Tours and Travel Management System is a web based application. The main purpose of "Tours and travels management system" is to provide a convenient way for a customer to book hotels, flight, train and bus for tour purposes.
16	521	2017016400760521	SANDEEP KUMAR DILIP KUMAR GUPTA	<b>ONLINE CAR RENTAL SYSTEM</b> This software is made to book the Car on rent by any individual.This Software is available 24*7.The customers need to register on the site and they are provided with username and passwords to access the software and book the car





17	521	2017016400762504	RAGINI RAMLAKHAN JAISWAR	<p><b>online gym registration system</b> -Any business that does not have a form is missing out on one of the most powerful marketing tools available to them. The main reason that it is important for businesses to have a form is how people are likely to find you. These days most people will go online and research products and</p> <p><b>Information &amp; Management System MIS</b> is an system to manage the over all data of college stududenths who are participated in the various committees and departmentms. also it includes the their activities, achievements, and details about the activities.</p> <p><b>SIA-GRANTHYALAYA</b> is the Library Management System. The SIA-GRANTHALAYA is meant to reduce the queue in the library.It makes the Librarian and User's transaction online that is both are aware of availability of the books from anywhere.</p>
18	521	2017016400760397	ROHIT LAXMAN KADAM	<p><b>SIA-ATHENAEUM</b> is the Library Management System for Physiotherapy.</p> <p>The SIA-ATHENAEUM is meant to reduce the queue in the Library.it makes the Librarian and User's transaction online that is both are aware of availability of the books from anywhere.</p>
19	521	2017016400761466	AJAY CHANDRAKANT KHARADE	<p><b>SIA-GRANTHYALAYA</b> is the Library Management System. The SIA-GRANTHALAYA is meant to reduce the queue in the library.It makes the Librarian and User's transaction online that is both are aware of availability of the books from anywhere.</p>
20	521	2017016400762527	SATYAM MANOJ MAURYA	<p><b>SIA-ATHENAEUM</b> is the Library Management System for Physiotherapy.</p> <p>The SIA-ATHENAEUM is meant to reduce the queue in the Library.it makes the Librarian and User's transaction online that is both are aware of availability of the books from anywhere.</p>
21	521	2017016400760826	PRITESH DATTATRAY MINDE	<p><b>SIA-GRANTHYALAYA</b> is the Library Management System. The SIA-GRANTHALAYA is meant to reduce the queue in the library.It makes the Librarian and User's transaction online that is both are aware of availability of the books from anywhere.</p>
22	521	2017016400761281	NIDHI SHYAMDHAR MISHRA	<p><b>finance module</b>The finance module in system provides financial functionality and analysis reports for ledgers, trail balance data, overall balance sheets and quartely financial statements. Finance Module is the system which links with the Admission Module.It's just a concept of Paying Bills and Receiving Receipt.</p>





23	521 2017016400762454	KIRTI DEVESH MISHRA	<p><b>Vehicle Management System</b> is used to store and manage information of vehicle owners(students,staff,guest) entering and leaving from the college campus.It uses a scanner to scan the barcode provided to every vehicle owner (only to students and staff members)Barcode is auto generated for every vehicle owner(student and staff members)</p> <p>Guest are provided with a registration form to fill their details.All the information of vehicle owner is stored in database.</p>
24	521 2017016400761482	RACHANA SAGUN NAIK	<p><b>Online Lawyer Application</b> There is a rise in the amount of crime in our country and most of the people are unaware of the criminal laws under IPC (Indian Penal Code). Therefore it becomes necessary to make the citizens aware of all kinds of laws put forth by our</p> <p><b>Health monitoring system using Arduino &amp; Android-</b> The modern visionary of healthcare industry is to provide better healthcare to people in a more economic and patient friendly manner. Therefore for increasing the patient care efficiency, there arises a need to improve the patient monitoring devices.</p>
25	521 2017016400762013	SANYUKTA VASANT NAKTI	<p><b>The online examination system</b> is to provide an interface through which student can appear for online internal examination. This will be an objective type examination where the student will be given 4 options for answer and has to choose one right option from it. The result will be created immediately.</p>
26	521 2017016400760977	VAIBHAVI SANDIP NALAWADE	<p><b>ANTI-COLLISION DEVICE</b> Accidents on the road have been one of the major causes of unnatural and untimely death all over the world. The device works by sending out streams of infrared radiation and alerts when any obstacle is present within specific range or safe distance, to take the necessary precaution to avert a collision.</p>
27	521 2017016400760134	KUNAL SANJAY PALAV	



28	521	2017016400760351	ASHUTOSHKUMAR OMPRAKASH PANDEY	<b>Online Book Reselling Portal</b> this project is like an e- bookstore website where books can be bought from the comfort of home through the Internet. <b>Inventory module</b> main idea is to develop a software interface for godowns for managing total transactions of goods and delivers and money management. Users are provided with graphical GUI for accessing historic data.
29	521	2017016400762125	GAYATRI ASHOK PATIL	<b>SONU FRESHGRIND'S</b> This Project is an attempting to provide the advantages of online shopping to customers of a real shop. It helps buying the freshgrind products in the shop anywhere through internet. Thus the customer will get the structure of online
30	521	2017016400760335	MAHENDRA BAPURAO PATIL	<b>Online Book Reselling Portal</b> this project is like an e- bookstore website where books can be bought from the comfort of home through the Internet.
31	521	2017016400761613	RAJKUMAR ARJUANA PATRO	<b>Hybrid Cloud Approach For Security Authorised reduplication -</b> Data deduplication is one of important data compression techniques for eliminating duplicate copies of repeating data, and has been widely used in cloud storage to reduce the amount of storage space and save bandwidth. To protect the confidentiality of sensitive data while supporting deduplication, the convergent encryption technique has been proposed to encrypt the data before
32	521	2017016400760625	PRANALI RAJESH PAWAR	<b>The COMPANY VISTOR'S MANAGEMENT SYSTEM</b> is meant maintain the record of the visitors in the company. It makes the company and visitor's transactions online that is both are aware of records of visitors
33	521	2017016400761203	ANIL KAILASH PRAJAPATI	<b>Super Mart is an e-commerce website</b> where user can buy grocery products online. Grocery Products are displayed in effective graphical user interface. This system will be like a virtual
34	521	2017016400761532	DARSH SHAILESH PRAJAPATI	





35	521	2017016400761667	UDDESH YASHWANT PUJARI	<p><b>Smart Attendance and ID generator</b> In many industries there's need of attendance and ID generator. The need of systematic attendance management is almost everywhere. So here we came up with a proper id of attendance management along with id generation. There's no need of manual work to generate id's it's done by a python code Along with it the management and generation of attendance data is too done by a python script with <b>METASPLOIT</b> - This paper sets out to inform the reader about the benefits and uses of the Metasploit Project (MP) focusing mainly on the Metasploit Framework version 2.3 and its many uses. An example of a successful vulnerability exploit will be presented with the approach being that of not knowing anything about an</p> <p><b>E-ticketing</b> -E-ticketing is a software that is providing category wise reports for all issues.</p> <p>E-ticketing can be implemented for any companies which shows the scalability of the software. In this software issues can be created by admin and user can suggest them.</p> <p><b>विद्युत-ज्ञान</b> is an application which allows the users to read books for free. The digital files provided by विद्युत-ज्ञान can be accessed anywhere, anytime on any compatible computer or</p> <p><b>Inventory module</b> main idea is to develop a software interface for godowns for managing total transactions of goods and delivers and money management. Users are provided with graphical GUI for</p> <p><b>Biker's World</b> It creates an platform for all the biker's from all over the world to buy any bike parts/accessories etc, to solve their queries, create a group to plan for the ride or other purpose, to book the slot for bike repair/ maintenance/ servicing at the nearest</p> <p><b>E-ticketing</b> -E-ticketing is a software that is providing category wise reports for all issues.</p> <p>E-ticketing can be implemented for any companies which shows the scalability of the software. In this software issues can be created by admin and user can suggest them.</p>
36	521	2017016400762601	DEEPAK KUMAR LALMANI RAJBHAR	
37	521	2017016400760857	ATHAK SUNIL RANE	
38	521	2017016400760722	SARA ACHYUT RAOOL	
39	521	2017016400761362	MANASI SHRIRAM RAORANE	
40	521	2017016400761741	TUKARAM PANDHARI REWALE	
41	521	2017016400761041	SHUBHAM SUNIL SAWANT	





42	521	2017016400761652	SEJAL MANGESH SAWANT	<p><b>विद्युत-ज्ञान</b> is an application which allows the users to read books for free. The digital files provided by विद्युत-ज्ञान can be accessed anywhere, anytime on Handbot A digital physical assistant created using RASPBERRY PI which assists user over voice command.</p>
43	521	2017016400761323	AJAY RAMDAYAL SHARMA	<p><b>E-ticketing</b> - E-ticketing is a software that is providing category wise reports for all issues.</p>
44	521	2017016400761547	PRASHANT JALINDER SHINDE	<p>E-ticketing can be implemented for any companies which shows the scalability of the software. In this software issues can be created by admin and user can suggest them.</p>
45	521	2017016400762044	SUSHANT BAJIRAO SHINDE	<p><b>In E-ticketing software vendors are assigned as the ticket generated Blood Bank System</b> There is no other redeeming act than to save a human life. People may feel afraid or Selfish when it comes to donating blood. But if everybody thinks that way, then doctors may be unable to save so, many human lives. People who have never donated blood may themselves require blood at some point of their</p>
46	521	2017016400760142	SONALIKA SANTOSH SINGH	<p><b>S.J.A. Physiotherapy Website- ADMIN MODULE.</b> This project is developed for College purpose. It is helpful for the Staff Members and External Committee. They can manage the details of Physiotherapy Website. They can update about different activities and events held in College premises. They can also add different e-</p>
47	521	2017016400760262	PRAJAKTA RAJSHAILENDRA SURVE	<p><b>The online examination system</b> is to provide an interface through which student can appear for online internal examination. This will be an objective type examination where the student will be given 4 options for answer and has to choose one right option from it. The result will be created immediately.</p>
48	521	2017016400760312	SURENDRAN SURYA	<p><b>finance module</b> The finance module in system provides financial functionality and analysis reports for ledgers, trail balance data, overall balance sheets and quarterly financial statements. Finance Module is the system which links with the Admission Module. It is just a concept of Paying Bills and Receiving Receipt.</p>



49	521 2017016400760293	SHRUTI JITENDRA TIWARI	<p><b>TIMETABLE GENERATOR MODULE</b> Most colleges have a number of different courses and each course has a number of subjects. Now there are limited faculties, each faculty teaching more than one subjects. This time table generation system helps to manage all the periods automatically and also will be helpful for faculties to get automatic timetable in their phone by using this application.</p> <p><b>finance module</b> The finance module in system provides financial functionality and analysis reports for ledgers, trail balance data, overall balance sheets and quarterly financial statements. Finance Module is the system which links with the Admission Module. It's just a concept of Paying Bills and Receiving Receipt.</p>
50	521 2017016400760304	RANIKA RAM TIWARI	<p><b>online gym registration system</b> -Any business that does not have a form is missing out on one of the most powerful marketing tools available to them. The main reason that it is important for businesses to have a form is how people are likely to find you. These days most people will go online and research products and</p> <p><b>Online Buying And Selling Grains</b> The grain exchange is one of the oldest systems of trading in the world. For thousands of years, it was sold from farmers to locals and cities for food. Today, it local can be bought and sold on the global market &amp; purchased via internet. The market has become much more competitive &amp;</p>
51	521 2017016400762446	ASHUTOSH DINESH TIWARI	<p><b>ANTI-COLLISION DEVICE</b> Accidents on the road have been one of the major causes of unnatural and untimely death all over the world. The device works by sending out streams of infrared radiation and alerts when any obstacle is present within specific range or safe distance, to take the necessary precaution to avert a collision.</p>
52	521 2017016400761691	RAJU RAM TIWARI	<p><b>The COMPANY VISITOR'S MANAGEMENT SYSTEM</b> is meant maintain the record of the visitors in the company. It makes the company and visitor's transactions online that is both are aware of records of visitors</p>
53	521 2017016400760424	SIDDHESH PRADEEP UTEKAR	
54	521 2017016400761702	SURAJ HIRALAL YADAV	





55	521	2017016400762431	MANISH ADHINATH YADAV	<p><b>Online Buying And Selling Grains</b>The grain exchange is one of the oldest systems of trading in the world. For thousands of years, it was sold from farmers to locals and cities for food. Today, it local can be bought and sold on the global market &amp; purchased via internet. The market has become much more competitive &amp; internet.</p> <p><b>Digital Distributer</b> It enables the owner of the medical to order medicines just by using a web application by sitting at any corner of the world. The druggist can maintain the record of the medicines available in the stock. The druggist can also generate the bill just by</p> <p><b>Digital Distributer</b> It enables the owner of the medical to order medicines just by using a web application by sitting at any corner of the world. The druggist can maintain the record of the medicines available in the stock. The druggist can also generate the bill just by</p> <p><b>Blood Bank System</b>There is no other redeeming act than to save a human life. People may feel afraid or Selfish when it comes to donating blood. But if everybody thinks that way, then doctors may be unable to save so, many human lives. People who have never donated blood may themselves require blood at some point of their</p> <p><b>Online Bus ticket Reservation System.</b> In our System we can provides different types of buses categories like AC or Non AC etc. .In our system we can manage all types of Passenger data &amp; bus data. All details that is related to Traveling like fare details, Seat availability, details of Booking, bus details, seating arrangements,</p> <p><b>Online Bus ticket Reservation System.</b> In our System we can provides different types of buses categories like AC or Non AC etc. .In our system we can manage all types of Passenger data &amp; bus data. All details that is related to Traveling like fare details, Seat availability, details of Booking, bus details, seating arrangements,</p>
56	521	2017016400761516	SATYAM BALIRAM YADAV	
57	521	2017016400760834	SUJEET OMPRAKASH YADAV	
58	521	2017016400760215	ONKAR SAMBHAJI YENARE	
59	521	2017016401319582	AKASH VASANT CHALAKE	
60	521	2017016400762616	SHUBHAM MANIK GHANWAT	






61	521 2017016401319574	ANIKET SURESH KAHAR	<p><b>Biker's World</b> It creates an platform for all the biker's from all over the world to buy any bike parts/accessories etc, to solve their queries, create a group to plan for the ride or other purpose, to book the slot for bike repair/ maintenance/ servicing at the nearest location. <i>it also provide rent services for their bike</i></p> <p>The finance module in system provides financial functionality and analysis reports for ledgers, trail balance data, overall balance sheets and quarterly financial statements.</p> <p>Finance Module is the system which links with the Admission Module. It's just a concept of Paying Bills and Receiving Receipt.</p>
62	521 2017016401319601	NAVNEET BAJRANG YADAV	<p><b>Smart Attendance and ID generator</b> In many industries there's need of attendance and ID generator. The need of systematic attendance management is almost everywhere. So here we came up with a proper id of attendance management along with id generation. There's no need of manual work to generate id's it's done by a python code Along with it the management and</p>
63	521 2017016401319597	ROHIT AWADESH YADAV	<p><b>S.I.A Admission Module</b> The project will help students to fill their admission form online from anywhere and also it will help college to store the data of the students .The project will provide an online mode of transaction where the students will pay the admission</p>
64	521 2017016402359126	POOJA OMPRAKASH YADAV	<p><b>Travel and Tourism-</b> The Tours and Travel Management System is a web based application. The main purpose of "Tours and travels management system" is to provide a convenient way for a customer to book hotels, flight, train and bus for tour purposes</p>
65	521 2017016401442102	APPURVA SHRIPAD TALASHILKAR	

  
CLASS TEACHER



  
PRINCIPAL  
PRINCIPAL  
College of Higher Education  
The S.I.A. Dombivli (E)

The S.I.A College Of Higher Education  
TYB.SC.IT PROJECT DETAILS 2020-2021

Timestamp	Roll no:	Name of the Student:	Title of the project:	Project Guide:	Description of project 4-5 lines
5-16-2021 16:31:38	IF18104	Suman Radheshyam Chau	Anti-collision Device	Lalita Singh	An ACD detects the another vehicle or train to avoid the collision. This device must be implemented to all Automobile to limit the road accidents and to warn regarding other vehicle to
					1)Line follower is a machine that can follow a path. 2)The path can be visible like a black line on a white surface. 3)Sensing a line and maneuvering the robot to stay on course, while Constantly correcting wrong moves using feedback from the sensor forms a simple yet effective system. 4) It can be used in automobile, industrial automations, guidance, etc.
5-16-2021 18:22:14	IF15012	Iyer Shankaran	Line Following Robot	Lalita Singh	This project Online Food Ordering System has been developed on PHP and MySQL.
5-17-2021 9:18:40	IF17016	Bablu gupta	online food ordering system	Sai Sree mam	Online shopping is a form of electronic commerce which allows consumers to directly buy goods from a seller over
4-5-2021 16:36:25	IF17023	Rajesh Shankar Machha	Online Shopping	Mandini kadam	



5-16-2021 16:41:31	IF17036	Roshan Dilip Patil	Grocery Management Sys	Miss Lalita Singh	Wheat, rice, pulses, oil, cosmetics, etc. are the part of the life such that they can not be seen as different from life. These products are available quickly and frequently at any store, every store has their set electronic commerce which allows consumers to directly buy goods from a seller over the internet. If you plan to establish an online presence for your business or company and create the first web page, you must consider the objectives and the main purpose of your new website.
5-17-2021 9:18:40	IF17057	Sawan Sharma	Online Shopping	Mandini kadam	The line follower robot is a mobile machine that can detect and follow the line drawn on the floor. Generally, the path is predefined and can be either visible like a black line on a white surface with a high contrasted color or it can be invisible like a magnetic filed
5-16-2021 18:02:53	IF17064	Mukesh Deepak Tak	Line following robot	Lalita mam	





4-5-2021 21:47:44	IF17074	Tanay Waghmare	Rider's Nation	Lalita Singh	The project is on web based shopping site. Online shopping is the process whereby consumers directly buy goods or services from a seller in real-time, without an intermediary service, over the Internet. It is a form of electronic commerce. This project is an attempt to provide the advantages of online shopping to customers in order to save time and This project Online Food Ordering System has been developed on PHP and MySQL. The main objective for developing this project was to sell food online order. This project intends different
4-5-2021 16:36:25	IF17077	ARJUN YADAV	online food ordering system	Sai Sree mam	shopping site. Online shopping is the process whereby consumers directly buy goods or services from a seller in real-time, without an intermediary service, over the Internet. It is a form of electronic commerce. This project is an attempt to provide the advantages of online shopping to customers in order to save time and
5-17-2021 0:27:20	IF17086	Navin Santosh Jayasawal	Rider's Nation	Lalita Singh	Customized website for pet owners / individuals to adopt pets, consult veterinary doctors and buy healthy meal for pets.
5-16-2021 17:02:53	IF18001	Srikanth Shankar	Online Pet Shop Management	Lalita Singh	



5-16-2021 19:23:30	IF18002	Dikshita Sitaram Amin	S/A Management Information	Nandini kadam	We have made a dynamic management information system for SIA college. It makes easy to store, view and maintain up to date data etc dynamically. Information could be also extracted in excel format whenever needed with use of given password and id to
5-16-2021 23:19:34	IF18003	Virendrakumar Baburam	FriendsBook	Nandini Kadam	This project is networking web site use for making Friends in campus. In this web site Teachers, graduates and current students share information. In this project we have a news feed section which can be daily updates about college/campus events. The Friendsbook has
5-17-2021 9:18:40	IF18005	Rutik Uttam Jaitapkar	Student Result management	Lalita singh mam, Nandini	We know the highest challenge of a school & college is to manage each and every student detail and their marks effectively. Many time data loss is biggest problem occurs, to overcome this problem we develop a software STUDENT REPORT MANAGEMENT
5-17-2021 9:18:40	IF18006	Nishant Krishna Ghadigao	Codetech - Online Coding	Sandhya Pandey	The project is a web application which provides various information and knowledge regarding programming technologies. It is specially made for students who are aspired towards programming languages.



4-5-2021 14:34:26	IF18007	Aakash virendra gupta	CHAT APPLICATION	Sandhya pandey	Chat application is a website.in this website the current college students,graduated students and teachers can connect with each other.the features like newsfeed they can share their ideas and thought.new students can connect with teachers via friendsbook
5-17-2021 9:18:40	IF18008	Suraj Rajesh Gupta	INTER COLLEGE EVENT	Sandhya pandey	The project is a web application which provides various information and knowledge regarding the college event . WE KNOW THE HISTORY AND CHANGE OF A SCHOOL & COLLEGE IS TO manage each and every student detail and their marks effectively . Many time data loss is biggest problem occurs , to overcome this problem we develop a software STUDENT REPORT MANAGEMENT SYSTEM . main purpose of our project is to helping an educational institutions.
5-16-2021 17:41:12	IF18010	Rutik Uttam Jaitapkar	Student Result managemen	Lalita singh mam,Nandini	Customized website for pet owners / individuals to adopt pets, consult veterinary doctors and buy healthy meal for pets.
5-16-2021 17:03:32	If18011	Satish Pradeep Jha	Online Petshop Managemen	Mrs. Lalita Singh	





5-16-2021 17:12:38	IF18012	Pratik Vijay Karania	Online Petshop Management	Mrs. Lalita Singh	Customized website for pet owners / individuals to adopt pets, consult veterinary doctors and buy healthy meal for pets
5-16-2021 16:35:20	IF18013	Nachiket Kulawade	Bikers world( online bike a	Lalita Singh	BIKERS WORLD (ONLINE BIKE ACCESSORIES) .it is capable to order online bike, riders accessories . we have produced the online system that is
5-17-2021 9:18:40	IF18014	Chaitanya Rajendra Kulka	Codetech - Online Coding	Sandhya Pandey	The project is a web application which provides various information and knowledge regarding programming technologies. It is specially made for students who are aspired towards programming languages.
5-17-2021 10:42:01	IF18015	Prasad Arun Kuvare	Coffee and food billing sys	Nandini mam	It's handle any hotel billing system
5-16-2021 16:27:46	IF18018	Tushar Tulashidas Naik	Grocery Management Sys	Lalita Singh	Project is based on the grocery system which can be managed through online process without any human interaction and online grocery buying makes life easy and comfortable.
4-16-2021 14:34:26	IF18019	Roshan Panada	CHAT APPLICATION	Sandhya pandey	Chat application is a website in this website the current college students,graduated students and teachers can connect with each other.the features like newsfeed they can share their



4-5-2021 13:59:41	IF18020	Shamika Poojary	SIA Management Informat	Nandini Kadam	The SIA MIS is capable to insert, view and extract data related to activities attended or performed by particular committee or teacher and faculty members. Committee data and teachers data are two basic modules. This manages data very quickly and efficiently.
5-16-2021 20:33:10	IF18021	Shreyas Poojary	QB - Create Your Own Qu	Mrs. Nandini Kadam	QB is a software which is helpful for teachers. In this project the teachers are facilitated by online system for creating a question bank. QB will make the whole process of creating a question bank automated.
5-17-2021 12:29:00	IF18022	Sugumaran Reddiar chenn	Safelock	Sandhya Pandey	Safe lock is used to store files and documents and access whenever required the idea of this project is digital transformation i.e paperless the idea is inspired from the DigiLocker initiative quickly and easily. Previously doctors used to collect patient records hand written on paper. It was difficult to manage such patient records and the patients were keeping on increasing day by day. So a online solution was needed in order manage such huge data and to be accessible from anywhere.
5-16-2021 21:48:19	IF18024	Manas Dattatray Samant	OPD / Physiotherapy Manag	Mrs. Sandhya Thakkar	



4-5-2021 13:59:40	IF18025	Neha Satra	SIA -Management Informa	Nandini Kadam	<p>The SIA-MIS system is capable to Insert, View and extract data related to Activities attended or performed by particular Committee or Teacher and faculty members. Committee Data and Teachers Data are two basic module. This system manages data very quickly and efficiently.</p> <p>enabled application developed in PHP and powerful MYSQL database backend.</p> <p>2. A E-School is a platform independent system that virtually any user can access from anywhere through a standard internet accessible system.</p> <p>3. School Management Systems helps input class notes, create lesson plans and</p>
5-16-2021 20:16:28	IF18026	abhishek shah	E-SCHOOL (SCHOOL MA	Miss. Lalita Singh	<p>enabled application developed in PHP and powerful MYSQL database backend.</p> <p>2. A E-School is a platform independent system that virtually any user can access from anywhere through a standard internet accessible system.</p> <p>3. School Management Systems helps input class notes, create lesson plans and</p>
5-16-2021 19:56:18	IF18027	Shanikumar Sharma	E-SCHOOL (SCHOOL MA	Miss. Lalita Singh	<p>enabled application developed in PHP and powerful MYSQL database backend.</p> <p>2. A E-School is a platform independent system that virtually any user can access from anywhere through a standard internet accessible system.</p> <p>3. School Management Systems helps input class notes, create lesson plans and</p>





5-16-2021 17:53:39	IF18126	Malati Vishwas Pagare	Online lawyer application	Sandhya pandey	1. Registration for customer as well as Lawyers. 2. Panel for Lawyers showcasing their details. Payment integration (for live application in future). Google map integration to track lawyer office location for customers. Search by lawyer location, lawyer services like criminal, divorce, affidavit, civil, and then schedule a meeting with the same.
5-17-2021 11:29:07	IF18017	SANDEEP MAURYA	Gym management system	Miss.Lalita Singh	This project "Gym Management System" is solution fitness centres to manage the customers in an easier and more convenient way.
5-16-2021 23:26:53	IF18117	Rahul Pradeep Kanojiya	BUS PASS SYSTEM	Nandini kadam	This project focus on the bus ticketing monthly pass, quarterly pass, yearly pass
5-16-2021 20:04:53	IF17004	Diksha Devendra Bade	FRANCHISEE MANAGEMENT	Nandini kadam	this project focus on franchise management system
4-5-2021 14:34:26	IF17033	Ashutosh Pandey	FRANCHISEE MANAGEMENT	Nandini kadam	this project focus on franchise management system
5-16-2021 17:53:39	IF18034	Deepak Mishra	BMS BOOKSHOP MANAGEMENT	Miss.Lalita Singh	The project is a web application which provides various information and knowledge regarding books. It is specially made for students who are aspired to learn.



5-17-2021 9 18 40	IF18028	Shubham Sunil Tambitkar	Codetech - Online Coding	Sandhya Pandey	<p>The project is a web application which provides various information and knowledge regarding programming technologies. It is specially made for students who are aspired towards programming languages.</p> <p>Android Health Monitoring Application That tells you about your daily calories count, Diet and nutritional foods for good Immune, pulse rate and Covid patients tracker it also has a scheduler where you can schedule your daily activities and plan as per your convenience. There are various video's and information available about weight gain and enabled application developed in PHP and powerful MYSQL database backend</p> <p>2. A E-School is a platform independent system that virtually any user can access from anywhere through a standard internet accessible system.</p> <p>3. School Management Systems helps input class notes, create lesson plans and</p>
5-16-2021 16 20 29	IF18029	Tawde Vaishnavi Nitin	BOOSTLIFE (An Android H	Sai Sree mam	
5-16-2021 20 08 00	IF18030	Varma Ritik Ajay Kumar	E-SCHOOL (SCHOOL MA	Miss Lalita Singh	



5-16-2021 16:25:40	IF18031	Anushka Ravindra Wanjal	BOOSTLIFE(An Health Mc	Android Health Monitoring Application That tells you about your daily calories count, Diet and nutritional foods for good Immune, pulse rate and Covid patients tracker it also has a scheduler where you can schedule your daily activities and plan as per your convenience. There are various video's and information available about weight gain and
			Sai Sree mam	In this system the user can directly book the appointment in any department of the specialist those are available and consult the doctor at any time and any where from your mobile phones or laptop.
5-16-2021 16:33:50	IF18032	Jyoti Nandraj Bavdekar	Centerized Illness Manage	1 It's mainly based on farming related products and land 2 its use as basic website to use every farmer. 3 poorman is free and secure website. 4 poorman website easily understandable.
			Tejsawani mam	
5-16-2021 16:19:45	IF18102	Sudarshan Shashikant Ba	Poorman ( online buying a	The Sia MIS is capable to insert view and to extract data related to activity attend Or performed by particular committee teacher and faculty member. Committee data and Teacher data are two basic module. This system manages data vert quickly and efficiently
			Sandhya panday mam	
4-5-2021 13:59:42	IF18103	Akshata Chandorkar	SIA Management Informa	
			Nandimi Kadam	





4-5-2021 15:43:11	IF18107	Ankita Keshav Dhadave	Gym management system	Nandini mam	This project "Gym Management System" is solution fitness centres to manage the customers in an easier and more convenient way. This project is networking web site use for making friends in campus. In this website teachers, graduates and current student share information. In this project we have new feed section which can be daily updates about collages/campus events Which can be update by the respected teachers and the site admin.
5-17-2021 0:10:53	IF18108	E Prafull Kumar E Madhaya	FriendsBook	Ms. Nandani Kadam	1) Line Follower is a machine that can follow a path. 2) The path can be visible like a black line on a white surface. 3) Sensing a line and maneuvering the robot to stay on course, while constantly correcting wrong moves using feedback from the sensor forms a simple yet effective system. 4) It can be used in automobile, industrial automations, guidance, etc.
5-16-2021 18:14:02	IF18111	Chandan Gupta	LINE FOLLOWER ROBOT	Lalita Singh	



5-16-2021 16:28:39	IF18112	Hande Omkar Shamrao	Online Bike Accessories	Lalita Singh	BIKE ACCESSORIES) ,it is capable to order online bike, riders accessories .we have produced the online system that is capable to manage the data of the all type `of the bike accessories . User of this system can able to operate this system any where in country, and booking i.e ordering of the accessories of
4-5-2021 14:20:23	IF18114	Mahatty Iyer	Online Shopping	Lalita Singh	Online shopping is a form of electronic commerce which allows consumers to directly buy goods from a seller over the internet. If you plan to establish an online presence for your business or company and create the first web page, you must consider the objectives and the main purpose of your new website.
5-16-2021 16:22:21	IF18115	Diksha J asal	ShakelT Dictionary	Ms. Lalita singh	This project contains 3 different types of dictionaries. Technical, normal n programming dictionary It will help user to find the meaning of particular word , which they are not able understand



4-6-2021 0:49:40	IF18116	Sneha Arvind Kadam	ONLINE MOBILE SHOPPI	Sandhya Pandey mam	The Online mobile shopping project has been developed to allow business grows larger and faster. This site will let consumer to view and order products online from any part of the world. The site sells different types of. Under this website many products and services can be ordered
5-16-2021 22:37:05	IF18118	Hrithiket Hiraji Khedekar	Poorman	Sandhya Pandey	Poorman is a secure and free website. It is easy to use. It is a buying and selling platform which is related to farming.
12-16-2020 13:00:22	IF18119	Kavya kotian	Web scraping and data mi	Sandhya Pandey mam	I am trying to bring cleaned and processed data just by pasting the simple link where we have to fetch data from that link.
4-5-2021 16:30:20	if18122	shivangi girjashankar mish	sport mangement	Sai Sree mam	sport mangement website is eassily available for all. its contain all types of sports information.in the sport all the facilictes provide for staing outside of country by sports our knowledge ,skill ,fitness ext
5-16-2021 21:31:01	IF18124	Kshiteej Deepak More	Safelock	Sandhya Pandey	Safe lock is used to store files and documents and access whenever required the idea of this project is digital transformation i.e paperless the idea is inspired from the Digilocker initiative





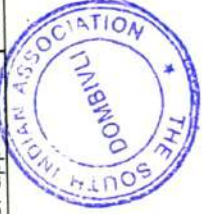
5-16-2021 21:17:53	IF18125	Ramkumar Nadar Arumug	Safelock	Sandhya pandey	Safe lock is used to store files and documents and access whenever required the idea of this project is digital transformation i.e paperless the idea is inspired from the DigiLocker initiative.
5-16-2021 17:33:46	IF18128	Nilesh Sunil Parab	IOT CAR PARKING SYST	Lalita Singh	IOT car parking system allows customers to reserve a car parking slot online by accessing it on web platform ,it also reduces the wasting of time and increases the safety of the car since the parking lot is numbering.
4-5-2021 16:42:30	IF18131	Suyash Patil	Food Express	Sandhya Pandey	This project Online Food Ordering System has been developed on PHP and MySQL. The main objective for developing this project was to sell food online order. This project Intends different types of forms with different of food varieties provides to user to buy online. of a school & college is to manage each and every student detail and their marks effectively . Many time data loss is biggest problem occurs , to overcome this problem we develop a software STUDENT REPORT MANAGEMENT SYSTEM . main purpose of our project is to helping an educational institutions.
5-16-2021 17:38:59	IF18132	Chinmay Prashant Patil	Student report managemen	Nandini mam	



4-16-2021 14:34:26 IF18133	Vidya Vilas Pawar	Online Shopping	Lalita Singh	Online shopping is a form of electronic commerce which allows consumers to directly buy goods from a seller over the internet. If you plan to establish an online presence for your business or company and create the first web page, you must consider the objectives and the main purpose of your new website. It's a website which can take online food order from customer of restaurant. Customers can view food image, price and etc
5-16-2021 21:40:47 IF18134	Anush poojary	Food Express	Sandhya pandey	This project Online Food Ordering System has been developed on PHP and MySQL. The main objective for developing this project was to sell food online order. This project intends different types of forms with different of food varieties provides to user to buy online.
5-17-2021 9:18:40 IF18135	Rahul Rai	online food ordering system	Sai Sree mam	Customized website for pet owners / individuals to adopt pets, consult veterinary doctors and buy healthy meal for pets.
5-16-2021 17:42:46 IF18136	Shivam Dharmendra Rai	Online petshop management	Mrs. Lalita Singh	



					<p>QB is a software which is helpful for teachers. In this project the teachers are facilitated by online system for creating a question bank. Currently teachers are creating question banks manually by using word or sometimes even on paper. QB will make the whole process of creating a question bank automated.</p>
4-5-2021 14:01:04	IF18139	OMKAR BANDU SHINDE	QB (Create your own QUE	Mrs. Nandini Kadam	<p>enabled application developed in PHP and powerful MYSQL database backend. 2. A E-School is a platform independent system that virtually any user can access from anywhere through a standard internet accessible system. 3. School Management Systems helps input class notes, create lesson plans and well as Lawyers. 2. Panel for Lawyers showcasing their details. Payment integration (for live application in future). Google map integration to track lawyer office location for customers. Search by lawyer location, lawyer services like criminal, divorce, affidavit, civil, and then schedule a meeting with the same.</p>
5-16-2021 20:04:53	IF18140	Siddhesh Thakkar	E-SCHOOL (SCHOOL MA	Miss Lalita Singh	
5-16-2021 17:53:39	If18141	Sandhya Varma	Online lawyer application	Sandhya pandey	





4-5-2021 16:38:27	IF18142	Mangesh Vishwakarma	Food Express	Sandhya pandey	It's an express for the foody and an customer to grab there attention towards our website for ordering food online. Basically it's an website for user to order food online at any time, they can get it delivered to there step door or can take away, it also provide them a menu to explore food
4-5-2021 16:36:25	IF18143	VINAY VISHWAKARMA	FOOD EXPRESS	SANDHYA PANDEY	It's an express for the foody and an customer to grab there attention towards our website for ordering food online. Basically it's an website for user to order food online at any time, they can get it delivered to there step door or can take away, it also provide them a menu to explore food near there locality.
4-5-2021 16:36:25	IF18144	Shubham yadav	INTER COLLEGE EVENT	Sandhya pandey	The project is a web application which provides various information and knowledge regarding the college event.
5-17-2021 11:09:07	IF18145	Pankaj Dushyant Yadav	lot car parking system	Lalita singh madam	Reservation System (OVPRS) is a system that enables customers/drivers to reserve a parking space. It also allows the customers/drivers to view the parking status at kyebando people's park. It was developed because the congestion and collision of the vehicle, the system was developed for Kyebando People's Park located in Kyebando Therefore



5-16-2021 23:26:53	IF18146	Vishwjeet ramhit yadav	Friendsbook	Nandini kadam	<p>Friendsbook is a college networking website in this website the current college students, graduated students and teachers can connect with each other. the features like newsfeed they can share their ideas and thought new students can connect with teachers via friendsbook</p> <p>The Online mobile shopping project has been developed to allow business grows larger and faster. This site will let consumer to view and order products online from any part of the world. The site sells different types of. Under this website many products and services can be ordered</p>
5-16-2021 20:04:53	IS19087	Pragya kishanji Pawar	ONLINE MOBILE SHOPP	Sandhya Pandey mam	<p>This software is use for handling the patient records like personal details, complaints, pain history, etc. Create and find appointments quickly</p> <p>Manage patients by handling their details and scheduling appointments</p> <p>Generate patient reports</p>
4-5-2021 14:34:26	IS19088	Sameer Sanjeev Bidi	OPD Physiotherapy Manag	Mrs. Sandhya Thakkar	



<p>The project is a web application which provides various information and knowledge regarding books. It is specially made for students who are aspired to learn.</p>			Miss. Lalita Singh
	BMS BOOKSHOP MANA	Pratik khade	
5-17-2021 11:29:07	IF18148		

  
**CLASS TEACHER**

  
**PRINCIPAL**  
**PRINCIPAL**  
 College of Higher Educa  
 The S.I.A. Dombivli (E)







# University Of Mumbai

A Project Report  
On  
**“SMART MIRROR”**

In Partial Fulfilment of the Requirement for Qualifying  
M.Sc.(I.T.) for Semester-IV Examination

Submitted by :  
**Ms. Himanshi Chandra**  
Seat no : PI18003  
AND  
**Ms. Akanksha Tripathi**  
Seat no : PI18008

**September 2020**



# **CERTIFICATE**

**Himanshi Chandra (PI-18003)  
and Akanksha Tripathi (PI18008)  
MONTH AND YEAR OF SUBMISSION  
September 2020**

**Submitted in fulfillment of the requirements for qualifying  
M.Sc.-(I.T.), Semester – IV Examination**

**DEPARTMENT OF INFORMATION TECHNOLOGY**



**THE SIA COLLEGE OF HIGHER EDUCATION**

**MUMBAI 421201**

**[2019-2020]**



# **The SIA College Of Higher Education, Dombivli (East)**

## **PREFACE**

Over the last few years, efforts have been made to make the efficient use of technology and resources. The Information Technology is one of these fields where maximum use of technology is made and made sure the end users are satisfied and the job is done in efficient manner.

Today almost all industries and firms are dependent on computer to store their large amount of data. This popularity is going to spread as and when year passes by. To cope up with this speed efforts have been made by every I.T. professionals and Students to sincerely make the industry more popular.

With the help of this following project one more sincere effort is been added and contributed towards this industry.



# ACKNOWLEDGEMENT

A project is always a result of the amalgamation of various ideas and support from countless people. We would like to acknowledge the contribution made by them.

I express my sincere thanks to the principal **Dr . Padmaja Arvind**. Also express my thanks to CO-ORDINATOR and staff of the I.T. Section. I would like to thank my guide **Mrs. Tejaswini Shivsharan** for her encouragement and guidance, which helped me in completing the project.

We are immensely grateful to all those involved in this project because without their inspiration, constant prompting and useful suggestions, it wouldn't have been possible to bring out this project in an allotted time.

We sincerely appreciate the help provided by those in the careful preparation of the project.

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# Chapter 1

## INTRODUCTION

- As per the advancement in science and technology smart mirror is now a little common gadget or project being developed and implemented. But there are many concepts and innovative ideas through which we can develop or built it far better than its basic definition.
- So here we came up with an idea of adding a basic health diagnosis feature in it. As we know the immune system of humans are getting weaker and weaker with increase in pollution and occurrences of new diseases, they fall ill very frequently.
- We have added heart rate monitoring and body temperature monitoring in our smart mirror so that one can easily get the basic idea of their health status on daily basis. If the health status is abnormal so they can have an early doctor visit.

### 1.1 Background:

The project was divided into roughly four phases:

1. Design
2. Microcontroller Programming
3. Display Programming,
4. Fabrication.

In the design phase we made the technical and aesthetic decisions that would inform the course of the project, and for the following two phases the bulk of the work was involved with programming and other electronics tasks. Finally, in the fabrication phase we pulled together all the separate elements into a well-constructed wooden frame.

### 1.2 Objective

- The smart mirror must offer benefits of using modern technology while integrating seamlessly into the standard bathroom routines of most people. The smart mirror must be simple and as intuitive as possible. The smart mirror would be used to merge technology and the need for information into anyone's daily schedule.
- To provide a smart interface between mirror and users over voice command and graphical view (mirror as a display).
- To provide an easy access to daily updated news along with weather forecast.
- To provide a system for checking heart rate and body temperature (basic health diagnosis).

## 1.4 Purpose and Scope

### 1.3.1 Purpose

The purpose of this project was to design and build what is commonly called a Smart Mirror, or a household mirror with an integrated digital display. The guiding principle of this endeavor was to produce a product that is simple to use, attractive to look at, and that incorporates several visual applications to make daily life more efficient.

The Smart Mirror, seeks to fill the need for a customizable, passive display of information in the home, to host everyday information from the time to appointment reminders.

Powered by a Raspberry Pi microcontroller and displayed on a used computer monitor, the Mirror is a simple and inexpensive means of displaying information.

### 1.3.2 Scope

- **The smart mirror can be further updated with:**
  - Home automation.



- AI assistant that with smart alarm feature, activity/schedule maker, daily schedule reminder, etc.
  - Upgrading the interface with links to different basic social media and shopping apps.
  - Also we can add a login feature for family members with an admin.
  - It can also be used as security system with the help of PIR sensors to detect human and VNC viewer.
- According to a survey, it can be evaluated that this device is grabbing the attention of many people who might be interested in buying one for their own home in the future. ... And hence, everyone will prefer having a high-tech mirror instead of having a normal mirror for the same price.
  - This smart mirror aims to reduce and possibly eliminate the need for the user to make time in their daily morning or nightly routine to check their PC, tablet, or smartphone for the information they need.

### 1.3.3 Applicability

There are various merits of the project such as the user can get update of current affairs of any country and anytime. The user can also diagnose his/her health at any time if any problem arise he/she can visit doctor immediately. This also saves time of users by providing news and weather forecast. One can get any information without mobile in their daily routine.

Updated news will be flash on screen at any time, we do not have to update simultaneously.

There are also various demerits like technical issue or any inappropriate content and humidity in one's room or bathroom. The network problem can results in loss of data.

# Chapter 2

## SYSTEM ANALYSIS

This chapter gives details explanation of system analysis, the structure of the organization used as the case study, design steps and procedures as well as constraints and limitation of the old system with a new improvement upon the proposed new system.

System analysis simply refers to what is required of the system as well as the procedures and components required to make the system work on specification. It consists of an in depth analysis of how the existing system worked, its strengths, weakness, benefits and above all its problem which give side to this research work. In carry out system analysis, an analyst must first define the scope within which he intends to work.

System design it therefore the building of more efficient system, capable of fulfilling the requirement of the user and the database.

### 2.1 Existing System

- The user has to gather information about the current affairs by themselves.
- The user has to visit the doctor for checking the health monitoring.
- The user has to check their mobile phones or Tv to get weather forecast.

### 2.2 Proposed System

- The user can check about the weather by smart mirror.

- The user can check his/her heart rate at home by smart mirror.
- The user can view news.
- This system also displays news.



# Chapter 3

## REQUIREMENT ANALYSIS

In order to start gathering requirements, first it is necessary to identify each group affected by this project and understand everyone's needs. With that information in hand, an initial list of the desired functional and non-functional requirements can be put into the Product Backlog in the form of user stories. Every sprint these requirements may change, reason why in this section are described only the final requirements that are part of the current Product Backlog of the project

### 3.1 Problem Definition

Our project aims to construct a functioning "smart mirror". When not in use, the product looks and functions exactly like a typical mirror. When activated, however, the mirror is able to display information directly through the glass. Picture yourself looking at your own reflection: while getting ready for the day, you can also read the date and time in the top left-hand corner, check your appointment reminders, and read a weather report, effortlessly. Our project purpose is to facilitate the easy viewing of this information and more through the visual medium of the mirror

### 3.2 Requirement Specification.

User requirements:

#### 3.2.1 Functional Requirements

The system must provide following functionalities:-

- Keeping update news all over the world on the screen.
- Keeping update of current weather forecasting like (hazy, rainy).

- System should perform the action as per defined in voice command.
- System should accept the voice command.
- System should perform heart monitoring

### **3.2.2 Non-functional Requirements.**

- Security
  - This system should able to perform action if defined for that command.
  - System should be able to give real time results with proper date and time.
- Reliability
- Maintainability
- Portability
- Extensibility
- Reusability
- Resource utilization

### **3.3 Planning and scheduling.**

Planning and scheduling is done to complete the project in the specified time interval and in a correct format.

- **Collecting Requirements:**  
In this we need to collect all the requirements from the client by taking meeting with them. According to that we process further.
- **Design Thinking:**  
In this phase we need to brainstorm from the information we have gathered in the earlier phase, by doing so we can develop all necessary modules, which will help in future.
- **Setup the Environment:**  
Here for our project we need to setup server application on the computer on which we would be working for our project we need to install Python and Raspberry Pi.
- **Developing Modules:**

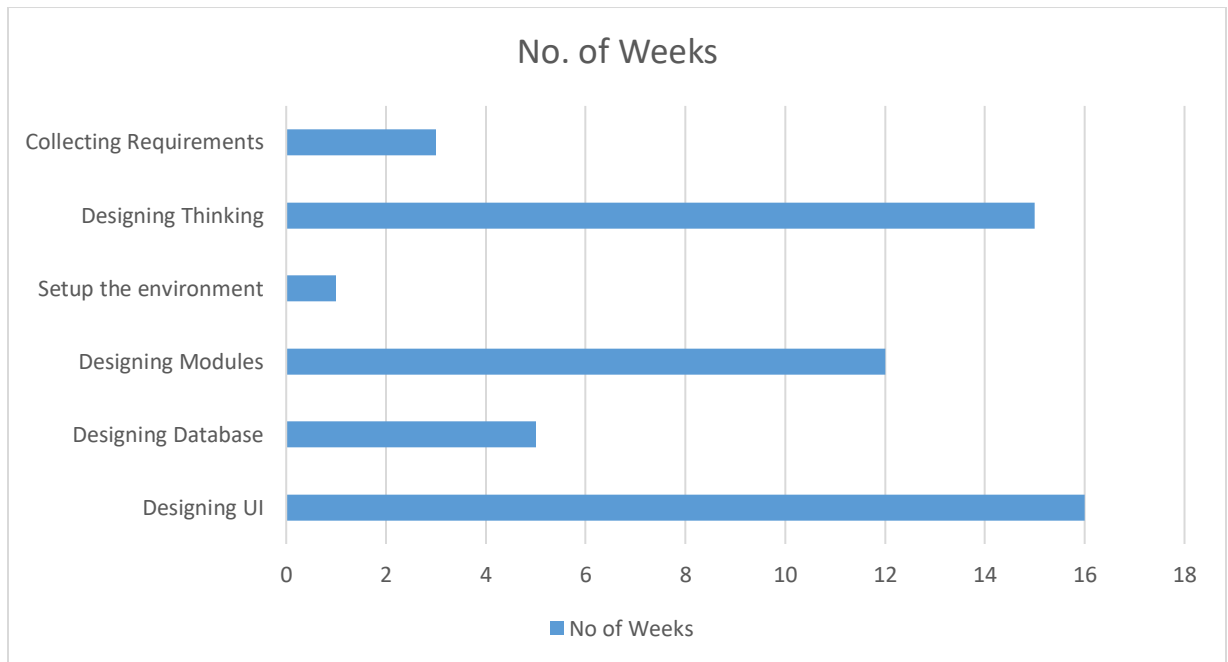
Based on the brainstorming held in the design phase here we develop the module for our project. This modules are combined to make whole application.

### 3.3.1 Gantt chart:

A Gantt chart, project management, is one of the most popular and useful ways of showing activities displays against time. On the left of the Gantt chart is list of activities along the top is a suitable time scale. Each activity is represented by a bar. The position and length of the bar reflects the number of weeks required to complete the project.

This allows you to see at glance.

- What are the various activities?
- When each activity begins and ends?
- How long each activity scheduled to last?





### 3.4 Hardware Requirements

Monitor	display
2-way mirror	
Raspberry Pi	3B+
MCP 3003 IC	
Pulse sensor	
LM35	transistor
Wooden board	
Jumper wires	
Sv power supply	Rasp pi
230v power supply	Display/monitor

### 3.5 Software Requirements

Language	Python3
Front end	UI tinker
Back end	Python, Tkinter

Requirement engineering and analysis: Brief discussion of software requirement engineering and analysis that are related to the proposed method are as follows :

The broad spectrum of tasks and techniques that lead to an understanding of requirements is called requirements engineering. Requirements engineering, which is a major process in software engineering, provides the appropriate mechanism for understanding what the customer wants, analysing need, assessing feasibility, specifying the solution unambiguously, and so on. It encompasses seven distinct tasks, which are inception, elicitation, elaboration, negotiation, specification, validation, and management. Some of these tasks occur in parallel and all are adapted to the needs of the project. At project inception, among other things, system analysts establish a basic understanding of the problem, the people who want a solution and the nature of the

solution that is desired. The activity includes establishing product vision and project scope. At the requirement elicitation, activities are performed to formulate the objectives for the system, what is to be International Journal of Software Engineering & Applications (IJSEA), Vol.5, No.2, March 2014 13 accomplished, how the system or product fits into the needs of the business, and how the system is to be used. Requirements elicitation (also called requirements gathering) combines elements of problem solving, elaboration, negotiation, and specification. Requirements analysis is the activity of elaborating basic requirements established during the inception, elicitation and negotiation tasks. Requirements analysis results in the software specification detailing the operational characteristics, interface with other system elements, and constraints that the software must meet. Requirements: Based on their functions, requirements can be classified into:

- (a) Functional requirements, which describe system functionalities or services;
- (b) Non-functional requirements, which define system properties and constraints (e.g. reliability, response time and storage requirements).

The functional and non-functional requirements can further be classified into few types and have relationship. As this research mainly concerns with business requirements that will be used in designing user requirements and the business rules that will be included in the use-case document, brief descriptions are provided for the three as follows:

- (a) Business requirements: Represent high-level objectives of the organization or customer who requests the system. They describe why the organization is implementing the system (the objectives the organization hopes to achieve).
- (b) User requirements: Describe user goals or tasks that the users must be able to perform with the product.
- (c) Business rules: The rules in the organization that affect the system, which include corporate policies, government regulations, industry standards, accounting practices, and computational algorithms.

## 3.6 Justification of Selection of Technology.

Tkinter is a small and powerful web framework for Python. It's easy to learn and simple to use, enabling you to build your web app in a short amount of time.

it has access to a multitude of online resources for documentation purposes.

It is one of the most used Python web frameworks, which is why there are available a lot of tutorials or libraries for it.

The *Raspberry Pi* is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python.



# Chapter 4

## SYSTEM DESIGN

### 4.1 Module Division

Our project phases are defined broadly in four modules, according to the scope of work involved in each:

1. Design
2. Microcontroller Programming,
3. Display Programming,
4. Fabrication.

### Module 1: DESIGN

Technical Milestones:

- Dimensions

The first and most important of our design phase was to decide the dimensions of our mirror. This ended up being determined by the monitor we chose for our display. Since we ended up using a Samsung 20" monitor, we needed a mirror of a size such that both the display elements and your reflection would not be competing for space. We quickly settled on a 20"x30" dimension as the best-looking and most functional size.

Deliverable: 20"x30" dimension

- Frame construction

Next, it became necessary to design a frame to contain both the mirror and the suite of electronics behind it. A wood frame being standard for most mirrors, we looked to this

material for a design solution. We realized that due to weight and bulk of the mirror's contents we'd need sturdy lumber, so while browsing Home Depot we settled on using a 2x3 construction. Screwed together in a box shape, it offers the strength and depth to contain our materials.

Deliverable: Wooden 2x3 box frame

- Mirror Material

Our first attempt at finding a mirror was to search dollar stores/department stores to see their stock, but none of these mirrors were suitable (their rear coatings were too opaque to shine light through). To save on time, we approached a local glass supplier and ordered a custom two-way mirror (this type allows us to easily shine a display through the glass).

Deliverable: 20"x30" Annealed Two-Way Mirror

- Microcontroller type

This design element offered us a lot of flexibility, as many microcontrollers fit our programming needs. We chose a Raspberry Pi 2 for its popularity, its functionality, and the wealth of tutorials and instructions that exist online for it.

Deliverable: Raspberry Pi 2 Microcontroller

- LM35 temperature sensor and Pulse rate sensor

LM35 is a precision Integrated circuit Temperature sensor, whose output voltage varies, based on the temperature around it. It is a small and cheap IC which can be used to measure temperature anywhere between -55°C to 150°C.

The working of the Pulse/Heart beat sensor is very simple. The sensor has two sides, on one side the LED is placed along with an ambient light sensor and on the other side we have some circuitry. This circuitry is responsible for the amplification and noise cancellation work. The LED on the front side of the sensor is placed over a vein in our human body. This can either be your Finger tip or your ear tips, but it should be placed directly on top of a vein.

- MCP3008

The MCP3008 is an 8-Channel 10-bit ADC IC, so it can measure 8 different analog voltage with a resolution of 10-bit. It measures the value of analog voltage from 0-1023 and sends the value to a microcontroller or microprocessor through SPI communication. Here, we use it to convert analog data to digital data as Raspberry Pi does not have integrated analog IO pins.

- Display elements

These consist of the visual applications that we choose to form our display. From the project's inception we knew that, at minimum, we wanted to be able to display the date and time. However, we also thought it would be both functional and visually appealing to have the day's weather forecast shown as well. It was the combination of these three that would ultimately make up our design.

Deliverable: Date, time, and weather display widgets

## **Module 2: MICROCONTROLLER PROGRAMMING**

Technical Milestones:

- "Kiosk Mode"

To achieve the minimalist display of our Smart Mirror, it was first necessary to program the controller to enter "Kiosk Mode". Since we chose to host our display on a webpage, we needed to have our browser (Chromium) open in this manner. Actually getting this to work involved creating a file on the Pi and writing the relevant code using the "Terminal" program.

Deliverable: Microcontroller boots "Chromium" browser in kiosk mode upon startup.

## **Module 3: DISPLAY PROGRAMMING**



## Technical Milestones

- Web Page

The web page is where the Smart Mirror's display actually exists. We created a file in which to enter the Python coding that would form the actual display. In this way we were able to insert applications to display the date, time, and local weather.

Deliverable: Locally hosted web page on the Pi containing date, time, and weather widgets.

## **Module 4: FABRICATION**

### Technical Milestones:

- Wooden Frame

This phase involves creating the actual apparatus to contain the mirror and its electronics. We started off by using a compound miter saw to cut four pieces of 2x3, which were then joined together with wood screws to form a 20"x30" box. Next, four pieces of wooden trim (with accompanying corner blocks) were hand-nailed to the outer edge of the frame with 2" finishing nails. Once installed, the trim overlapped the inner edge of our frame by 1/2" so as to prevent the glass falling forward.

Deliverable: Wooden 2x3 Frame with exterior trim work.

- Two-Way Glass

Next, we needed to install our actual mirror. With the overlapping trim mentioned above it was a straightforward installation, involving us easing the glass gently into the frame itself and securing it with two wooden blocks screwed in behind the mirror itself. The glass is now essentially sandwiched between these blocks in the rear and the overlapped trim in the front.

Deliverable: Two-way mirror securely mounted in frame.

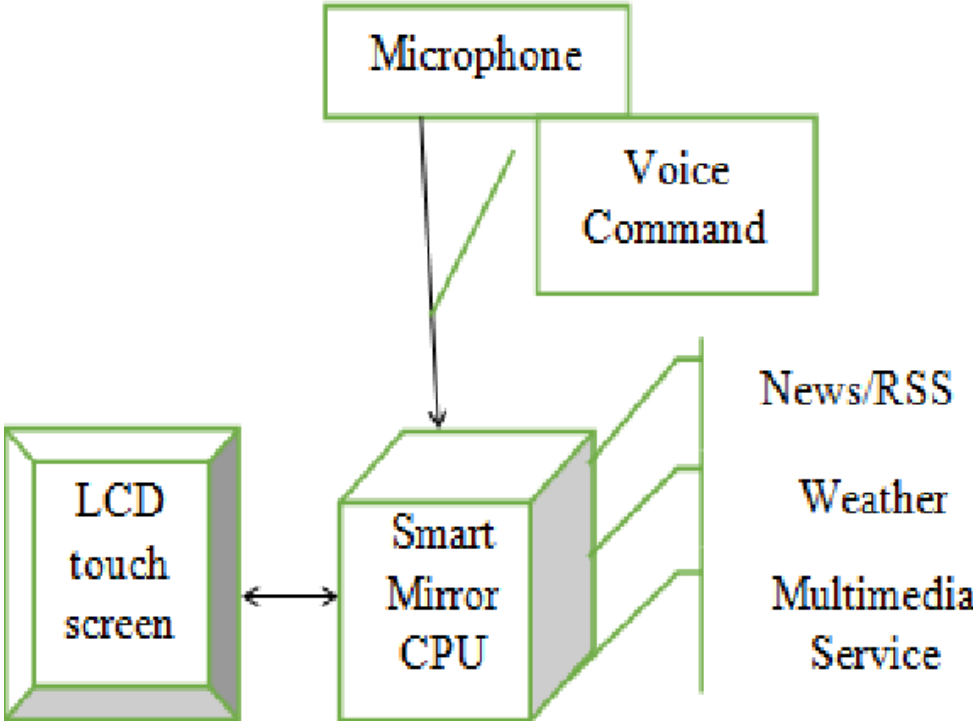
- Electronics

The final step of the fabrication phase was to install the suite of electronics that power the mirror. First, we mounted the display monitor by laying it against the glass and screwing in two 2x3 blocks (one on its top, the other along the bottom) to hold it in

place. Next, we used velcro to mount the Raspberry Pi on the glass and proceeded to hook up the necessary cabling. Finally, we installed our power bar by using its built-in screw mounts to secure it to the bottom piece of the frame.

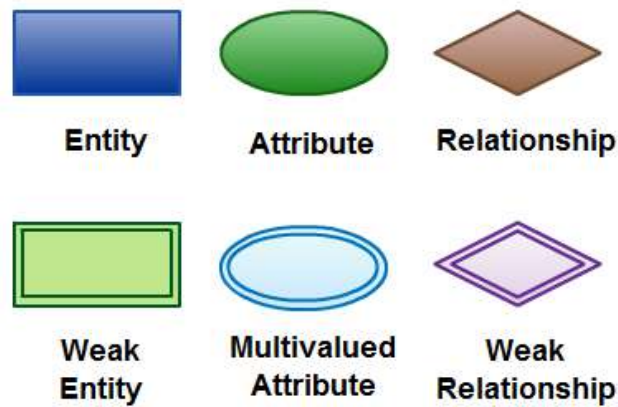
Deliverables: Display monitor, Raspberry Pi, and power bar mounted in frame.

## 4.2 ER Diagram



Entity relationship diagram displays the relationships of entity set stored in a database. In other words, we can say that ER diagrams help you to explain the logical structure of databases. At first look, an ER diagram looks very similar to the

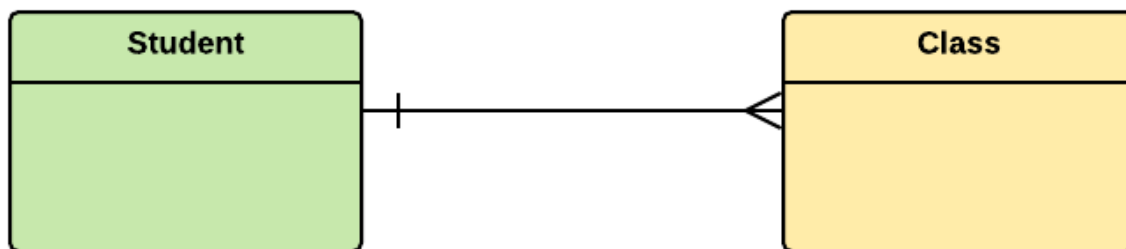
flowchart. However, ER Diagram includes many specialized symbols, and its meanings make this model unique.



*Elements in ER diagrams*

- Entity Set:-

An entity set is a group of similar kind of entities. It may contain entities with attribute sharing similar values. Entities are represented by their properties, which also called attributes. All attributes have their separate values. For example, a student entity may have a name, age, class, as attributes.



- Relationship:-

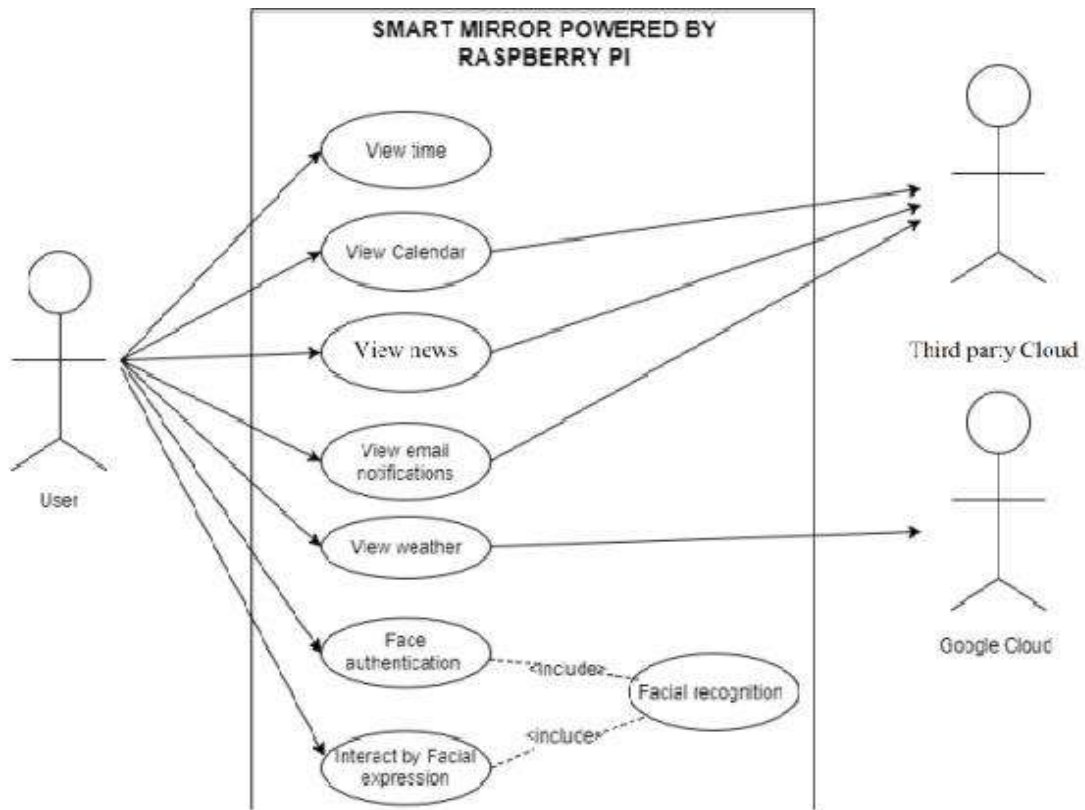
Relationship is nothing but an association among two or more entities. E.g., Tom works in the Chemistry department.



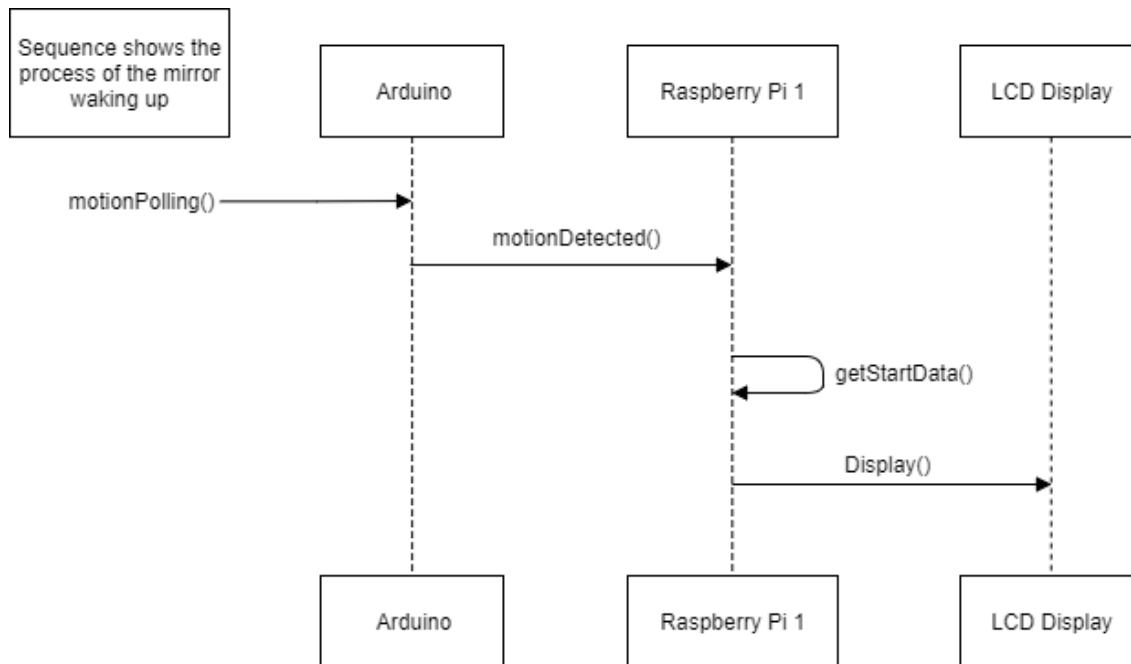
## Use Case Diagram:-

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses.

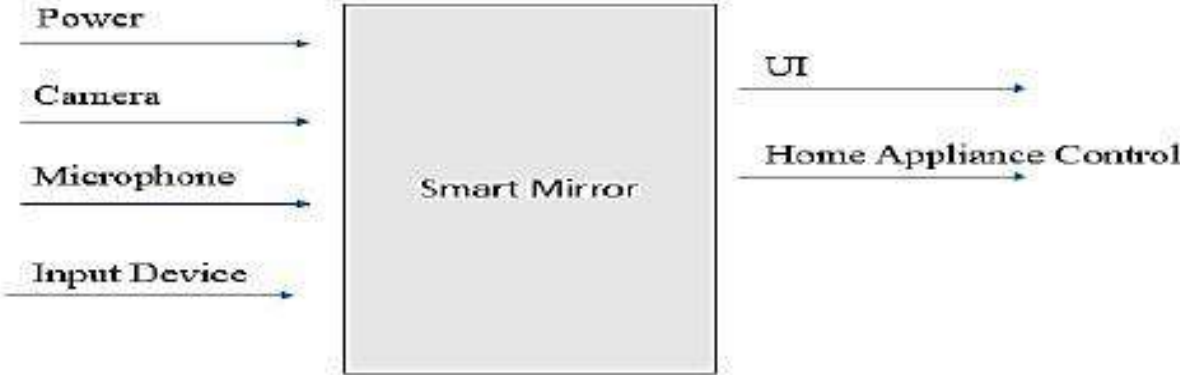




## Sequence Diagram:-



# 4.4 Data Flow Diagram



## Chapter 5

# IMPLEMENTATION AND TESTING

## 5.1 Implementation Approach

Implementation is the carrying out, execution, or practice of a plan, a method, or any design, idea, model, specification, standard or policy for doing something. As such, implementation is the action that must follow any preliminary thinking in order for something to actually happen.

In any context, software or hardware implementation encompasses all the post-sale processes involved in something operating properly in its environment, including analysing requirements, installation, configuration, customization, running, testing, systems integrations, user training, delivery and making necessary changes. The word "deployment" is sometimes used to mean the same thing.

- Mirror.py

```
import tkinter as tk
from tkinter import *
from PIL import ImageTk, Image
import time, os, sys
from geolocation import*
from googlemaps import Client as GoogleMaps
#import pyttsx3
from subprocess import call
import wikipedia
```



```
import speech_recognition as sr
import bs4
from bs4 import BeautifulSoup as soup
from urllib.request import urlopen
import feedparser
import time
import spidev # To communicate with SPI devices
from time import sleep # To add delay
# Start SPI connection
spi = spidev.SpiDev() # Created an object
spi.open(0,0)

WEATHER_CLOCK = 300000 # every 5 minutes (in ms) - used for updating weather
info
TIME_CLOCK = 60000 # every 1 minute (in ms) - used for displaying clock
click=30000
DAY_CLOCK = 1800000 # every 30 minutes - used for week forecast

LOCATION="Grove Oxfordshire" #keywords used for geolocation api

ICONS_DIR="./icons" #directory where icons are stored

headlines=" "
```

```
query= ' 
```

```
sample_rate = 44100
```

```
chunk_size = 512
```

```
def speak(audio):
```

```
call(["espeak",audio])
```

```
def alarm():
```

```
CurrentTime = time.strftime("%H:%M")
```

```
speak("Hour")
```

```
queryh=takeCommand().lower()
```

```
h=["11","20"]
```

```
while queryh not in h:
```

```
speak("invalid hour")
```

```
queryh=takeCommand().lower()
```

```
hour=queryh
```

```
print(hour)
```

```
speak("Minute")
```

```
querym=takeCommand().lower()
```

```
m=["4","5","6","7","8","10"]
```

```
while querym not in m:
```

```

speak("invalid minute")
queryh=takeCommand().lower()
minute=querym
print(minute)

alarm=hour+":"+minute
print(alarm)

while alarm != CurrentTime:
CurrentTime = time.strftime("%H:%M")
print(CurrentTime)
time.sleep(1)
if alarm == CurrentTime:
speak("wake up")
def takeCommand():
r = sr.Recognizer()
r.energy_threshold=4000
with sr.Microphone(device_index=2, sample_rate = sample_rate, chunk_size =
chunk_size) as source:
print("Listening...")
r.pause_threshold = 1
audio = r.listen(source)

try:
print("Recognizing...")

```

```
query = r.recognize_google(audio, language='en-in')
print("/n",query)
```

```
except Exception as e:
```

```
print("Say that again please...")
```

```
return "None"
```

```
return query
```

```
def left(event):
```

```
print("clicked")
```

```
def right(event):
```

```
print("clicked")
```

```
def monitor(event):
```

```
speak("heres the temperature data")
```

```
i=0
```

```
while(i<10):
```

```
spi.max_speed_hz = 1350000
```

```
adc = spi.xfer2([1,(8+0)<<4,0])
```

```
data = ((adc[1]&3) << 8) + adc[2]
```

```
volts = (data * 3.3) / float(1023)
```

```
volts = round(volts, 2) # Round off to 2 decimal places
```



```
temp = ((data * 330)/float(1023))
temp = round(temp)
temp=str(temp)
```

```
print(volts)
sleep(1)
print(temp)
speak(temp)
sleep(1)
i+=1
```

```
def reply(event):
    r2 = sr.Recognizer()
    r2.energy_threshold=4000
    with sr.Microphone(device_index=2, sample_rate = sample_rate, chunk_size =
    chunk_size) as source:
        speak("whats your query")
        print("Listening...")
        audio2 = r2.listen(source)
        r2.pause_threshold = 1
        try:
            print("Recognizing...")
            speak("Recognizing...")
            query2 = r2.recognize_google(audio2, language='en-in')
```

```
print(query2)
if 'Wikipedia' in query2:
    speak('Searching Wikipedia...')
    query2 = query2.replace("Wikipedia", "")
    results = wikipedia.summary(query2, sentences=2)
    speak("According to Wikipedia")
    print(results)
    speak(results)
if "alarm" in query2:
    alarm()
```

```
except Exception as e:
```

```
print("Say that again please...")
speak("Say that again please...")
return "None"
return query
```

```
def get_geolocation():
    location = ""
    return location
```

```
def get_forecast(location):
    # get current temperature from forecastio
    import forecastio
```

```
api_key = "96fde71e4fb18660642950e15945ed9f"
forecast = forecastio.load_forecast(api_key,"27.2038","77.5011" )
return forecast
```

```
def make_image(filePath, width, height):
    filePath = os.path.join(ICONS_DIR,filePath)
    img = Image.open(filePath)
    img = img.resize((width,height),Image.ANTIALIAS)
    img = ImageTk.PhotoImage(img)
    return img
```

```
def get_datetime():
    #format = "%H:%m - %A %-d %B %Y" # e.g. 20:15 - Tuesday 3 April 2015
    time_format = "%H:%M"
    try:
        # get clock from internet
        import ntplib
        client = ntplib.NTPClient()
        response = client.request('pool.ntp.org')
        clock = time.strftime(time_format,time.localtime(response.tx_time))
        date = time.strftime(date_format,time.localtime(response.tx_time))
    except:
        # if internet if not available, get clock from host
        import datetime
        clock = datetime.datetime.now().strftime(time_format)
```

```
date = datetime.datetime.now().strftime("%d %b %Y")
return clock, date
```

```
def is_network_available():
import shlex
import subprocess
cmd=shlex.split("ping -c1 google.com")
try:
output = subprocess.check_output(cmd)
except(subprocess.CalledProcessError,e):
return 1
else:
return 0
```

```
def get_wifi_signal():
file="/proc/net/wireless"
fo = open(file,"r")
lines=fo.readlines()
fo.close()
wifi_signal = int(float(lines[2].split()[2]))
return wifi_signal
```

```
class App():
def __init__(self):
self.start_time = time.time()
```



```
# init gui

self.root = tk.Tk()

self.root.attributes("-fullscreen", True) # fullscreen

self.root.configure(background="black")

self.bottomFrame = Frame(self.root, background = 'black')
self.bottomFrame.bind("<Button-1>", reply)
self.bottomFrame.bind("<Button-3>", monitor)
self.bottomFrame.pack(side = BOTTOM, fill=BOTH, expand = YES, pady=20)

# get geolocation
self.location = get_geolocation()

#self.button=tk.Button(text="hello", command=reply)
#self.button.pack(anchor=E)

# weather frame
self.left_frame = self.make_frame(self.root)
#self.left_frame.configure(background='blue')
self.left_frame.pack(side=tk.LEFT, fill=Y, anchor=NW, padx=0, pady=10)

self.left_frame_inner = self.make_frame(self.left_frame)
self.left_frame_inner.pack(fill=Y)
```

```
self.summary_label = self.make_label(self.left_frame,9)
self.summary_label.pack(anchor=W)

self.rain_label = self.make_label(self.left_frame,10,fg="grey")
self.rain_label.pack(anchor=W)

self.wind_label = self.make_label(self.left_frame,10,fg="grey")
self.wind_label.pack(anchor=W)

self.humidity_label = self.make_label(self.left_frame,10,fg="grey")
self.humidity_label.pack(anchor=W)

self.hourly_label = self.make_label(self.left_frame,8)
self.hourly_label.pack(anchor=W,pady=20)

self.weather_icon = self.make_icon(self.left_frame_inner)
self.weather_icon.pack(side=tk.LEFT, anchor=NW,padx=0,pady=0)

self.temperature_label = self.make_label(self.left_frame_inner,9)#50
self.temperature_label.pack(side=tk.LEFT,anchor=NW,padx=50,pady=10)

self.last_update_label = self.make_label(self.left_frame,12)
self.last_update_label.pack(side=tk.BOTTOM, anchor=W, pady=200)
```

```

# week weather frame (days name)
self.frame_week = self.make_frame(self.left_frame)
#self.frame_week.configure(background='yellow')
self.frame_week.pack(anchor=W,pady=20)

self.frame_day=[]
self.day_label = []
self.day_icon = []
self.day_img = []
self.day_temp_max = []
self.day_temp_min = []

for x in range(0,7):
self.frame_day.append(self.make_frame(self.frame_week))
self.frame_day[x].pack(side=LEFT, padx=(0,5))

self.day_label.append(self.make_label(self.frame_day[x],10,weight="bold"))
self.day_label[x].pack()

self.day_icon.append(self.make_icon(self.frame_day[x], width=20, height=20))
self.day_img.append(make_image("default.png",20,20))
self.day_icon[x].configure(image=self.day_img[0])
self.day_icon[x].pack(pady=8)

self.day_temp_max.append(self.make_label(self.frame_day[x],10,weight="bold"))

```

```
self.day_temp_max[x].pack()
```

```
self.day_temp_min.append(self.make_label(self.frame_day[x],10,fg="grey"))
```

```
self.day_temp_min[x].pack()
```

```
# datetime frame
```

```
self.right_frame = self.make_frame(self.root)
```

```
#self.right_frame.configure(background='red')
```

```
self.right_frame.pack(side=tk.RIGHT, fill=Y, anchor=NW, padx=0, pady=10)
```

```
self.bottom_frame = self.make_frame(self.root)
```

```
self.bottom_frame.pack(side=tk.BOTTOM, fill=Y, anchor=NW, padx=0, pady=10)
```

```
self.wifi_icon = self.make_icon(self.right_frame, width=40, height=30)
```

```
self.wifi_icon.pack(side=tk.TOP, anchor=E, pady=10)
```

```
self.clock_label = self.make_label(self.right_frame,15)
```

```
self.clock_label.pack(anchor=E, pady=10, padx=10)
```

```
self.date_label = self.make_label(self.right_frame,12)
```

```
self.date_label.pack(anchor=E, pady=10, padx=10)
```

```
#self.news = self.make_label2(self.bottomFrame,20)
```

```
#self.news.pack(anchor=W, padx=100, pady=50)
```



```
self.news_icon = self.make_icon(self.bottomFrame, width=35, height=35)
self.news_icon.pack(side=tk.LEFT, anchor=NW, padx=40, pady=0)
```

```
self.news = self.make_label(self.bottomFrame,8)
self.news.pack(anchor=NW, pady=10)
```

```
self.news_label = self.make_label(self.bottomFrame,6)
self.news_label.pack(anchor=W, padx=10, pady=5)
```

```
self.news_label2 = self.make_label(self.bottomFrame,6)
self.news_label2.pack(anchor=W, padx=10, pady=5)
```

```
self.news_label3 = self.make_label(self.bottomFrame,6)
self.news_label3.pack(anchor=W, padx=10, pady=5)
```

```
self.news_label4 = self.make_label(self.bottomFrame,6)
self.news_label4.pack(anchor=W, padx=10, pady=5)
```

```
self.news_label5 = self.make_label(self.bottomFrame,6)
self.news_label5.pack(anchor=W, padx=10, pady=5)
```

```
# update loops
```

```

self.update_weather()
self.update_weather_week()
self.update_datetime()
self.update_wifi()
# tk gui loop
self.root.mainloop()

def make_icon(self, parent, filePath="default.png", width=100, height=100):
img = make_image(filePath, width=width, height=height)
return Label(parent, text="", image=img, width=width, height=height,
background='black')

def make_frame(self, parent):
f = Frame(parent, bg="black")
return f

def make_label(self, parent, size, fg="white", weight="normal"):
return Label(parent, text="", bg="black", fg=fg, font=("Helvetica Neue",size, weight))

def update_wifi(self):

try:
signal = get_wifi_signal()

```

```
except:
    signal = 0

    if signal<100:
        wifi_file="wifi_excellent.png"
    if signal<75:
        wifi_file="wifi_good.png"
    if signal<50:
        wifi_signal="wifi_fair.png"
    if signal<25:
        wifi_signal="wifi_weak.png"
    if signal<1:
        wifi_signal="wifi_no.png"

    self.wifi_img = make_image(wifi_file,40,30)
    self.wifi_icon.configure(image=self.wifi_img)
    self.root.after(TIME_CLOCK, self.update_wifi)

def update_weather(self):
    forecast = get_forecast(self.location)
    day_forecast = forecast.currently()
    hour_forecast = forecast.hourly()

    self.weather_img = make_image(day_forecast.icon + ".png",50,50)
    self.weather_icon.configure(image=self.weather_img)
```

```
temperature = day_forecast.temperature
temp = '{0:.1f}'.format(temperature)
temp_str = str(temp) + u" \N{DEGREE SIGN}C"
self.temperature_label.configure(text=temp_str)
```

```
summary = day_forecast.summary
self.summary_label.configure(text=summary)
```

```
rain = int(day_forecast.precipProbability * 100)
rain_str = "Chance of rain: " + str(rain) + "%"
self.rain_label.configure(text=rain_str)
```

```
wind = day_forecast.windSpeed #in miles/hour
wind_str = "Wind speed: " + '{0:.1f}'.format(wind) + " mph"
self.wind_label.configure(text=wind_str)
```

```
humidity = int(day_forecast.humidity * 100)
humidity_str = "Humidity: " + str(humidity) + "%"
self.humidity_label.configure(text=humidity_str)
```

```
hourly = hour_forecast.data[1].summary
hourly_str = "Next hour: " + str(hourly)
self.hourly_label.configure(text=hourly_str)
```



```

self.start_time = time.time()

self.root.after(WEATHER_CLOCK, self.update_weather)

def update_weather_week(self):
forecast = get_forecast(self.location).daily()

for x in range(0,7):
day_name = forecast.data[x].time.strftime("%a").upper()
self.day_label[x].configure(text=day_name)
self.day_img[x] = make_image(forecast.data[x].icon + ".png",20,20)
self.day_icon[x].configure(image=self.day_img[x])
day_temp_max = '{0:.1f}'.format(forecast.data[x].temperatureMax)
day_temp_max_str = str(day_temp_max) + u"\N{DEGREE SIGN}"
self.day_temp_max[x].configure(text=day_temp_max_str)
day_temp_min = '{0:.1f}'.format(forecast.data[x].temperatureMin)
day_temp_min_str = str(day_temp_min) + u"\N{DEGREE SIGN}"
self.day_temp_min[x].configure(text=day_temp_min_str)

self.root.after(DAY_CLOCK, self.update_weather_week)

def update_datetime(self):

datetime = get_datetime()
self.date_label.configure(text=datetime[1])
self.clock_label.configure(text=datetime[0])

```

```

news_file="News.png"
import RPi.GPIO as GPIO
from time import sleep
GPIO.setwarnings(False)
GPIO.setmode(GPIO.BCM)
b=21
GPIO.setup(b,GPIO.IN,pull_up_down=GPIO.PUD_UP)
state=GPIO.input(b)
if state==1: print('hello')

self.news_img = make_image(news_file,35,35)
self.news_icon.configure(image=self.news_img,text="NEWS")
self.news.configure(text="NEWS")
headlines_url = "https://news.google.com/news?ned=%s&output=rss" % "in"
feed = feedparser.parse(headlines_url)
Labels=[self.news_label,self.news_label2,self.news_label3,self.news_label4,self.news_label5]
for post in feed.entries[0:1]:
self.news_label.configure(text="1: "+post.title)

for post2 in feed.entries[2:3]:
self.news_label2.configure(text="2: "+post2.title)

for post3 in feed.entries[4:5]:
self.news_label3.configure(text="3: "+post3.title)

```

```

for post4 in feed.entries[6:7]:
self.news_label4.configure(text="4: "+post4.title)

for post5 in feed.entries[8:9]:
self.news_label5.configure(text="5: "+post5.title)

# calculate elapsed time since last update
elapsed_time = time.time() - self.start_time
elapsed_time = int(elapsed_time/60)

# if stuck for more than 15 mins, reboot
if elapsed_time > 15: reboot()

maybe_plural = "s" if elapsed_time > 1 else ""
self.last_update_label.configure(text="last updated " + str(elapsed_time) + " min" +
maybe_plural + " ago")

self.root.after(TIME_CLOCK, self.update_datetime)

if __name__=="__main__":
app=App()
temperature.py
import spidev

from time import sleep

spi = spidev.SpiDev()

```

```
spi.open(0,0)
```

```
def temp():
```

```
    while(True):
```

```
        spi.max_speed_hz = 1350000
```

```
        adc = spi.xfer2([1,(8+channel)<<4,0])
```

```
        data = ((adc[1]&3) << 8) + adc[2]
```

```
        temp = ((data * 330)/float(1023))
```

```
        temp = round(temp)
```

```
        print(temp)if __name__=="__main__":
```

```
temp()
```

- Heart rate monitoring:

The Raspberry Pi pulse sensor can not be read out digitally, thus we need an analog-to-digital converter. Such an ADC makes it possible to read out analog signals on the Raspberry Pi because. Unlike the Arduino, the Pi has no integrated analog IO pins. I used the following components in the below:

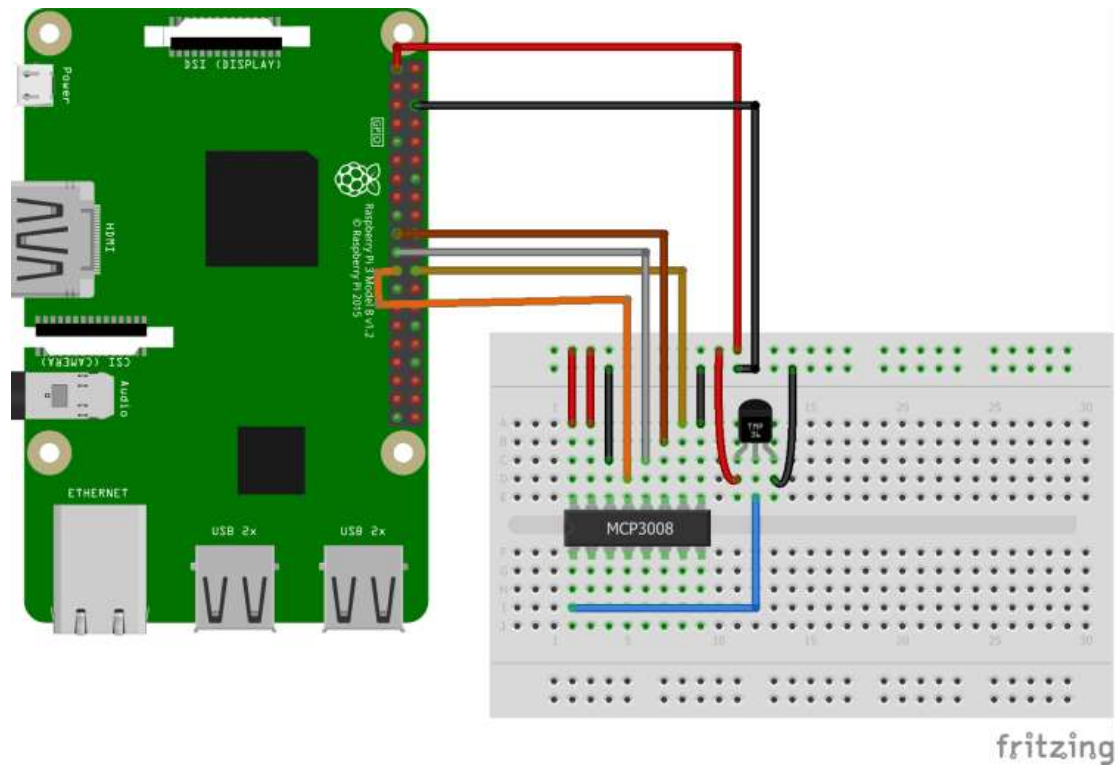
- Heart rate Pulse sensor:
- MCP3008 ADC
- Small Breadboard:
- Jumper Wire:

Some sensors are shipped with a Velcro fastener for the finger, which is advantageous for the measurement, since there is not too much pressure on the finger.

Since this sensor has also been designed for the Arduino, it does not provide a digitally readable signal. In order to be able to read the analogue signal, an ADC such as the MCP3008 is required. It doesn't matter which channel of the ADC you are using, as long as you adjust it later in the code.







## Coding:

The code is as follows

```

1. # Importing modules
2. import spidev # To communicate with SPI devices
3. from time import sleep # To add delay
4.
5. # Start SPI connection
6. spi = spidev.SpiDev() # Created an object
7. spi.open(0,0)
8.
9. # Read MCP3008 data
10. def analogInput(channel):
11. spi.max_speed_hz = 1350000
12. adc = spi.xfer2([1,(8+channel)<<4,0])
13. data = ((adc[1]&3) << 8) + adc[2]
14. return data
15.
16. # Below function will convert data to voltage
17. def Volts(data):
18. volts = (data * 3.3) / float(1023)

```

```
19.volts = round(volts, 2) # Round off to 2 decimal places
20.return volts
21.
22.# Below function will convert data to temperature.
23.def Temp(data):
24.temp = ((data * 330)/float(1023))-50
25.temp = round(temp)
26.return temp
27.
28.while True:
29.temp_output = analogInput(0) # Reading from CH0
30.temp_volts = ConvertVolts(temp_output)
31.temp = ConvertTemp(temp_output)
32.
33.print("Temp : {} ({}V) {} deg C".format(temp_level,temp_volts,temp))
34.sleep(5)
```

## 5.3 Testing Approach

A test approach is the test strategy implementation of a project, defines how testing would be carried out. Test approach has two techniques:

- Proactive - An approach in which the test design process is initiated as early as possible in order to find and fix the defects before the build is created.
- Reactive - An approach in which the testing is not started until after design and coding are completed.

### 5.3.1 Unit Testing

UNIT TESTING is a level of software testing where individual units/ components of a software are tested. The purpose is to validate that each unit of the software performs as designed. A unit is the smallest testable part of any software. It usually has one or a few inputs and usually a single output.

- Unit Test Plan
  - Prepare
  - Review
  - Rework
  - Baseline
- Unit Test Cases/Scripts
  - Prepare
  - Review
  - Rework
  - Baseline
- Unit Test
  - Perform

### **5.3.2 Integration Testing**

INTEGRATION TESTING is a level of software testing where individual units are combined and tested as a group. The purpose of this level of testing is to expose faults in the interaction between integrated units. Test drivers and test stubs are used to assist in Integration Testing. Integration Testing is the second level of testing performed after Unit Testing and before System Testing.

- Integration Test Plan
  - Prepare
  - Review
  - Rework
  - Baseline
- Integration Test Cases/Scripts
  - Prepare
  - Review
  - Rework
  - Baseline
- Integration Test
  - Perform

### **5.3.3 Validation Testing:**



Validation testing is the process of ensuring if the tested and developed software satisfies the client /user needs. The business requirement logic or scenarios have to be tested in detail. All the critical functionalities of an application must be tested here.

Whenever you are asked to perform a validation test, it takes a great responsibility as you need to test all the critical business requirements based on the user needs. There should not be even a single miss on the requirements asked by the user. Hence a keen knowledge on validation testing is much important.

### **5.3.4 Acceptance Testing:**

Acceptance Testing is a level of software testing where a system is tested for acceptability. The purpose of this test is to evaluate the system's compliance with the business requirements and assess whether it is acceptable for delivery.

- Acceptance Test Plan
  - Prepare
  - Review
  - Rework
  - Baseline
- Acceptance Test Cases/Checklist
  - Prepare
  - Review
  - Rework
  - Baseline
- Acceptance Test
  - Perform

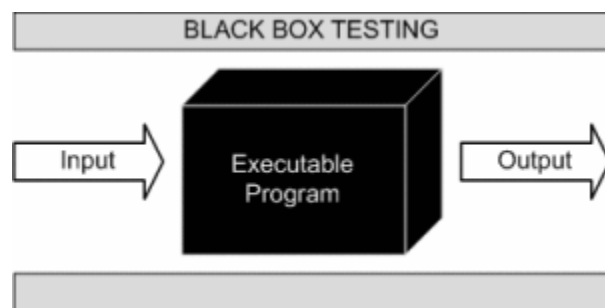
### **5.3.5 Qualification Testing:**

Qualification testing is performed to verify the design and manufacturing process, and it provides a baseline for subsequent acceptance tests. The production qualification testing is conducted at the unit, subsystem, and system level on production items and is completed before the production decision. The results of these tests are a critical factor in assessing the system's readiness for production. Down line Production Qualification

Tests (PQTs) are performed to verify process control and may be performed on selected parameters rather than at the levels originally selected for qualification.

### 5.3.6 Black Box Testing:

Black Box Testing also known as Behavioural Testing, is a software testing method in which the internal structure/design/implementation of the item being tested is not known to the tester. These tests can be functional or non-functional, though usually functional.



This method is named so because the software program, in the eyes of the tester, is like a black box; inside which one cannot see. This method attempts to find errors in the following categories:

- Incorrect or missing functions
- Interface errors
- Errors in data structures or external database access
- Behaviour or performance errors
- Initialization and termination errors

### 5.3.7 White Box Testing:

White Box Testing is testing of a software solution's internal structure, design, and coding. In this type of testing, the code is visible to the tester. It focuses primarily on verifying the flow of inputs and outputs through the application, improving design and usability, strengthening security. White box testing is also known as Clear Box testing, Open Box testing, Structural testing, Transparent Box testing, Code-Based testing, and

Glass Box testing. It is usually performed by developers. White box testing involves the testing of the software code for the following:

- Internal security holes
- Broken or poorly structured paths in the coding processes
- The flow of specific inputs through the code
- Expected output
- The functionality of conditional loops
- Testing of each statement, object, and function on an individual basis

## **5.4 Modifications and Improvements:**

It includes any updates, changes, engineering changes, adaptations, enhancements and/or modifications supplied or approved by Quantum that:

- Correct any errors or defects in any of the Products;
- Improve or enhance the existing functions of any of the Products;
- Change any of the functions or add new features or functions to any of the Products;
- Reduce the cost of manufacturing and assembling any of the Products.

# Chapter 6

## RESULTS AND DISCUSSIONS

### 6.1 Test Report

Test Report is needed to reflect testing results in a formal way, which gives an opportunity to estimate testing results quickly. It is a document that records data obtained from an evaluation experiment in an organized manner, describes the environmental or operating conditions, and shows the comparison of test results with test objectives.

### 6.2 User Documentation

- Date and Time:

Python's time module has been used to display the date and time with a proper format.

A class is created to fetch the datetime and is passed to a Tkinter block code the main window, where it gets labeled and assigned with dimension.



02:07 PM

Tuesday  
Sep 22, 2020

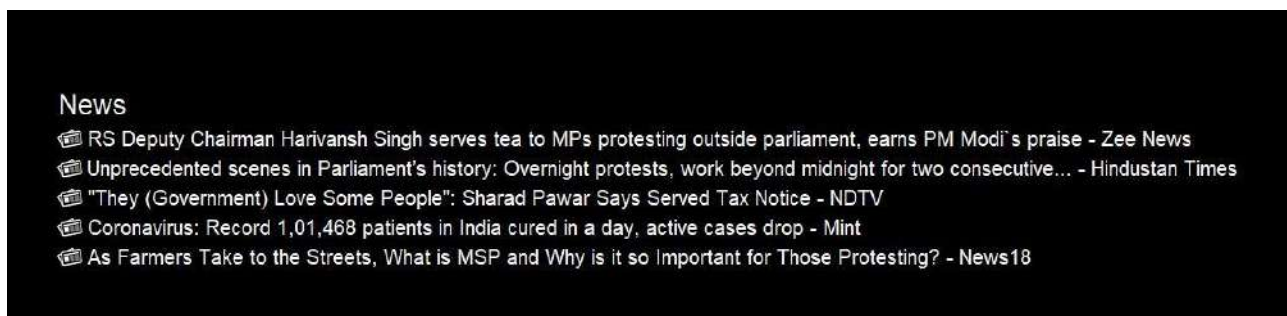
- Weather:

For getting the weather forecast have used darksky.net a site which provides weather data based on location. Here we need to create an account and get an API key used to fetch the weather forecast data.



- News:

For displaying news have used feed parser module of python which accepts the argument of country name to get the news of that country.



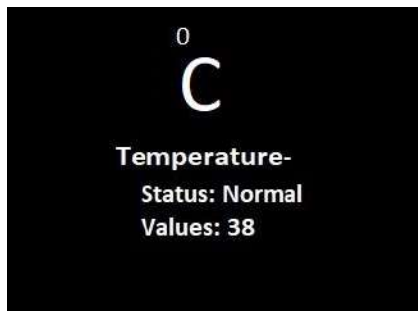
- Speech Recognition:

The smart mirror is interactive we can ask for service through voice command lets take the example of health monitoring system.

We need to say “diagnose me” and the mirror will reply to touch the temperature and heart rate sensor so that it gains the values and display it over the window and the values disappear after 2 minutes

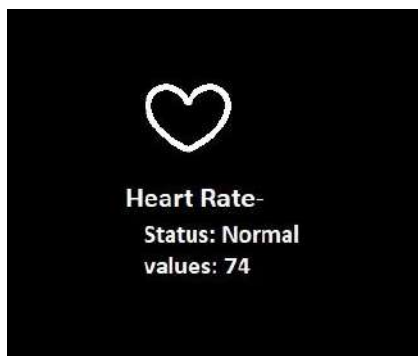
- Temperature monitoring:

For monitoring temperature have used LM35 transistor which is connected to the rasp pi with a MCP 3008 ADC between.

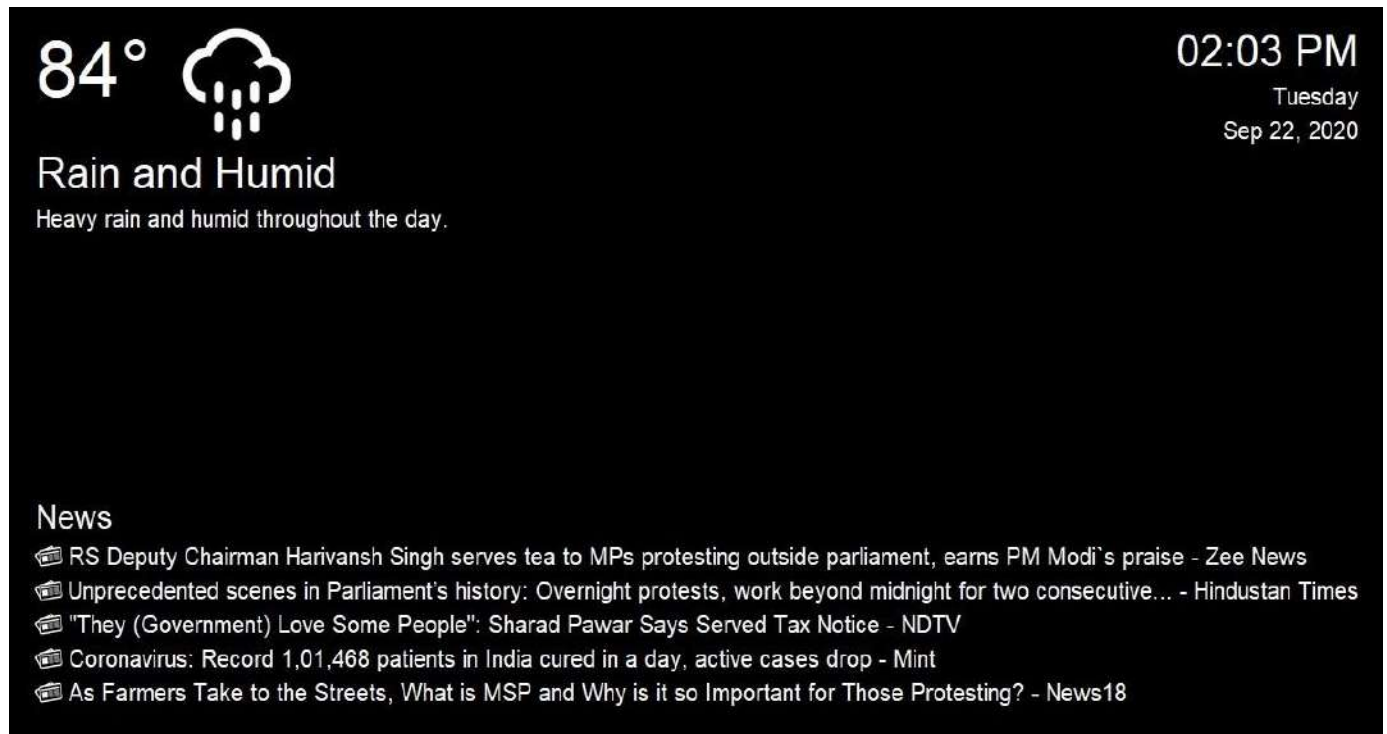



- Heart Rate monitoring:

For monitoring heart rate have used pulse rate sensor which is connected to the rasp pi with a MCP 3008 ADC between.



➤ Normal window appearance on smart mirror








84° 

02:03 PM  
Tuesday  
Sep 22, 2020


**Rain and Humid**  
Heavy rain and humid throughout the day.

**News**

-  RS Deputy Chairman Harivansh Singh serves tea to MPs protesting outside parliament, earns PM Modi's praise - Zee News
-  Unprecedented scenes in Parliament's history: Overnight protests, work beyond midnight for two consecutive... - Hindustan Times
-  "They (Government) Love Some People": Sharad Pawar Says Served Tax Notice - NDTV
-  Coronavirus: Record 1,01,468 patients in India cured in a day, active cases drop - Mint
-  As Farmers Take to the Streets, What is MSP and Why is it so Important for Those Protesting? - News18

➤ Window appearance on smart mirror after asked for diagnosis service


The image shows a smart mirror interface with a black background and white text and icons. At the top left, it displays '84°' next to a cloud with rain icon. Below this is the text 'Rain and Humid' and 'Heavy rain and humid throughout the day.' At the top right, it shows '05:48 PM', 'Tuesday', and 'Sep 22, 2020'. In the center, there are two health status indicators: 'Temperature-' with a 'C' icon, 'Status: Normal', and 'Values: 38'; and 'Heart Rate-' with a heart icon, 'Status: Normal', and 'values: 74'. At the bottom, there is a 'News' section with five news items, each preceded by a small icon.

84° 






05:48 PM  
Tuesday  
Sep 22, 2020

Rain and Humid  
Heavy rain and humid throughout the day.

<sup>0</sup>  
C  
Temperature-  
Status: Normal  
Values: 38

  
Heart Rate-  
Status: Normal  
values: 74

News

-  RS Deputy Chairman Harivansh Singh serves tea to MPs protesting outside parliament, earns PM Modi's praise - Zee News
-  Unprecedented scenes in Parliament's history: Overnight protests, work beyond midnight for two consecutive... - Hindustan Times
-  "They (Government) Love Some People": Sharad Pawar Says Served Tax Notice - NDTV
-  Coronavirus: Record 1,01,468 patients in India cured in a day, active cases drop - Mint
-  As Farmers Take to the Streets, What is MSP and Why is it so Important for Those Protesting? - News18

# Chapter 7

## Conclusions

### 7.1 Conclusion

Most of us have a wish to be efficient in our everyday lives. We want to accomplish tasks easily, we want to manage our schedules, and most of all we simply want to feel in control of our lives as they unfold. The advent of smart technologies has helped to fill this need, as everyday objects are integrated with increasingly sophisticated levels of technology.

However, there are still a vast amount of unexploited niches in our homes where technology could make our lives smoother and more convenient, and it is this technical problem that our group will address with our product, the Smart Mirror.

The household mirror is often taken for granted in our daily routine, but really it's one of the products that stand to gain the most functionality out of a tech upgrade.

Mirrors are a focal point of our attention almost every single day, and yet we rarely physically touch them. This makes it an exceptionally easy hub to display important information on, from the time of day to your favorite website's leading headlines.

Now let's take an overview of our product, the Smart Mirror itself. At its heart the mirror is powered by a microcontroller, the Raspberry Pi 2, a platform on which to build all of our functionality.

The elements we chose to make up this display consist of the following:

- Time (a real-time clock displaying the hour, minute, and second)
- Date
- Weather
- News
- Temperature
- Heart Rate



As for the mirror itself, it consists of a strong 2x3 frame assembled from four individual pieces (each cut on 45 degrees) and screwed together with wood screws. The considerable weight of the glass and the suite of electronics behind it made this size of lumber necessary. Next, we purchased a two-way mirror (20"x30") from a local glass supplier and mounted it within the frame. This mirror is built so that one of its faces looks identical to a mirror (reflective) but the other is transparent enough for our display to shine through. From the other side, the user sees only their reflection and elements we've chosen to display.

➤ **Benefits:**

- Smart interface with mirror.
- Easy access to daily updated news.
- Easy access to daily updated weather forecast.
- Simple and comfortable way to check basic health status

## 7.2 Limitations of The System

- The working is a little slow we can speed up by using rasp pi 4.
- The raspberry pi over heats very frequently needed to be placed in low temperature room.
- The pulse sensors used is not highly accurate.
- The temperature sensor may catch the temperature of its near environment when rasp pi over heats and give improper body temperature values.

## 7.3 Future Scope of The Project

The smart mirror can be further updated with:

- Home automation.

- AI assistant that with smart alarm feature, activity/schedule maker, daily schedule reminder, etc.
- Upgrading the interface with links to different basic social media and shopping apps.
- We can also add a login feature for family members with an admin.
- Smart Mirror As Security System :  
When there is nobody in home it can be switched into security system by using VNC viewer to detect human presence. When someone enters into room ,PIR sensor will detect the movement of the person when he passes by the mirror and capture the image and stores it in the drop box .Also informs the owner by updating captured image in the drop box , by this way smart mirror system can also be used as a security system.

## 7.4 References

- <https://projects.raspberrypi.org/>
- <https://docs.python.org/>
- <https://www.circuitstoday.com/>
- Youtube.com
- Google.com

## 7.5 Summary

A futuristic smart mirror system that provides information like time, date, accurate temperature and humidity, and latest news while looking and grooming in front of mirror and also helps with basic health diagnosis. The household mirror is often taken for granted in our daily routine, but really it's one of the products that stand to gain the most functionality out of a tech upgrade. Mirrors are a focal point of our attention almost every single day, and yet we rarely physically touch them. This makes it an exceptionally easy hub to display important information on, from the time of day to your favorite website's leading headlines. Smart mirrors have great potential to enhance user experience of accessing and interacting with information. Not only do they allow users to see relevant

information effortlessly, they can also be integrated as a thief detection system. Our smart mirror saves time and makes it easier to access information. We can display date and time, weather predictions, news , current affairs and also monitor our health through basic diagnosis of body temperature and heart rate .In future this project can be improved by adding integrated thief detection system into our smart mirror, interactive touch screen, geo-location and some more features

# **NOVA – HELP DESK AGENT**

**“A Simple Help Desk Ticket Automation Agent in UiPath”**

## **A Project Report**

Submitted in partial fulfillment of the  
Requirements for the award of the degree of

**MASTER OF SCIENCE (INFORMATION TECHNOLOGY)**

**By**

Harshad Triveni Gupta

PI19007

**Under the esteemed guidance of**

**Mrs. S. Saisree Rangarajan**

**Designation Professor**



**DEPARTMENT OF INFORMATION TECHNOLOGY  
THE S.I.A. COLLEGE OF HIGHER EDUCATION**

*(Affiliated to University of Mumbai)*

**DOMBIVLI (EAST), 421 203**

**MAHARASHTRA**

**YEAR 2020-2021**

**DEPARTMENT OF INFORMATION TECHNOLOGY**





# PROFORMA FOR THE APPROVAL OF PROJECT PROPOSAL

(Note: All entries of the proforma of approval should be filled up with appropriate and complete information. Incomplete proforma of approval in any respect will be summarily rejected.)

PRN No.: \_\_\_\_\_

Roll No.: \_\_\_\_\_

1) Name of the Student

\_\_\_\_\_

2) Title of the Project

\_\_\_\_\_

3) Name of the Guide

\_\_\_\_\_

4) Teaching experience of the Guide

\_\_\_\_\_

5) Is this your first submission?

Yes

No

Signature of the Student

Signature of the Guide

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of the Coordinator

## **CERTIFICATE**

This is to certify that the project entitled, “**NOVA – Help Desk Agent**” is benefitted work of **HARSHAD TRIVENI GUPTA** bearing Seat No: PI19007 submitted in partial fulfillment of the requirement for the award of degree of BACHELOR OF SCIENCE in INFORMATION TECHNOLOGY from University of Mumbai.

**Internal Guide**

**Coordinator**

**External Examiner**

**Date**

**College Seal**

## **Abstract**

The success of any business or organization will depend on how skillfully and fastly you handle your customer problems. Remember, if you can resolve the customer issues successfully, then you would have won a customer's trust and heart for their lifetime. They will stay connected with your organization hence, boosting revenue and profits. On the other hand, if you are not able to handle these issues, then you will likely to lose your customer and their trust as well.

Generally, in any organization there is a support team who is responsible to manage issues raised by the customer associated with that organization and maintain the relationship between the customer and organization. The support team is responsible for improving customer service standards by addressing and solving that problems.

Support team must deal with large number of customer tickets generated daily. These tickets could be raised on various issues related to services provided by the organization, password resetting, product owned and many more.

But the question remains that why is it so hard to deliver customer service consistently for any organization? So, the answer is, obviously a manual employee of any organization cannot reply to all those tickets alone. This would be quite tedious and will require enough cost and a more resources in terms of cost and labors to work on. Everyone knows that customer service ticket jobs are really challenging.

Our solution will help the organization to manage the inputs from a variety of channels and update support tickets on ZOHOO Desk application. Support tickets are the requests that any customer raise by calling help desk agent of any organization to get your issues resolved for better customer satisfaction.

## Acknowledgement

The presented project, as a part of the curriculum was a first experienced for me. I have looked upon this project not merely as a syllabus to be completed but as an aim to know, study, develop and experience the commercial software technologies.

I would like to thank and appreciate the support of my guidance, who served a helping hand physically, mentally, and intellectually during this project.

Foremost regards to my guide **Prof. Saisree Rangarajan** as well as H.O.D. **Prof. Sreekala Nair** who were the guiding lights throughout the project.

I would like to thank our Principle, **Dr. Padmaja Ma'am**, who made available the facilities required for this project.

I also wish to mention the unsaid support of my parents who, as always helped me in every possible way to make this work of mine, as a success.

The contribution made by my friends and my classmates, directly or indirectly was indispensable and will always be remembered.

This opportunity has given me the valuable experience about software development.

I am glad to say that I have satisfactorily reached my aims and intentions, to make this project a success.

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## **Introduction:**

Generally, in any organization there is a support team who is responsible to manage issues raised by the customer associated with that organization and maintain the relationship between the customer and organization. The support team is responsible for improving customer service standards by addressing and resolving their issue.

Support team must deal with humongous number of tickets generated daily. These tickets could be raised on various issues related to services provided by the organization, password resetting, product owned and many more. Obviously, a manual employee cannot reply to all those emails on daily basis. This would be quite difficult task and will require enough cost.

Instead of processing all these tasks manually, you can just automate this task. Below in this solution, I am going to show you, how to automate this task using UiPath.

Help desk agent gets input from a variety of channels, including phone, email, and spreadsheets, to create and update support tickets. Support tickets are the requests that you raise by calling help desk agents to get your issues resolved; for example, your laptop is not working, or you have internet issues.

For this project, we will only be covering the automation of inputting tickets from spreadsheets that a requester places in a certain folder. We are assuming a very simple use case of ticket creation for this first project. All you must do in this project is to input support ticket data in a spreadsheet and place it in a folder. The bot, once invoked, automatically creates a support ticket within the help desk system for you.

If you noticed, we are invoking this bot. This means that we will be building an attended automation that behaves like an assistant – an assistant that raises tickets automatically!

## **Automation:**

Nowadays, there is almost no aspect of our lives that is unaffected by automation. Some examples include washing machines, microwave ovens, autopilot mode for automobiles and airplanes, Nestlé using Robots to sell coffee pods in stores in Japan, Walmart testing drones to deliver products in the US, our bank checks being sorted using Optical Character Recognition (OCR), and ATMs.

The term automation is derived from the Greek word autos meaning self, and motos, meaning moving. Automation, in simple words, is technology that deals with the application of machines and computers to the production of goods and services. This helps in getting work done with little or no human assistance.

With the advent of computers, many software systems were developed to accomplish tasks that were previously done on paper to manage businesses, or not being done at all due to the lack of tools. Some of these are bookkeeping, inventory management, and communications management.

There is also a type of software that ties these systems and people together in workflows, known as Business Process Management (BPM) tools. This software has been developed for areas such as record systems, engagement systems, insight systems, and innovation systems. These mostly replicate processes in real-life scenarios.

In the digital world, automation and software development are two different terms. Very often, however, one is confused with the other. If some portion of a workflow can be programmed to be done without human intervention, it can be called automation. For example, in order to pass any invoice in a payment system, Ms. Julia at ABC organization needs to check that goods have been delivered and recorded in an inventory management system. This is a cumbersome job, as it has to be done for each and every invoice. Also, for larger organizations, more people are needed to do this check on computers. However, Jack, an application developer, proposes that he can integrate those two systems using database integration techniques. He will write a procedure that will fetch data from the inventory management system and automate the check of receivables. Developing an inventory management software system is called software development, while programming a step so that no more human intervention is required is called automation.

There are various techniques used and available to automate steps and processes in an organization where software systems are being used to accomplish certain tasks. Before we look at these techniques however, let us see what can be automated and what should be automated.

There are a few aspects that have to be taken into consideration for choosing automation candidates. The following processes should be automated:

- Repetitive steps
- Time-consuming steps
- High-risk tasks
- Tasks with a low-quality yield
- Tasks involving multiple people and multiple steps.
- And everything else!

We have found out what should be automated. Now the question arises what can be automated?

To automate something, it needs to have the following characteristics.

- Well defined and rule-based steps
- Logical
- An input to the task can be diverted to the software system.
- Input can be deciphered by software systems with available techniques.
- The output system is accessible.
- Benefits are more than the cost.

## **Robotic Process Automation:**

Today, automation has reached a stage of maturity where several other technologies have developed from it. Robotic process automation (RPA) is one such transformational burgeoning area. Robot in Robotic process automation means software programs that mimic human actions. In simple words, RPA involves the use of software that mimics human actions while interacting with applications in a computer and accomplishing rule-based tasks. This often requires reading from and typing or clicking on existing applications that are used to perform the given tasks.

In addition, these software Robots also perform complex calculations and decision making on the basis of the data and predefined rules. With the rapid progress of technology and renewed efforts in the area of artificial intelligence, it has become possible to use State activity: Transitions contain three sections - Trigger, Condition, and Action, which enable you to add a trigger for the next state or a condition under which an activity is to be executed. with RPA to accomplish tasks that were not possible earlier. Some of the technologies being adopted with RPA are as follows:

- Machine learning
- Natural language processing
- Natural language generation
- Computer vision

With the inclusion of the preceding technologies, sometimes it is also referred to as intelligent automation.

With the advent of RPA, it has become much easier to automate tasks. Now, we need to know only the steps taken by humans and make the Robots mimic the action on a computer screen using mouse and keyboard. This is a big deal because in most cases, the process is already defined and the steps documented. Humans also follow the same operating procedures, which define the steps taken to accomplish the task. Business logic, validation of data, transformation, and use of data is already coded in existing systems that humans use to accomplish a task, a simple example being invoice data entry.

RPA platforms allow the program, called Robots, to interact with any application in the same way a human would do, hence, automating rule-based work by recording those steps for later playback.

An important point that distinguishes RPA from traditional automation is that the software Robot is trained using steps that are illustrative rather than using instructions based on code. Thus, a person with little programming experience can be trained on these platforms to automate simple to complex processes.

RPA comprised of three main components which are Robots, Processes and Automation. Let us discuss all of them one by one:

**Robots:** A robot is an electromechanically designed machine, programmable of computer and trying to be carrying out a complex series of actions automatically without any human intervention. A robot accomplishes tasks by moving into the real world.

**Process:** The ‘Process is the well-known term to everybody and even associated in the day-to-day life of people and spread across the sectors. It is an essential part of any system and firm and is the activity to accomplish a task completion. A process is a well-defined step which takes input form different devices and people and is completed as per the predefined rules to produce desired output.

**Automation:** “Automation” is the technique of making an apparatus, a process, or a system which operate automatically. However, peoples are already reaping the automation application in day-to-day life. Automation includes processing capability of any system. Integrating people and system to achieve automation is not a simple task.

## **Types of RPA:**

We have two kinds of RPA automation that are based on how the RPA tool helps you automate. One of them is like an assistant that you call upon to help you complete the tasks, while the other is a kind of automation that is mostly used for back-office work.

**Attended Automation:** These are the assistants that run on your computer and help you complete parts of the tasks that you are performing. For example, if you usually copy and paste data from one application to multiple applications, you can invoke an attended RPA to take over just these sets of activities. The control is then returned to you by RPA to carry out the next set of tasks. This type of automation is popular with agents at call centers. With this, the long, repetitive processes that an agent does are replaced with single clicks! This greatly reduces the time it takes to train your representatives. Therefore, attended RPA can reduce the average handling times, improving your customer experience.

You would use attended bots for the following reasons:

- Tasks that need real-time human-system interaction
- To augment your employee's day-to-day work, enabling them to do it faster and better.
- To help your employees understand and embrace automation.

**Unattended Automation:** If you don't need a representative or worker interaction to execute a process, you can usually run the process on a backend server. This is known as unattended automation, which can be used to automate back-office work. In unattended automation, workflows are self-triggered and run-on servers. They usually run to a predetermined schedule and are available 24/7. For example, you can batch your invoices and process them at certain times during the day. The bot would later send you a report, indicating the invoices that could not be processed automatically. You can review the report and only work on the invoices that need your intervention. These automated tasks can be scheduled or started through control rooms. You can

allocate tasks, adjust priorities, manage queues, and intervene, in the case of performance issues, through the control room.

Usually, unattended automation gives you more control over the automation process. It follows your rules to complete a process automatically. You would use unattended automation for the following reasons:

- Tasks that are structured and can be fully mapped.
- To replace entire roles where possible
- To gather, sort, analyze, and distribute large amounts of data.



## **Literature Review:**

The changes happening in the global world driven by the development of new technologies require businesses to become more agile and quickly respond to the needs, wishes, and demands from their customers. Moreover, competitive, and financial pressures force organization to be more efficient, this constantly seeking for new technologies and methodologies that would help them become more productive, save costs, and add value to their business.

One of the solutions which is emerging as a new technology is Robotic Process Automation (RPA) which can replace employees to be involved in more complicated tasks which can bring organization more value. According to the reports of consulting companies RPA is recognized as an emerging and disruptive technology that is already delivering value.

Although there is number of authors reporting various benefits of implementing RPA within an organization according to author's best knowledge, RPA is at, more often implemented in practice than it is investigated by the research. Thus, it is very important to discuss differences, similarities, and complementarities between RPA and similar technologies and approaches, one of which is business process management (BPM).

According to the findings of preliminary literature overview, RPA is defined as the application of specific technology and methodologies which is based on software and algorithms aiming to automate repetitive human tasks.

Recently, RPA definition is extended towards its conjunction with artificial intelligence (AI), cognitive computing, process mining, and data analytics. The introduction of advanced digital technologies allows RPA to be reallocated from performing repetitive and error-prone routines in business processes towards more complex knowledge-intensive and value-adding tasks.

## Background Study:

Any strong business will look to **harness the power of customer service to develop positive relationships with the clients**. But if you are a proactive company, you will keep asking the questions, “**What is good customer service?**”

Your customers are interacting with your business pretty much every day. At some stage, your team will encounter roadblocks and challenges. Remember, if you can resolve these issues successfully and fast, you would have won a customer’s trust for their lifetime. They will return to you again, hence, boosting your organization’s revenue and profits. On the other hand, if the handling is poor, expect your customers to bolt to your closest competitor. And with it goes your revenue too.

Earlier all these tasks are done manually by the people on daily basis. Hence these tasks were really time consuming and required more people to process.

In this solution, we will only be covering the automation of inputting tickets from spreadsheets that a requester places in a certain folder. We are assuming a very simple use case of ticket creation for this first project. All you must do in this project is to input support ticket data in a spreadsheet and place it in a folder. The bot, once invoked, automatically creates a support ticket within the help desk system for you.

To create this solution, we are considering RPA i.e., Robotic Process Automation. It is an exciting technology that is being the first step to using new and advancing technologies to automate enterprise processes.

RPA is advancing rapidly and is part of a bigger movement to low code and no-code tools. Compared to traditional coding, these tools are easier to use and faster to deploy. Organizations are now using these rapid development tools with emerging technologies such as process mining, artificial intelligence (AI), and analytics to enable end-to-end process automation.

RPA allows software robots to carry out tasks on a computer just like a human would. Robotic Process Automation (RPA) excels at automating manual and repetitive tasks. RPA, therefore, gives us a tool that we can use to automate all the unexciting work you may have been doing so you can do some exciting work! With this tool, you have more time to spend on unique human activities such as delighting your team, boss, and customers.

## **Objectives:**

Customer support team plays a very important role in organization to manage their customer's problems and in resolving them. But it is difficult for any employee who is working in any XYZ organization's customer support team to handle all the customer's problem on daily basis.

The main objective of these project is to provide such a solution for organization so that they can manage their customer support department to an extent. In general, this solution gets input from spreadsheet and create support ticket on ZOHO Desk application.

This solution gets the inputs stored in spreadsheet and then create a support ticket on Zoho desk application. This solution is a trigger based attended robot, so the user must trigger the event as shown in the prompted message box. Once the user triggers the event the automation will get started. And will create the support ticket, then it will move the request excel sheet to process folder.

## **Different RPA Platforms or Tools:**

RPA tools help you automate business processes using multiple technologies. It all started with screen scrapping and workflow configurations to automate BPO processes. The emergence of AI technologies has helped the RPA tools include cognitive aspects. RPA, along with AI, is now being called "Intelligent Automation."

There are various RPA platforms available in the market some of them are:

- Automation Anywhere
- UiPath
- Blue Prism
- WorkFusion
- Thoughtonomy
- KOFAX

UiPath and Automation Anywhere are two of the top RPA platform vendors, as per the rankings from respected analysts such as Forrester and Gartner. They have taken different paths, as we will see, and have evolved into the top RPA platforms that we see today.

### **UiPath:**

UiPath is a top RPA platform by many measures. The company is one of the most funded in this space and gives you a sense of what investors consider the best RPA tool in the long run.

It is quite popular and has a big community. The secret to this is that UiPath made the platform easily accessible quite early. It is also one of the easiest RPA platforms with a comparatively low learning curve. Therefore, I have selected UiPath as one of the platforms for our projects.

Fast forward to today, and UiPath is a top enterprise RPA platform. The UiPath platform helps you develop automation rapidly while being secure and scalable.

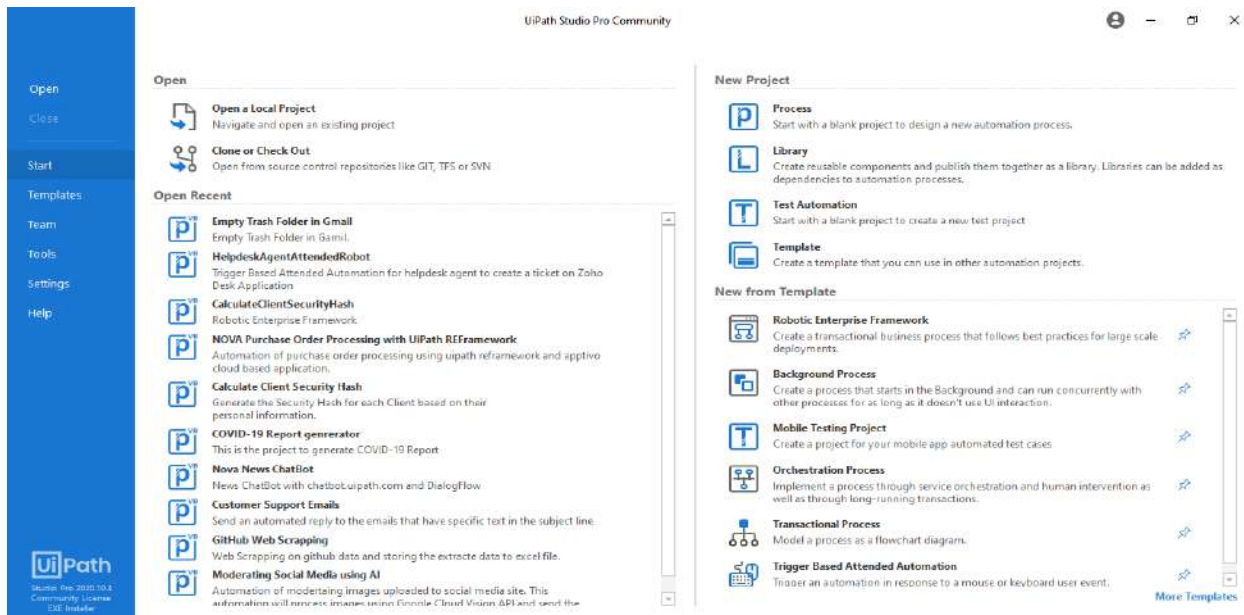
The platform has three main components:

- UiPath Studio
- UiPath Orchestrator
- UiPath Robot

Let us discuss all of them one by one:

## UiPath Studio:

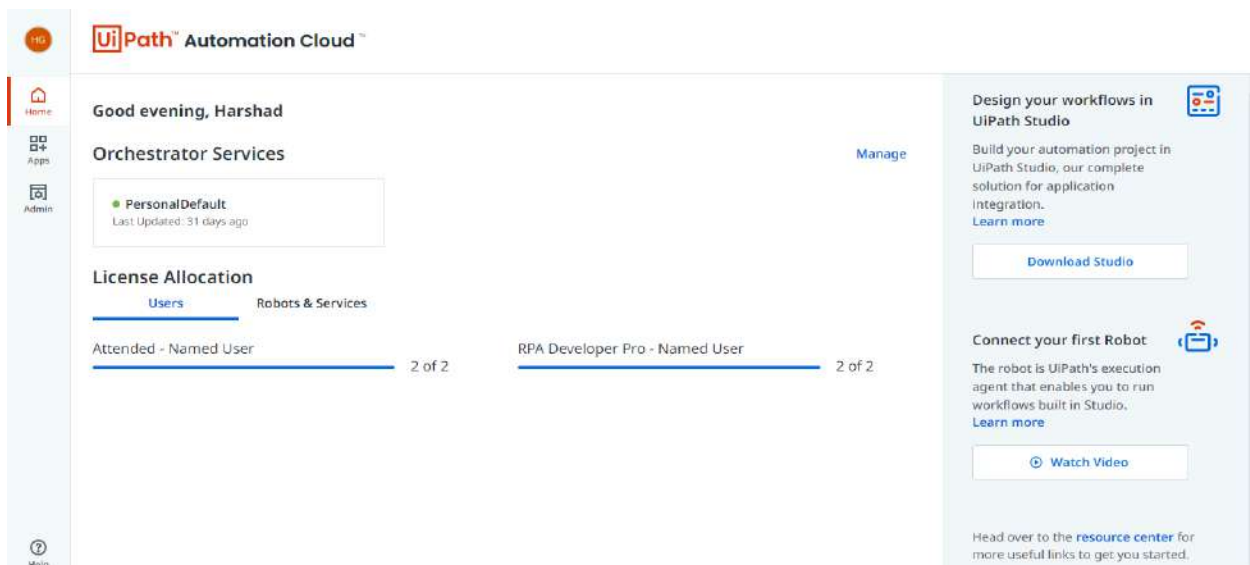
You design and configure your process workflows in UiPath studio. It is a low-code environment where you drag and drop prebuilt components. These components are provided by UiPath and are called Activities. The following is a screenshot of UiPath Studio:



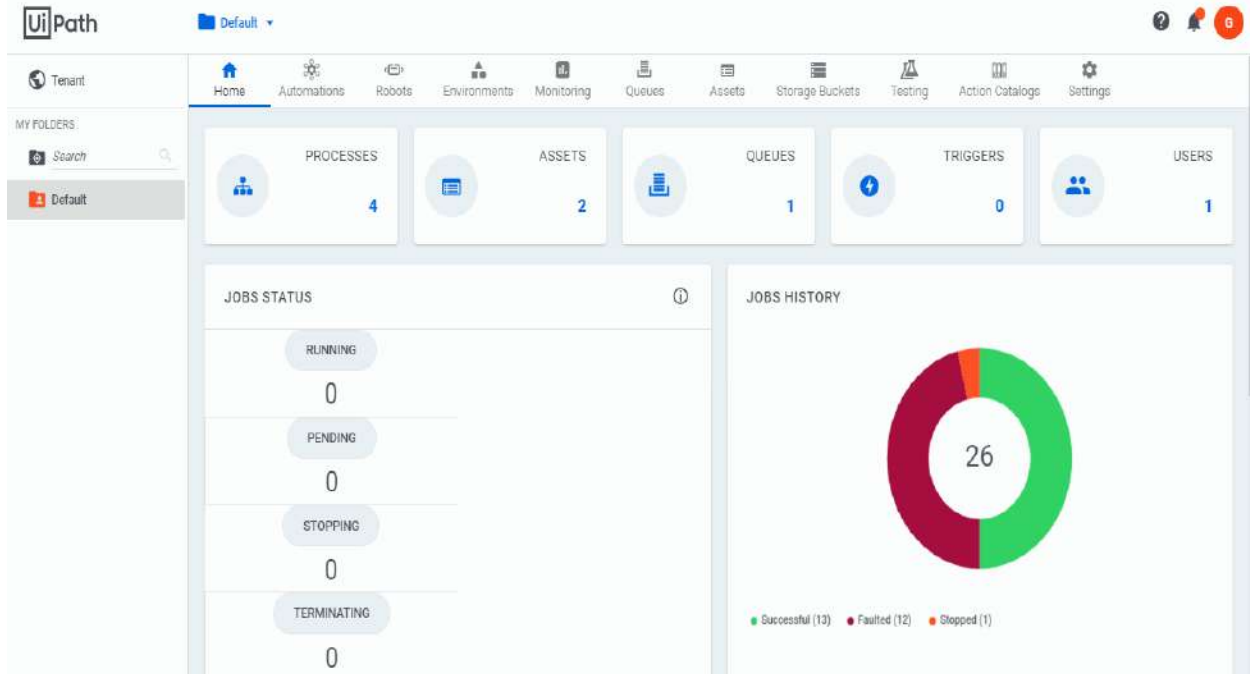
You can also create your custom components if the Activity that you need is not available. All these Activities enable you to create bots that automate processes. When you have many bots, you can manage them with an Orchestrator.

## UiPath Orchestrator:

Orchestrator, as the name suggests, is the central place where you manage the UiPath bots. You can deploy and keep track of all your bots from this interface:







The Orchestrator is conveniently accessible through your browser and also through mobile apps.

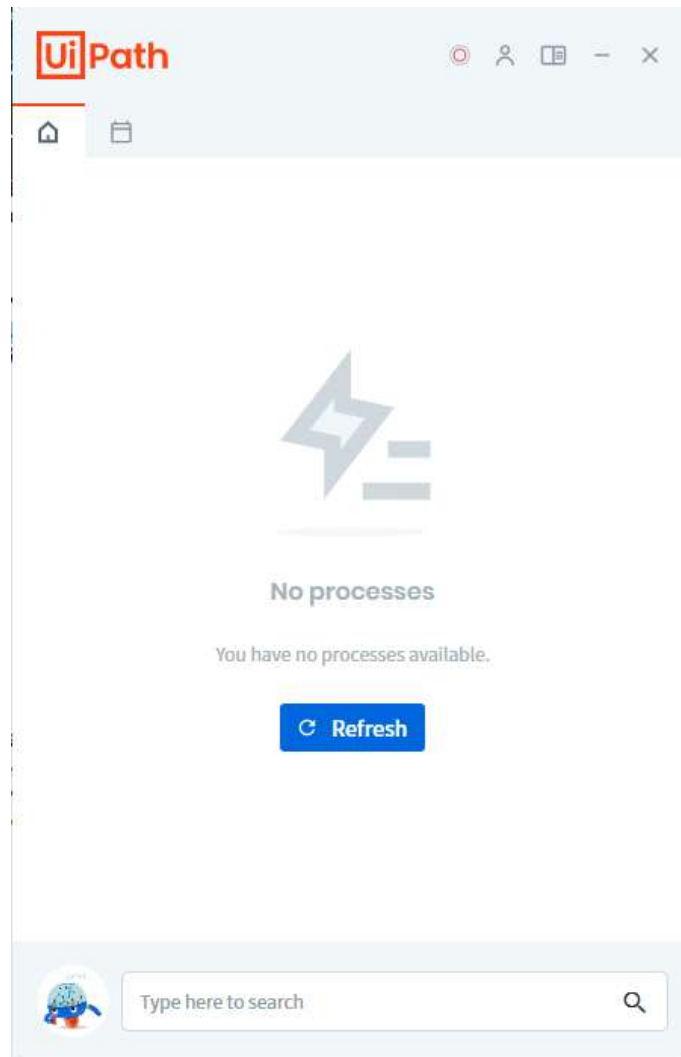
The Orchestrator allows multi-tenancy, allowing you to scale easily and enable discrete departmental RPA initiatives. The bottom line is that you can build your first bot and scale up to thousands of bots with this architecture.

### **UiPath Robot:**

UiPath Robot is your runtime executable and allows you to run workflows built using Studio. It runs on your local machines and can be accessed from the Windows Tray:

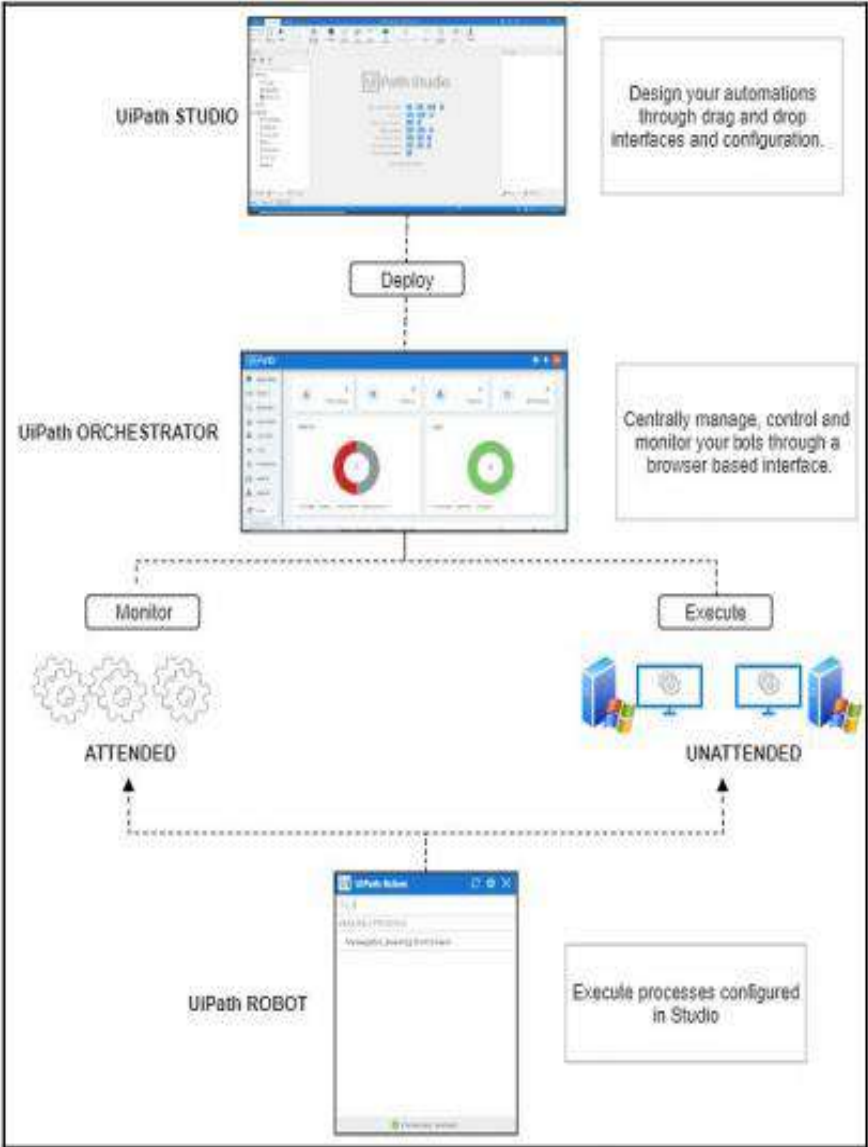
Robot can be run with or without people's supervision – attended or unattended, as we saw earlier. These robots need to be connected to UiPath Orchestrator to execute processes or you have to license them locally. The license you choose determines the capabilities of the robot.

In UiPath Automation all these three components work together to complete a task and perform automation of different robots like, attended or unattended robot. This all components provide you with a rapid development of environment where you can create your automation projects.



### **UiPath – an integrated view**

The UiPath components we described previously work together to provide you with a rapid development environment where you can create your automation projects. Here is an integrated view of how these components work together to build, deploy, execute, and monitor both attended and unattended automation:



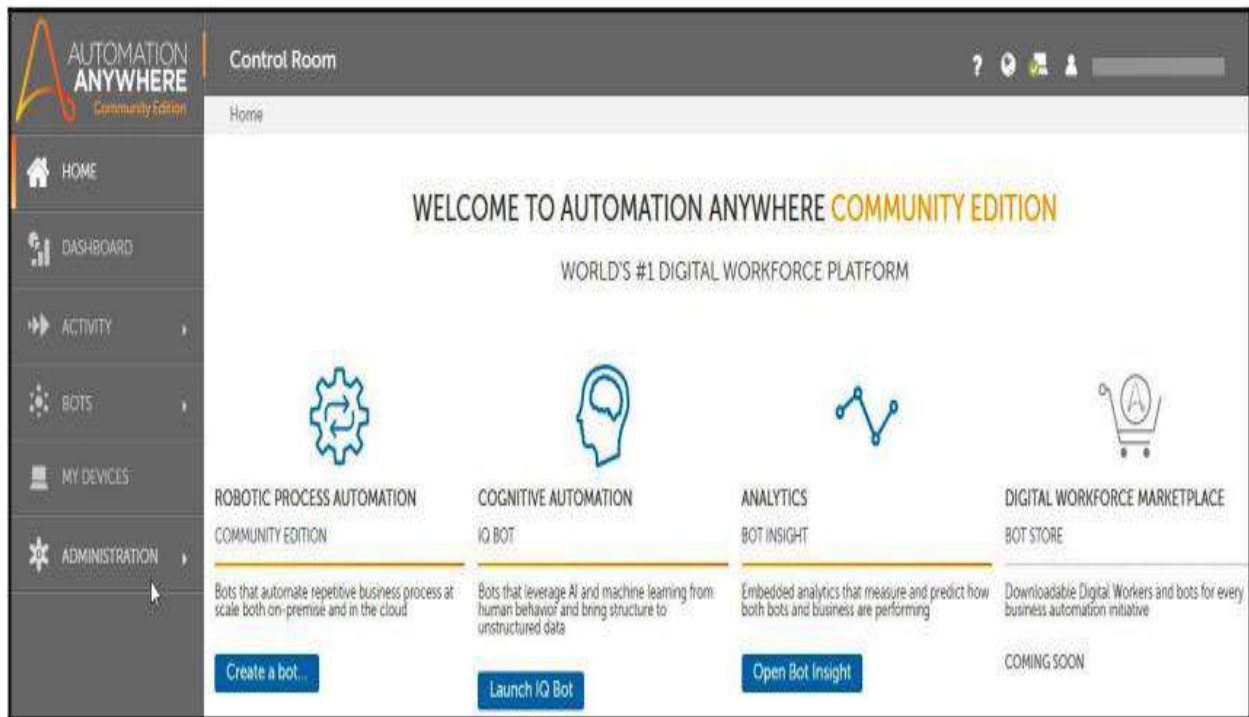
## Automation Anywhere:

Automation Anywhere is another top RPA tool. It has a good depth of functionality and features while being mostly user-friendly. You can get started quickly and scale easily with this decently robust tool.

Automation Anywhere started in 2003 with a vision to replace manual scripting applications with process automation that could be designed by the user. Their focus was to support all aspects of automating business processes, including end-to-end processes. Fast forward to today, and the current version of Automation Anywhere, known as A2019, can be deployed on the cloud or on-premises. It has a web-based Control Room where you can develop and deploy bots. The Control Room connects to a bot agent on your Windows desktop to execute the automation process.

## Enterprise Control Room:

Automation Anywhere's Control Room is a central place where you can develop, configure, and monitor your bots using a collection of specialized web-based services. Here is a screenshot of the Community Edition Control Room:



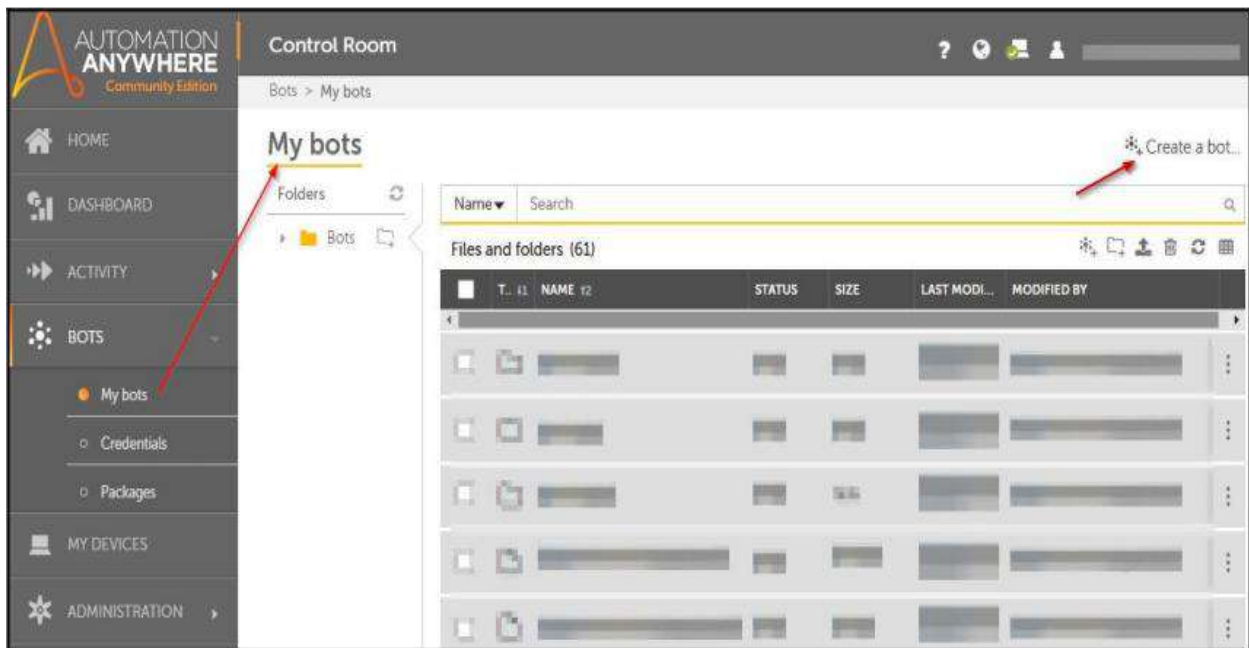
The Control Room connects to a local bot agent to run your bots. It is a plugin that can be installed on your computer that accesses the Control Room.

The Control Room provides us with the ability to build, manage, and analyze bots. Let's look at each of these aspects.

## Build:

Automation Anywhere's web-based Control Room can be used to create and edit bots from anywhere you have access to a web browser. You can access the bot editor from the Control Room by navigating to the My bots' section, as shown in the following screenshot:

You can also manage your usernames and passwords securely using the Credentials option. The packages that you can use to develop your automation are listed under the Packages option.



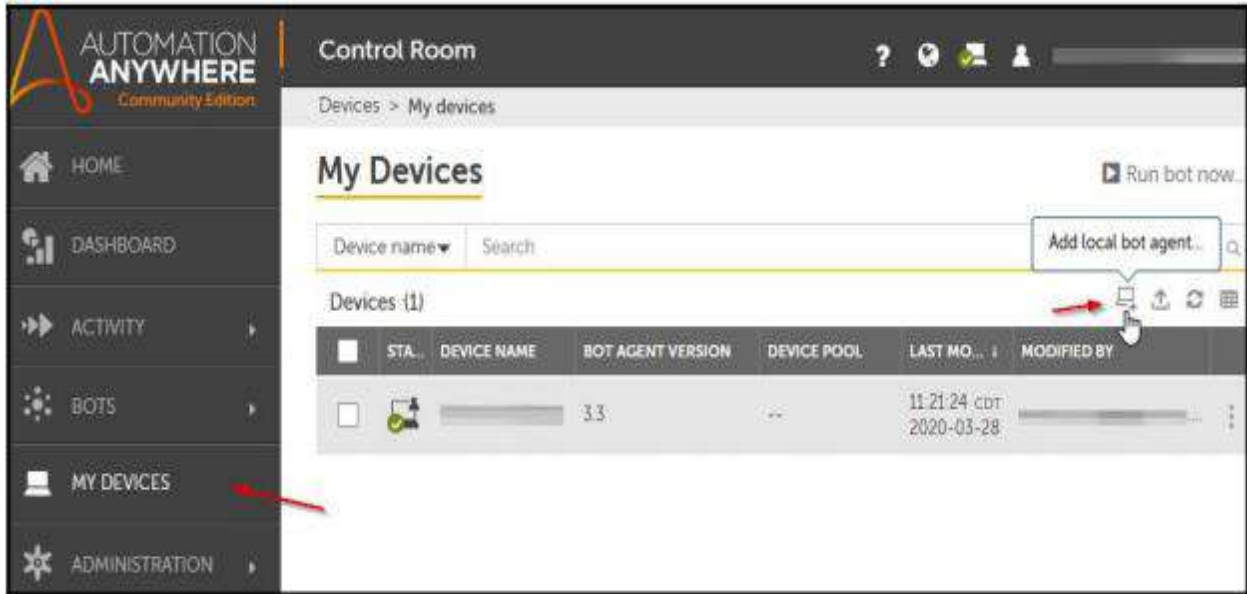
Next, let us explore the My Devices and Administration tabs.

## Manage:

You can also configure your client machine and users using the Control Room. The client machine that you use to connect to the Control Room to create or run your bots is called Devices. You can manage these devices from the My Devices option. In the Community Edition that we are using, we can run one bot agent, as shown in the following screenshot:

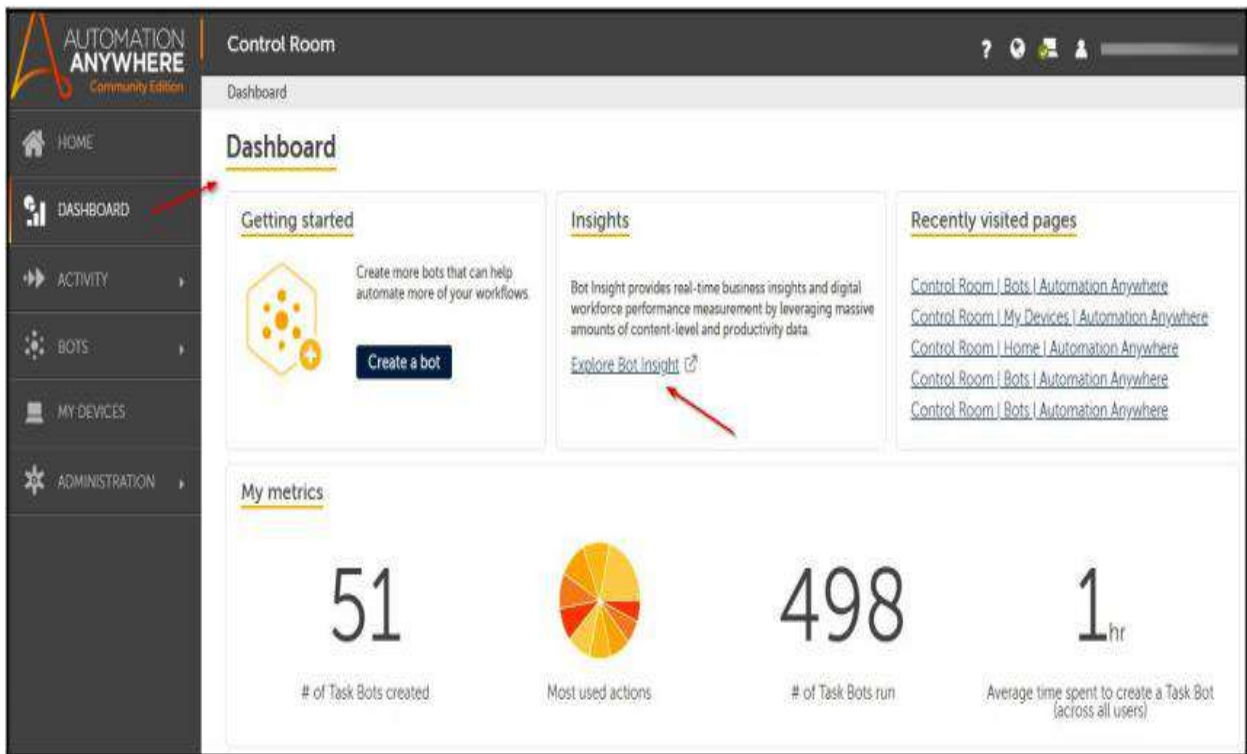
Enterprise administrators can manage various aspects such as databases, the credential vault, users, roles, packages, licensing, and so on using the Control Room. In the Community Edition that we will be using, we can only view registered users.





**Analyze:**

You can analyze the performance of your bots with the help of Automation Anywhere Bot Insights. This option, which can be found in the Control Room, provides real-time and interactive insights into your automated business processes:



Automation Anywhere also offers an AI-based bot option called IQ Bot. Let's have a quick look at that.

**IQ Bot:**

Automation Anywhere's IQ Bot uses different AI techniques such as computer vision, natural language processing (NLP), and machine learning (ML) to digitize semi structured or unstructured data. This means it can help us extract data from documents, forms, images, and emails.

## **Technical Requirements:**

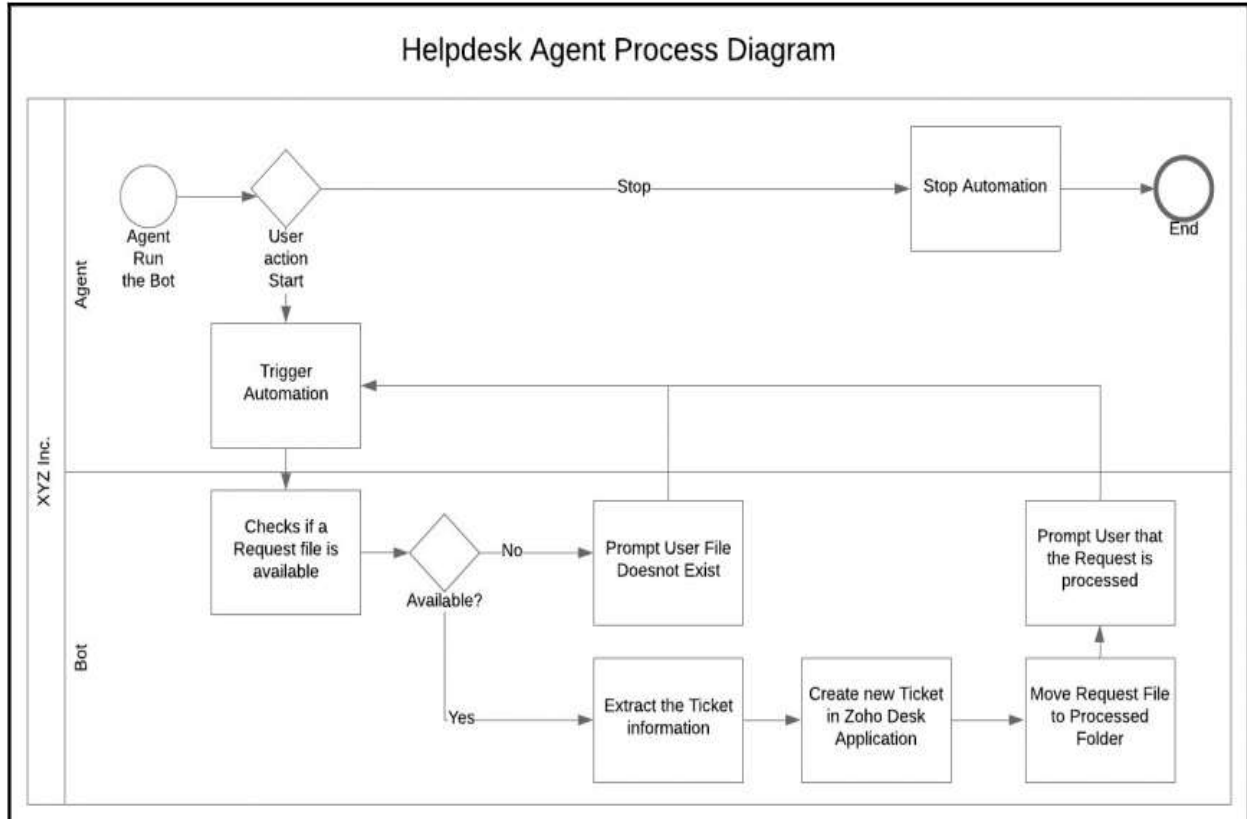
The hardware and software that will be required for this project are as follows:

- A PC with UiPath Community edition version 19+ installed.
- A Chrome browser with a UiPath add-on
- A Zoho Desk SaaS application. You can sign up for free at <https://desk.zoho.com>.
- Microsoft Excel 2007 and later

## Project Overview:

We will automate the creation of help desk tickets using data from an Excel sheet. In this project, once the bot is invoked, it will check whether there are new request files available to process. If available, the bot will read the ticket data from this spreadsheet. The data is then used to create support tickets in the Zoho Desk application.

Here is the high-level workflow for the project:



## Project Details:

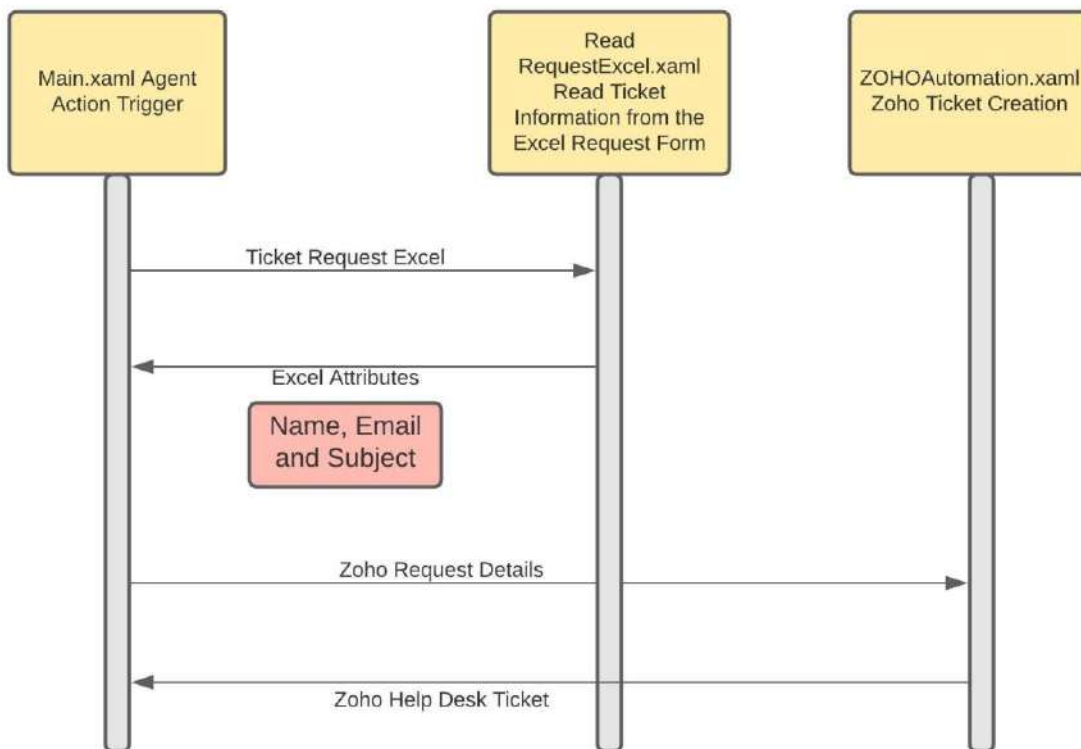
Let's now look at the overall flow for this project in terms of the components we will be building and their interaction.

We will have a main workflow called `Main.xaml`, which will invoke other workflows and orchestrate the automation. Within this workflow, we will keep checking for the trigger `Alt + S`. Once triggered, we will check whether the `Request.xlsx` file is available. If the file is available, then we will invoke `ReadRequestExcel.xaml` from `Main.xaml`.

Within `ReadRequestExcel.xaml`, we will use the file path as an input argument to open the Excel file, read the content, and store it in three output arguments – Name, Email, and Subject. Next, `Main.xaml` invokes `ZohoAutomation.xaml` with these three arguments (Name, Email, and Subject) to create the ticket in the Zoho desk. If all goes well, a Successful message is returned.

Finally, once the Successful message is received, `request.xlsx` is moved to the `Processed` folder and the bot is ready to process new requests:

Here is the sequence flow diagram of the project:



This was an overall flow to give you a high-level view of what we will be doing to create this automation. Before we configure our main workflow, let's undertake some groundwork that is required for the project.



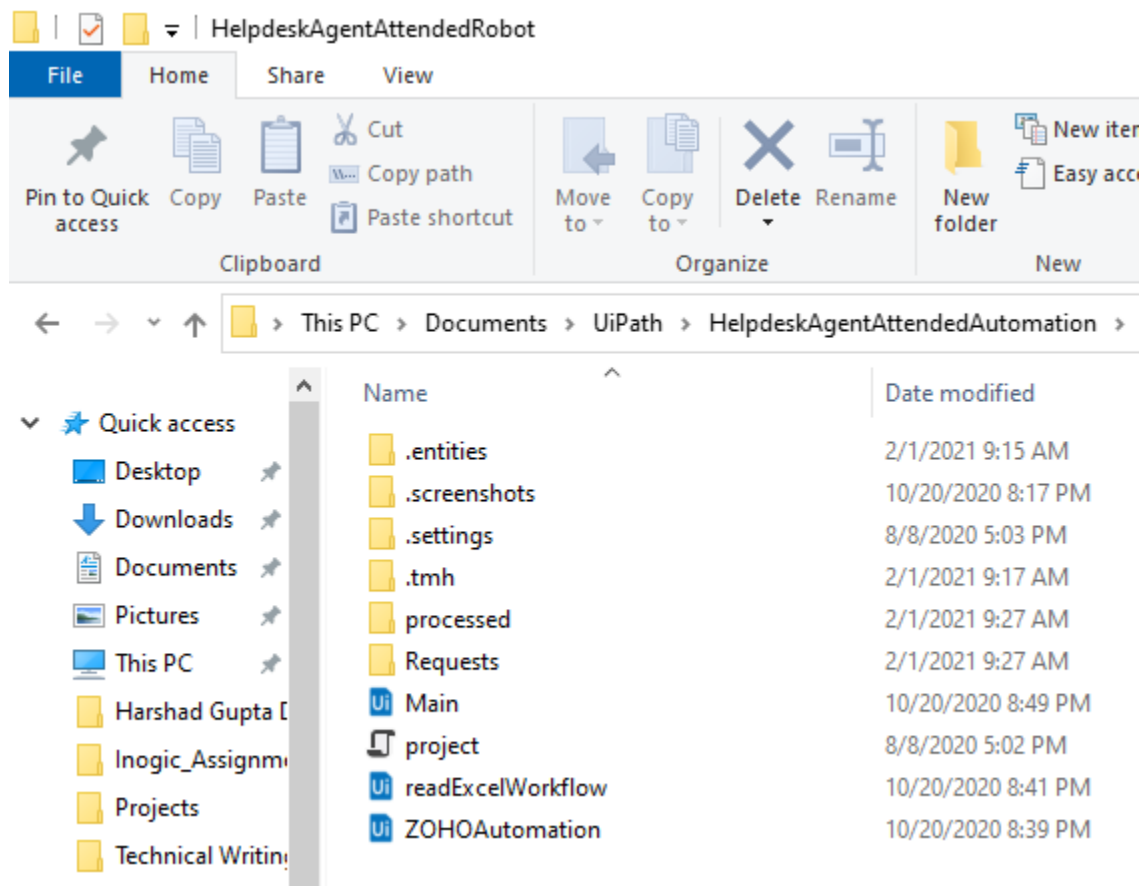
## Project Groundwork:

As part of the project groundwork, we will create the project folders, along with a spreadsheet for the ticket data, and also log in to the Zoho SaaS application.

### Creating Project Folder:

Let's create two folders, one to accommodate the spreadsheet containing the data to process, and the other to accommodate the processed spreadsheets:

- 1) Open Windows Explorer on your machine and create a folder for the project.
- 2) Within this project folder, create two folders, called `Requests` and `Processed`, as shown in the following screenshot:



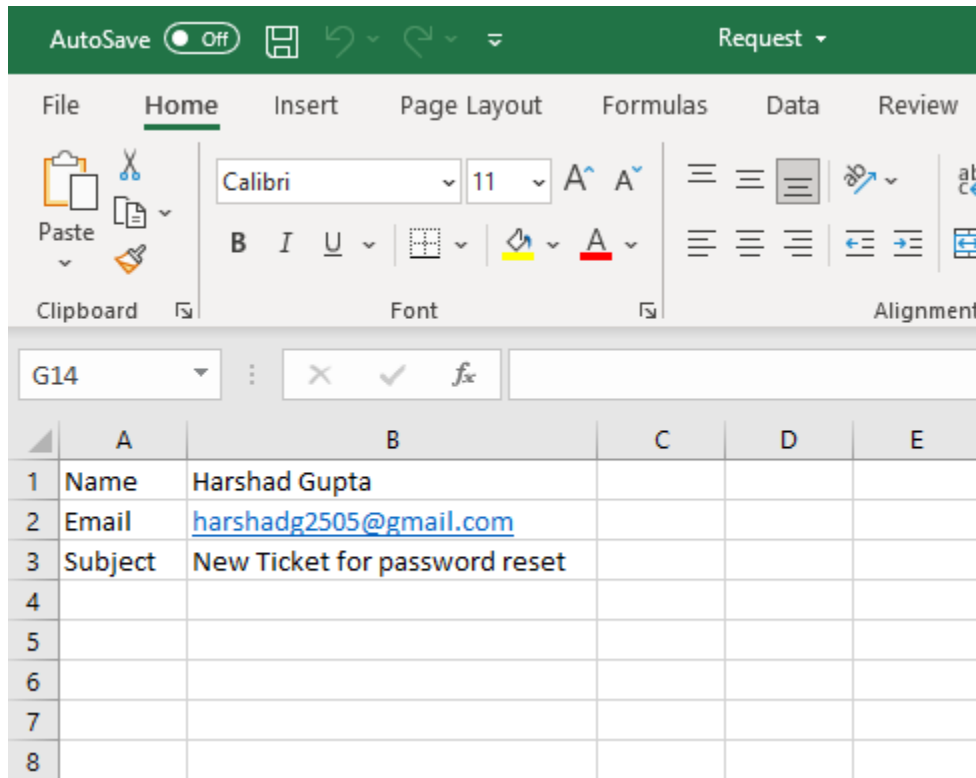
We will place the spreadsheet in `Requests`, and then the bot will move the processed sheets to the `Processed` folder.

Next, let's create the requests spreadsheet.

## Creating an Excel Sheet with Ticket Data:

Now, let's create a simple spreadsheet with ticket data:

- 1) Open Excel and create a sheet with three rows and two columns, as shown in the following screenshot:



The first column contains the data labels, and the second column contains the data you like for your support ticket.

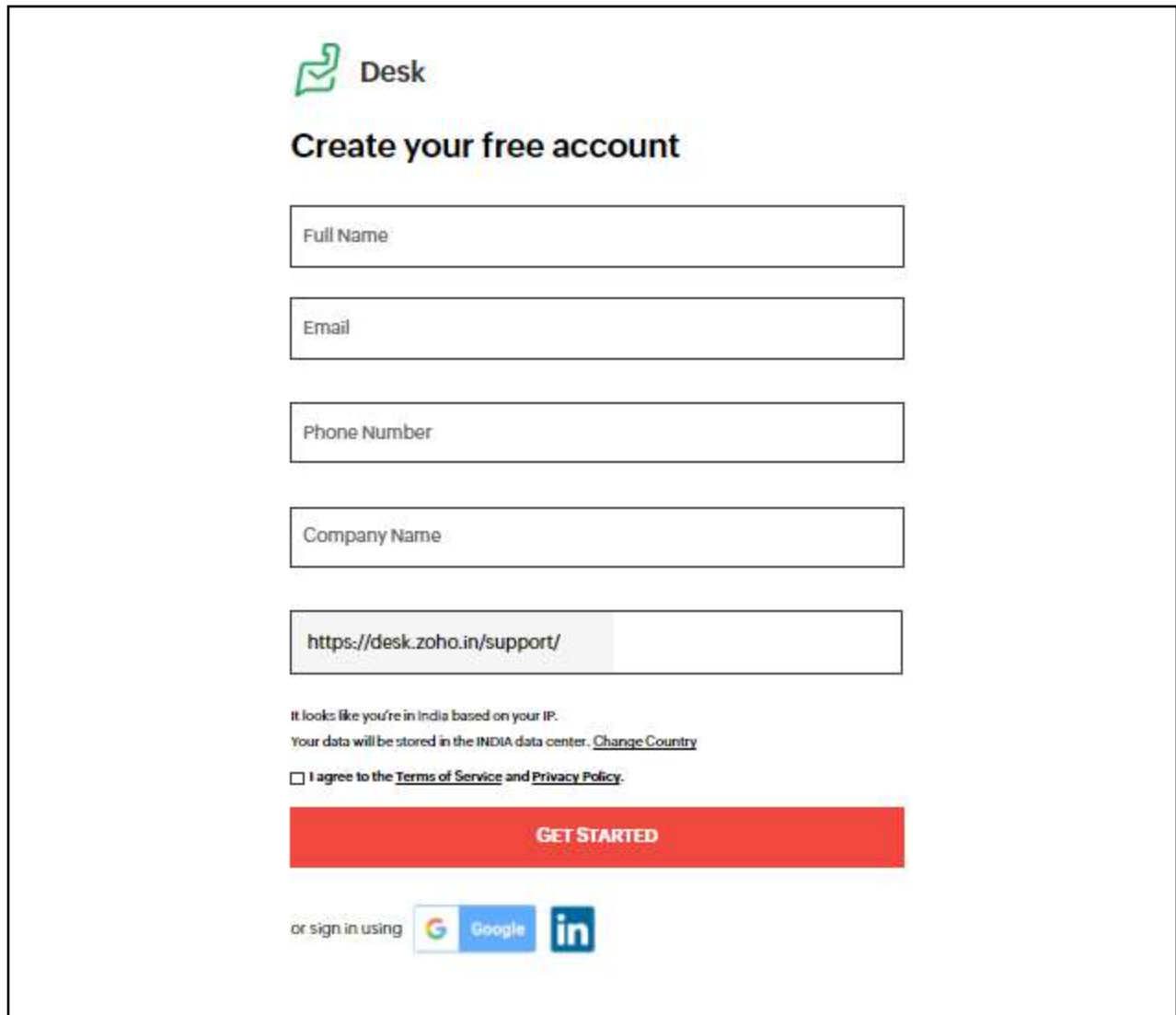
- 2) Save this file as Request.xlsx in the Requests folder that we created in the previous section.

Let's now log in to the Zoho application.

## Registering and Logging in to Zoho Desk:

Perform the following steps:

- 1) Go to [desk.zoho.com](https://desk.zoho.com) and choose the option to log in. You should be directed to a page to log in or sign up if you do not have an ID. Create a free desk account by filling in the details if you do not have one:

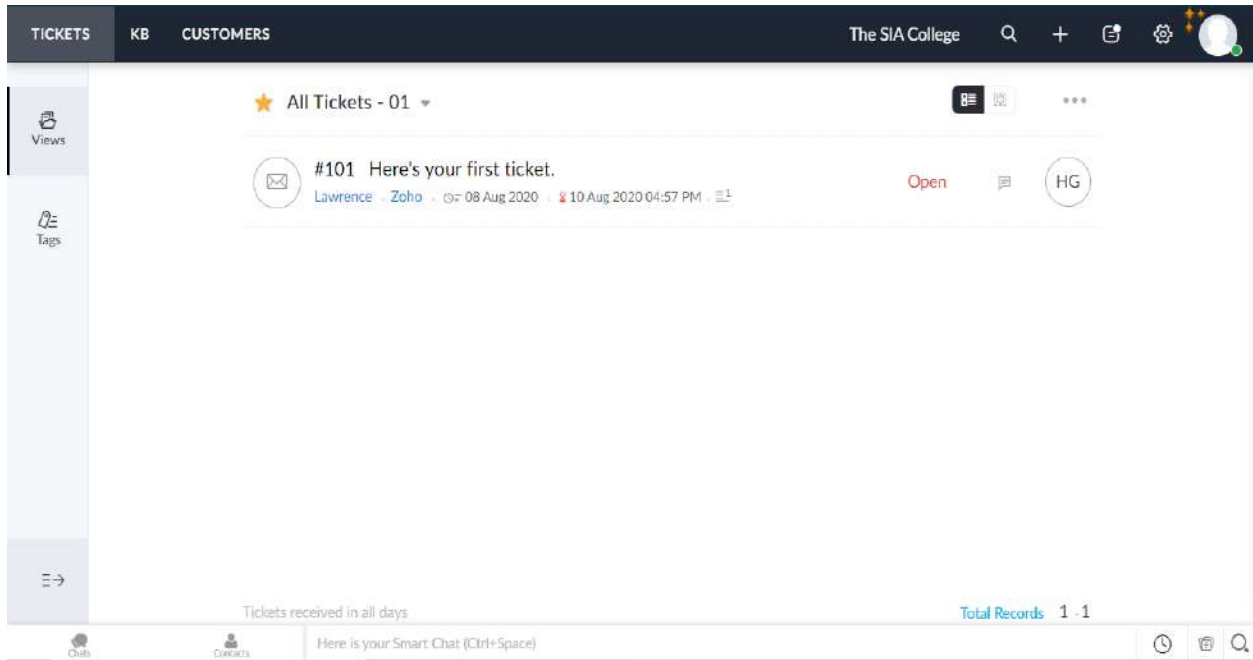


The image shows the Zoho Desk registration page. At the top left is the Zoho Desk logo, which consists of a green envelope icon and the word "Desk". Below the logo is the heading "Create your free account". The form contains five input fields: "Full Name", "Email", "Phone Number", "Company Name", and a URL field containing "https://desk.zoho.in/support/". Below the URL field, there is a message: "It looks like you're in India based on your IP. Your data will be stored in the INDIA data center. [Change Country](#)". Below this message is a checkbox with the text "I agree to the [Terms of Service](#) and [Privacy Policy](#)". At the bottom of the form is a large red button with the text "GET STARTED". Below the button, there is a link "or sign in using" followed by icons for Google and LinkedIn.

- 2) Once you register with your details and company name, you will be walked through the steps to get started. You should eventually end up on the Zoho Desk view with the current tickets:

You will see the following screen with your first ticket created on Zoho desk.

Leave the tab open with the application logged in for the automation.



Now, as mentioned in the Project detail section, we will create the workflows for the automation. Let's start with the main workflow.

## Project Implementation:

This section all the details regarding how to implement and develop the following automation helpdesk agent.

### Main Workflow:

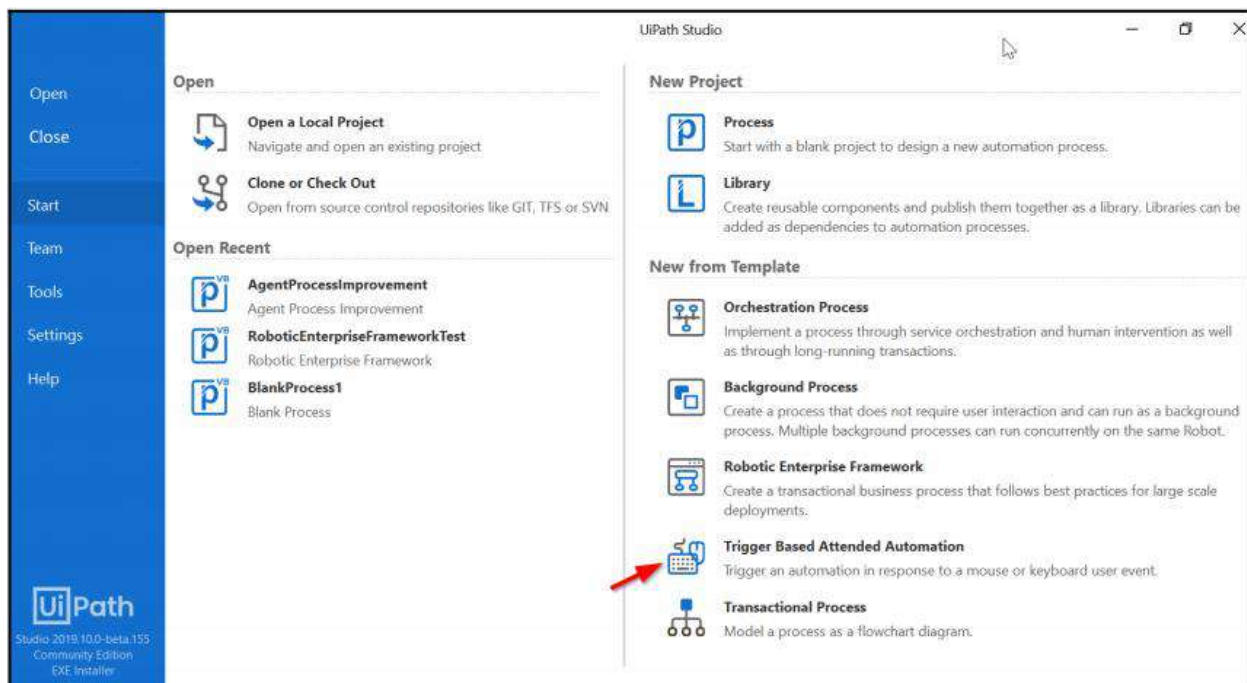
Let's start by opening the UiPath Studio. This is one of the UiPath components of UiPath Platform which we need to install on our machine for creating automation workflow.

On your Windows machine, you can go to Start and then select UiPath Studio.

### Project Setup:

Let's create a new project for our automation using the UiPath template:

- 1) On the first UiPath studio screen that pops up, select the project called Trigger Based Attended Automation. This will use a predefined UiPath template to create an attended automation project:



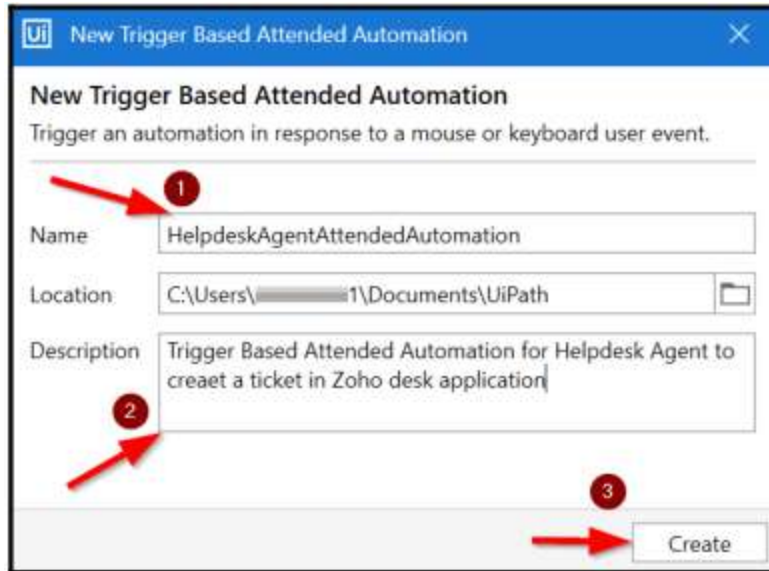
- 2) Next up, provide a name for your project and an optional description and click on Create:

You can give project name as per your choice, but it is important to provide a useful and insightful project name for easy reference.

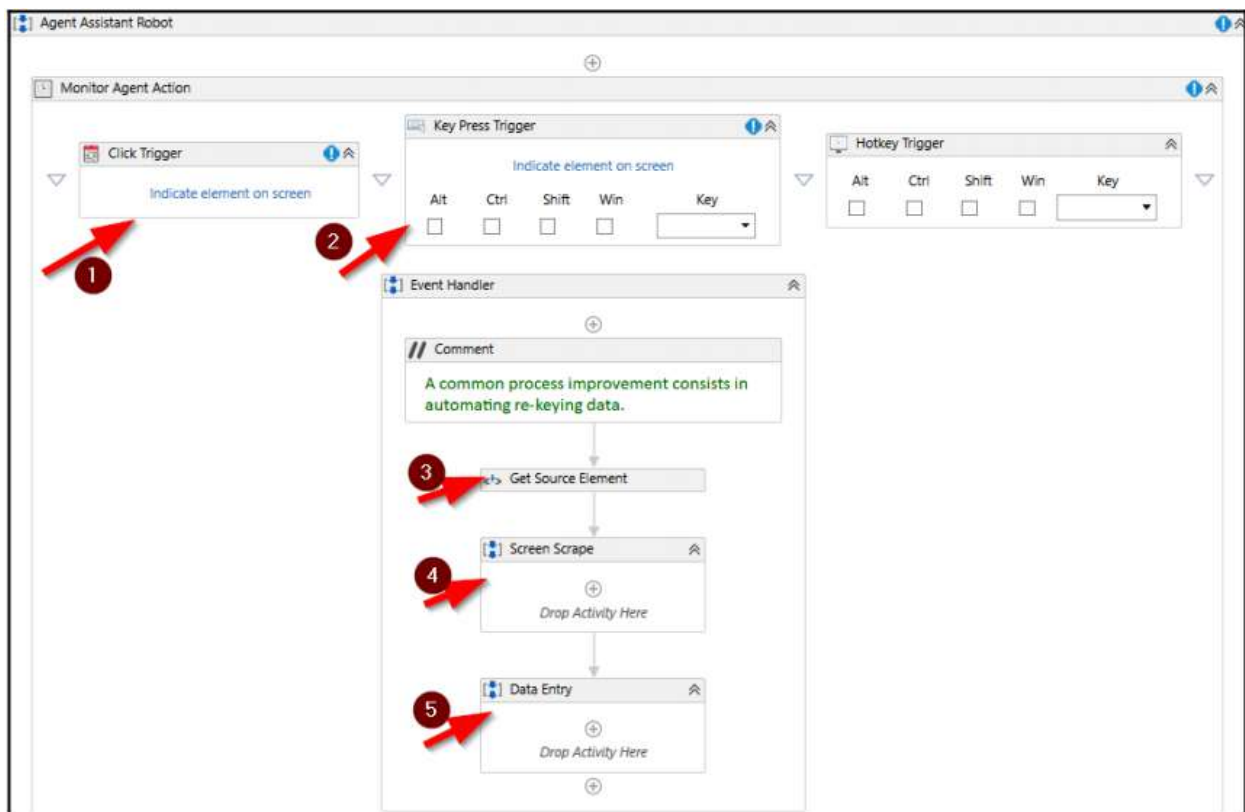
Then you need to select the location where you have created the project folder in the project groundwork step.

You can also add a description for you project as shown in below screenshot.





- 3) On the Studio main screen, click Open Main Workflow to get to the main workflow.
- 4) Your initial workflow should look like the following. Go ahead and remove the five unwanted activities highlighted in the following screenshot by right-clicking and selecting Delete:



5) Once done, ensure that you save the project and keep doing so periodically.

The project is now set up. We are now ready to configure the initial part of the automation.

### Configuring initial part of Main workflow:

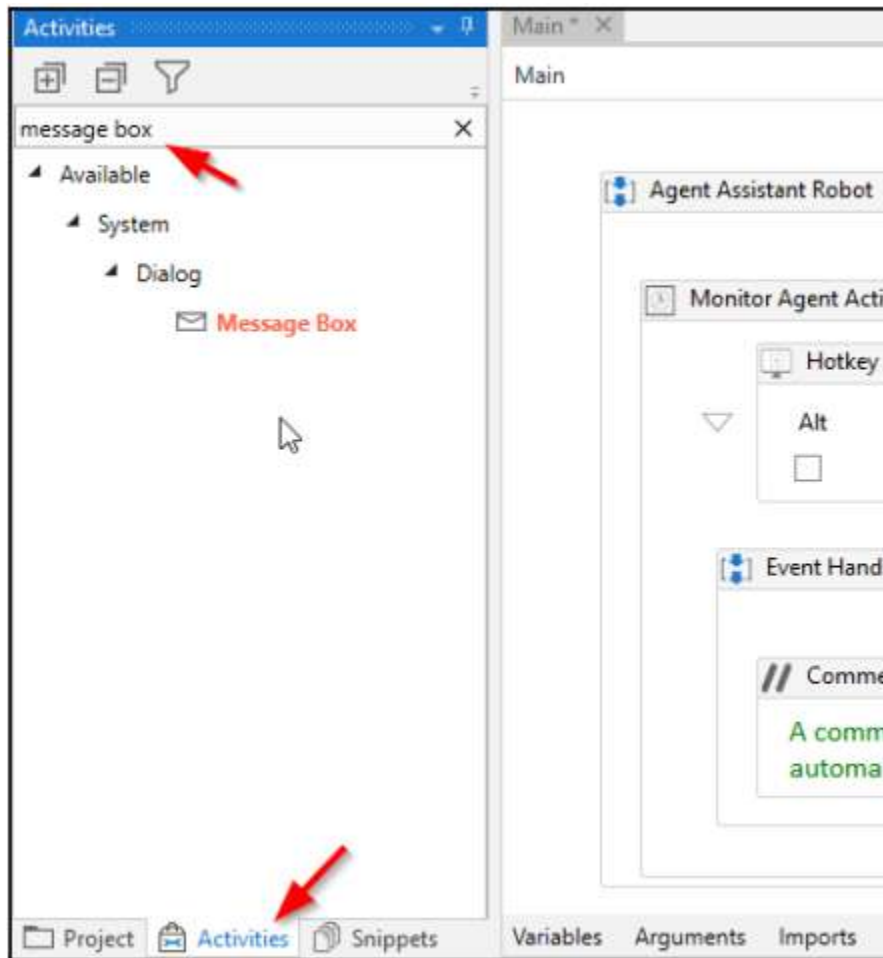
We will add a few UiPath activities to initiate the attended automation.



UiPath activities are puzzle pieces that we use to create any UiPath automation. The activities are automation actions, such as clicking, typing, and message box. We can use these activities to create with Excel, email, and the web.

Let's now look at the steps to add the activities:

- 1) We'll start by adding a message box. To do this, go to the Activities panel and search for message box:



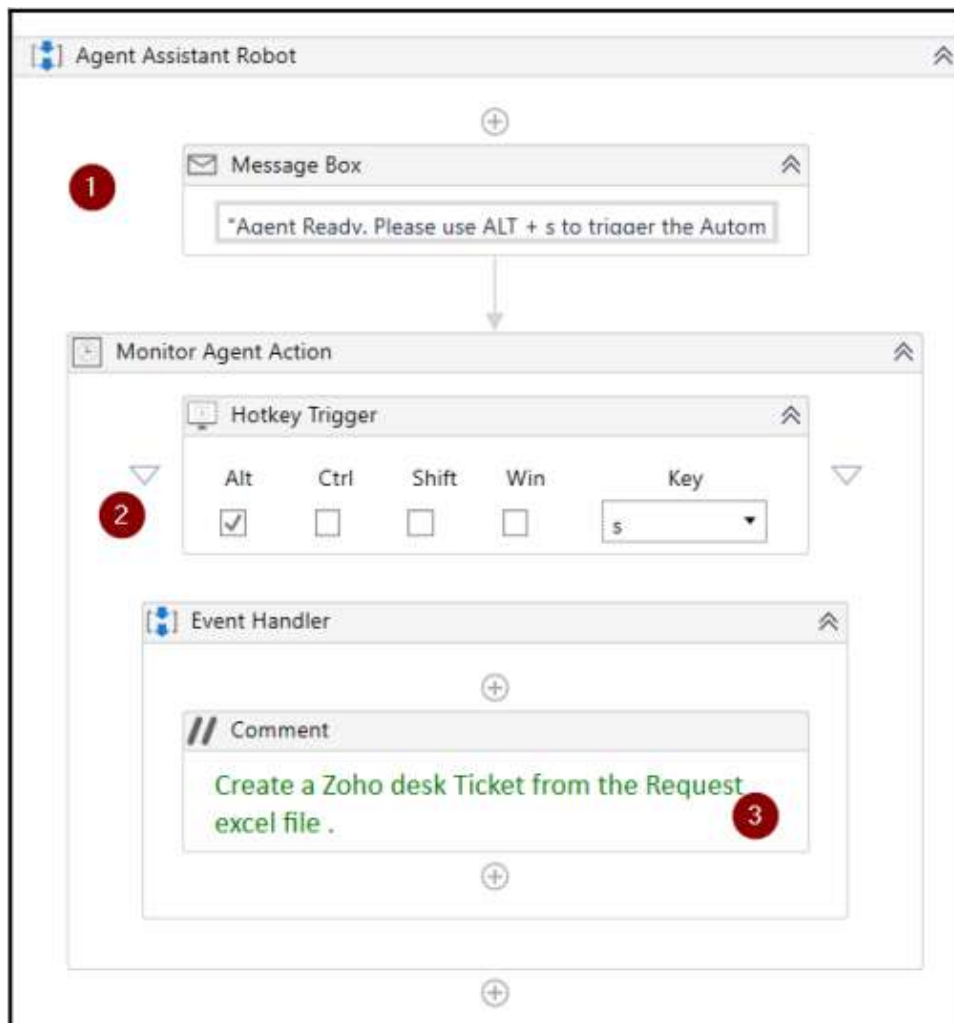
Message Box activity is used to display message to user with the given text. It takes a string as a input and display that string to user as a message in message box.

You can then drag and drop the activity to where you want it in the workflow.

- 2) Once added, click on the box for the message and type "Agent Ready. Please use ALT + s to trigger the Automation". Note that you must keep the quotes as you input the message. Please refer to the image in step 4.
- 3) Next, let's tell UiPath which hotkey we will use to trigger the automation. Luckily, UiPath has provided the activity within the template to do just that. In the **Hotkey Trigger** activity, choose Alt and type in s for the key, as shown in the screenshot in step 4.

Hotkey Trigger activity is used to specify which keyboard hotkey is used as a trigger to start the automation. In our project we will use the **Alt** and **s** keyword to start our automation.

- 4) It is always a good idea to add adequate comments for people to facilitate understanding of your workflow "code". Within Event Handler, let's start by adding a Comment to say Create a Zoho desk Ticket from the Request excel file.:



Comments are added in your automation for easy understanding of our automation. Comments are not executed by the automation. It is just for the sake of understanding that what exactly our workflow is going to do.

- 5) As the first activity in **Event Handler**, we will be checking the Requests folder to see whether there are any new requests. For that, we will use the **Path Exists** activity. Follow the same steps as before to find the activity in the left-hand panel and drag and drop to the main workflow.

Path Exists activity in UiPath is used to check whether the specified file in exists on not. If the file is present, then it return the true value else false.

- 6) Now, for this and all activities, there are UiPath properties that are displayed on the right pane. Let's use the following Properties for the Path Exists activity we added:
  - **Path:** Environment.CurrentDirectory+"\\Requests\\Request.xlsx"
  - **PathType:** File
  - **Exists:** Create a boolean variable (use Ctrl + K or right-click) and create a new variable called boolFileExists.



UiPath properties are the parameters and settings for the selected activity. The properties pop up on the right panel of your Studio interface. You can go to the panel and add or update properties for the selected activity.

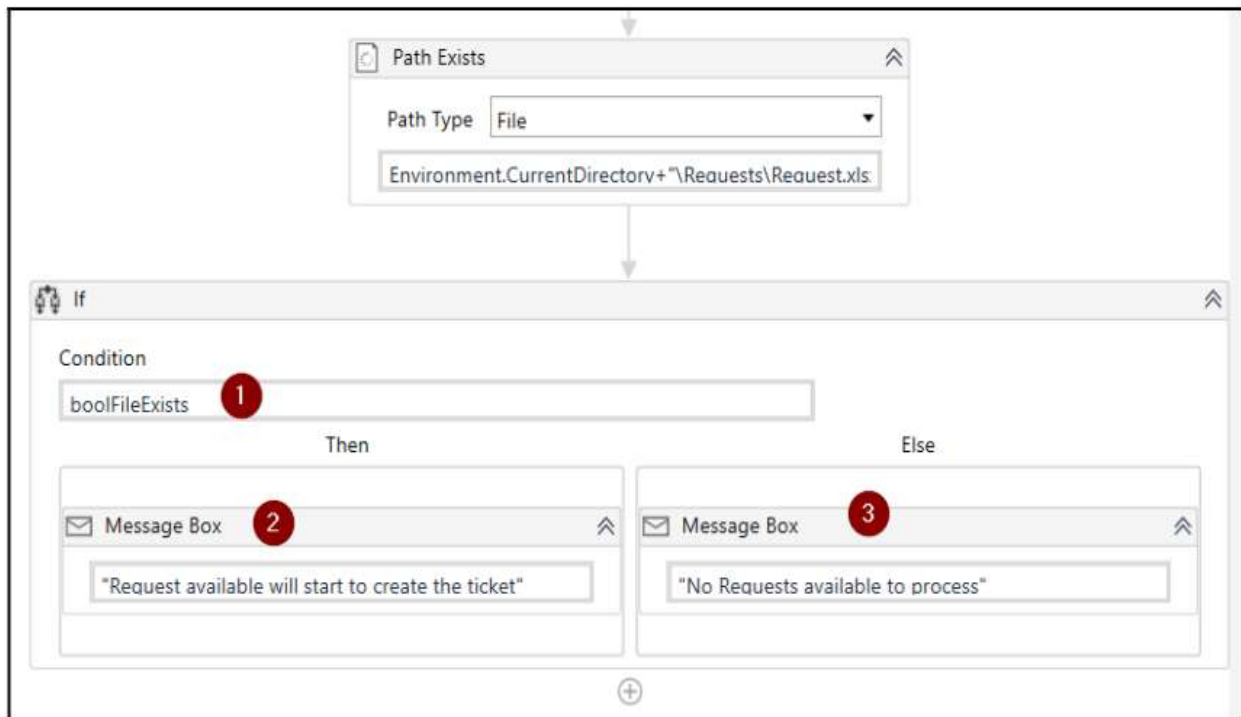
After implementing the above steps your sequence and properties should look like this:

The screenshot displays the UiPath Studio interface. On the left, the 'Main' workflow is visible, containing a 'Monitor Agent Action' with a 'Hotkey Trigger' (Alt, Ctrl, Shift, Win, Key: s) and an 'Event Handler'. Inside the 'Event Handler', there is a comment: 'Create a Zoho desk Ticket from the Request excel file .' followed by a 'Path Exists' activity. The 'Path Exists' activity has 'Path Type' set to 'File' and the path 'Environment.CurrentDirectory+"\\Requests\\Request.xls"'. On the right, the 'Properties' panel for 'UiPath.Core.Activities.PathExists' is shown. It has sections for 'Common', 'Input', 'Misc', and 'Output'. The 'Input' section has 'Path' (2) set to 'Environment.Curren...' and 'PathType' (3) set to 'File'. The 'Output' section has 'Exists' (4) set to 'boolFileExists'.

7) Next, let's display a message to let the user know whether the bot found a request and whether it will process this request. We will use an **If activity** from the activities panel to do that. Add the **If** activity below the **Path Exists** activity.

**If** activity is used to perform task base on specifies condition. If the condition is true, then it will go to **then** part otherwise it will execute the **else** part.

8) Let's use `boolFileExists`, which we created in the earlier step as the condition to check. Within this **If** control, add two message boxes with messages as per the following screenshot to display an appropriate message to the agent:



This is all for the main workflow for now. We will revisit the workflow later to call the `ReadExcelRequest` and `ZOHOAutomation` workflows, which we will create in the next two sections.



## Reading from Excel File:

In this next workflow, we will pick up the Request Excel file from the folder we created, read the ticket data, and incorporate them in variables for the next workflow to process. This will help you get your feet wet with Excel-based automation:

- 1) Let's start by creating a new Sequence in the project. This will create a new workflow for us to work on:

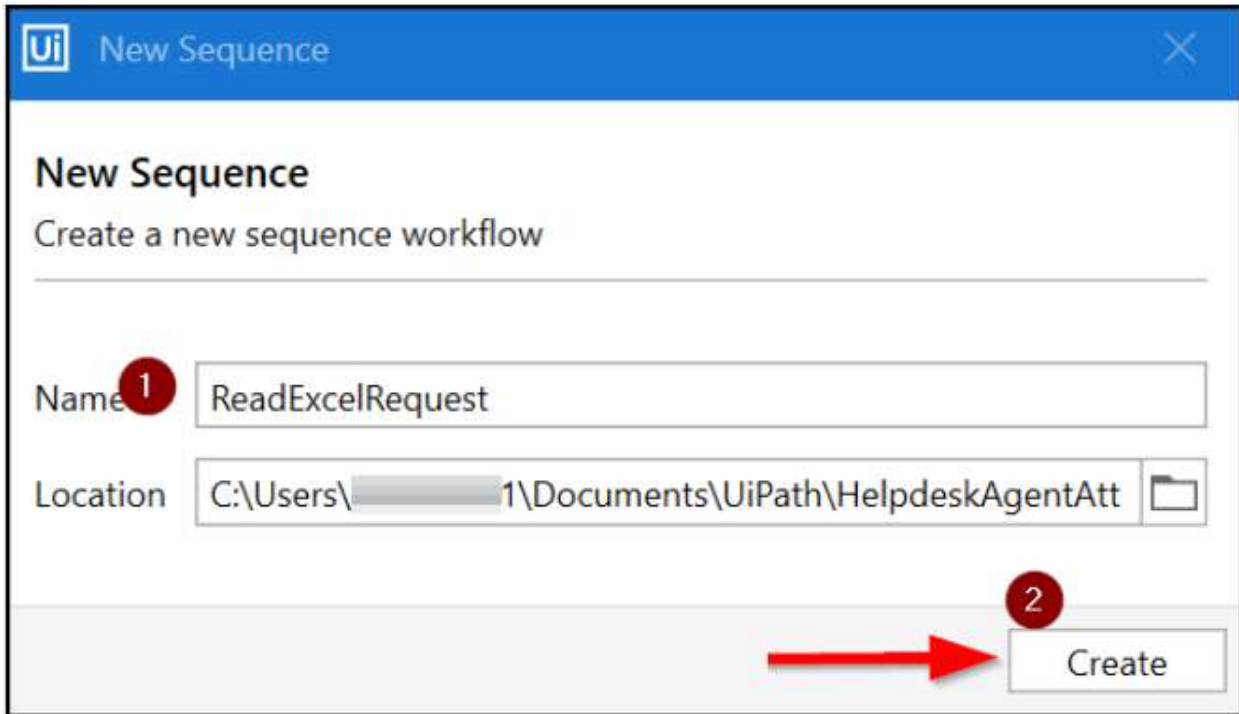


- 2) Let's name it ReadExcelRequest and click Create. The studio will create a default sequence for you:



You can provide the name of sequence as per you need. It is necessary to provide some useful name of your sequence for easy reference.

Then you need to select the location of project which you have created in windows explorer.

After provide all the details click on create button it will create the sequence in your UiPath studio.



- 3) Within the workflow, let's first add the arguments using the **Arguments** tab at the bottom of Studio (refer to the following information box). **Arguments** will enable us to input and output data from this workflow to the main workflow. Proceed and create four arguments, as shown in the following screenshot:

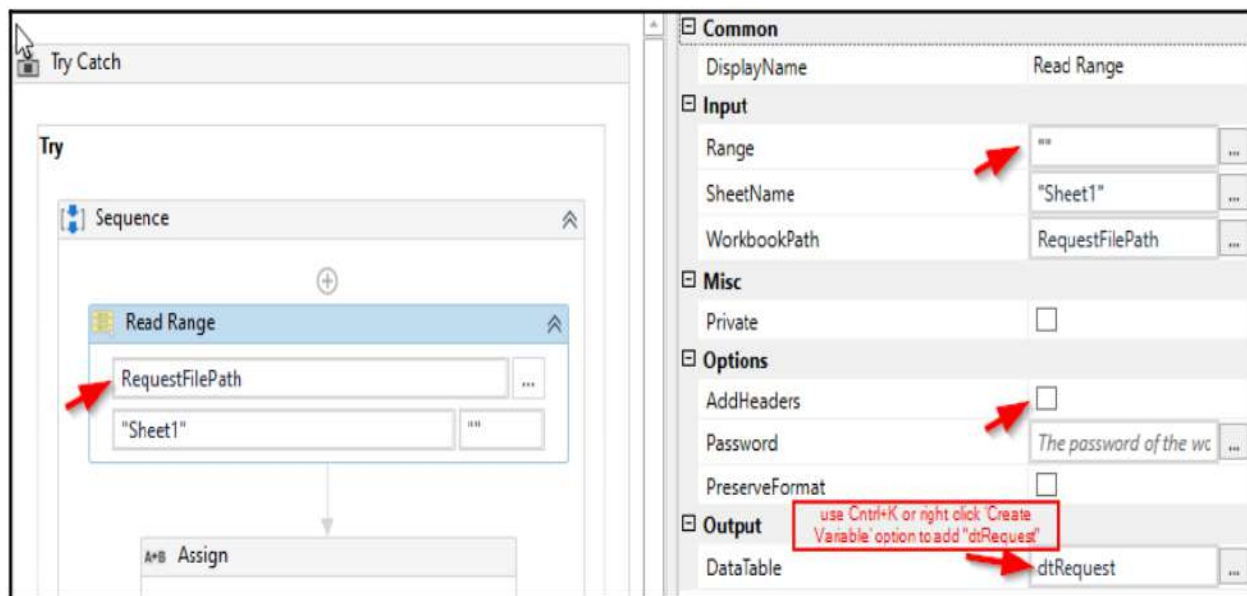
Name	Direction	Argument type	Default value
RequestFilePath <b>1</b>	In	String	<i>Enter a VB expression</i>
ContactName <b>2</b>	Out	String	<i>Default value not supported</i>
Email <b>3</b>	Out	String	<i>Default value not supported</i>
Subject <b>4</b>	Out	String	<i>Default value not supported</i>
<i>Create Argument</i>			
Variables <b>Arguments</b> Imports   100%			

Note **Direction** and **Argument type**.



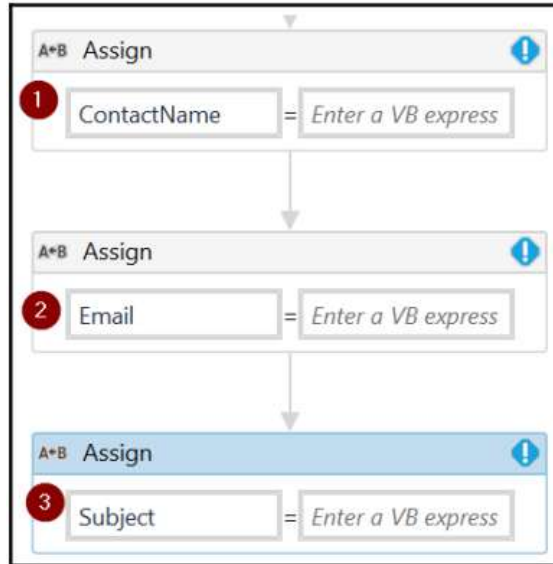
The difference between a variable and an argument is that variables pass data to other activities, while arguments pass data to other workflows. The Arguments tab is next to the Variables tab at the bottom of the Studio screen.

- 4) We will always use a **Try-Catch** block to handle any exceptions gracefully. So, let's add the **Try Catch** activity to this sequence. Then, within the **Try** block, add the **Read Range** activity under Workbook to read the specified Excel file. The **Read Range** activity reads the value of a specified Excel range and stores it in a **DataTable** variable.
- 5) For the **WorkbookPath**, specify the `RequestFilePath` argument that we added in step 2. This argument should be populated with the path to `Requests.xlsx` when we invoke this workflow from **Main**. Your sequence and properties should look like this:



In the properties for the **Read Range** activities, perform the following steps:

- Remove the range to cover the entire sheet. To do that, add "" to the **Range** property on the right pane.
  - While there, uncheck the **AddHeaders** property as we don't have header in our input file.
  - Add an **Output** variable to store the data table. Use `Ctrl + K` to add the `dtRequest` variable within the **DataTable** property.
- 6) Next, we will use three **Assign** activities in the workflow to read from Excel and store the data for `ContactName`, `Email`, and `Subject` in respective arguments.
  - 7) Use the arguments we just created on the left-hand side of the activity. You can start typing the argument names and the argument names should pop up for you to select:

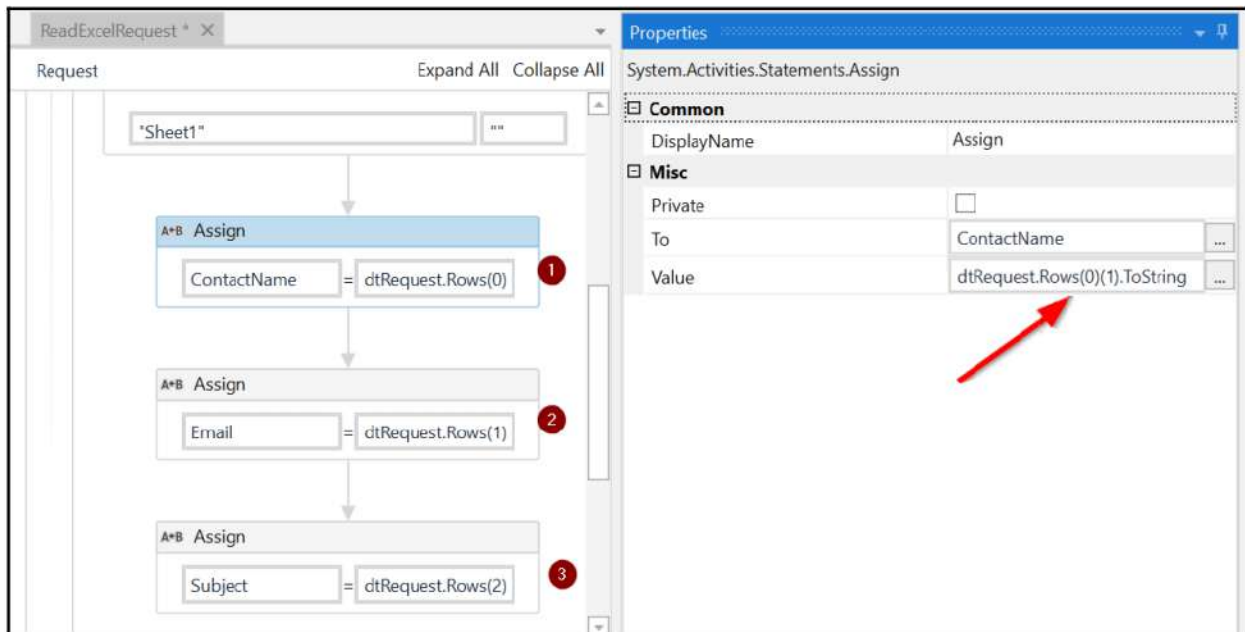


8) We will use the `dtRequest.Rows(row)(column)` data table to read Excel values and map them to the arguments. For example, **`dtRequest.Rows(0)(1)`** means the first row and second column value in Excel. Since the output variable only accepts the values of the String type, we have to add `.ToString` at the end of this formula; for example, `dtRequest.Rows(0)(1).ToString`:

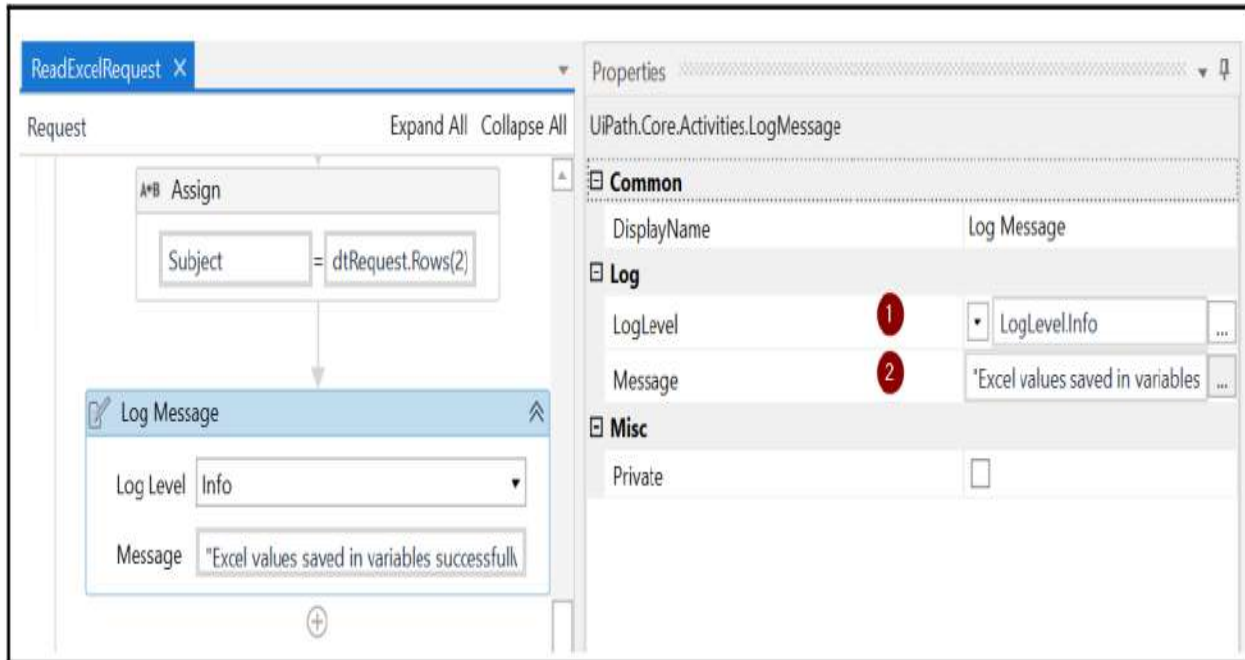
`.ToString` method is used to get the input as a string type.

`dtRequest.Rows(row)(column)` is used to specify the specific row and column of data table.

the below screen shot show how to use `dtRequest.Rows(row)(column)` property to specify the data table row.



- 9) After the **Assign** activities, add a **Log Message** activity to update the Excel read options in the system logs. This will help us to debug the workflow if needed:



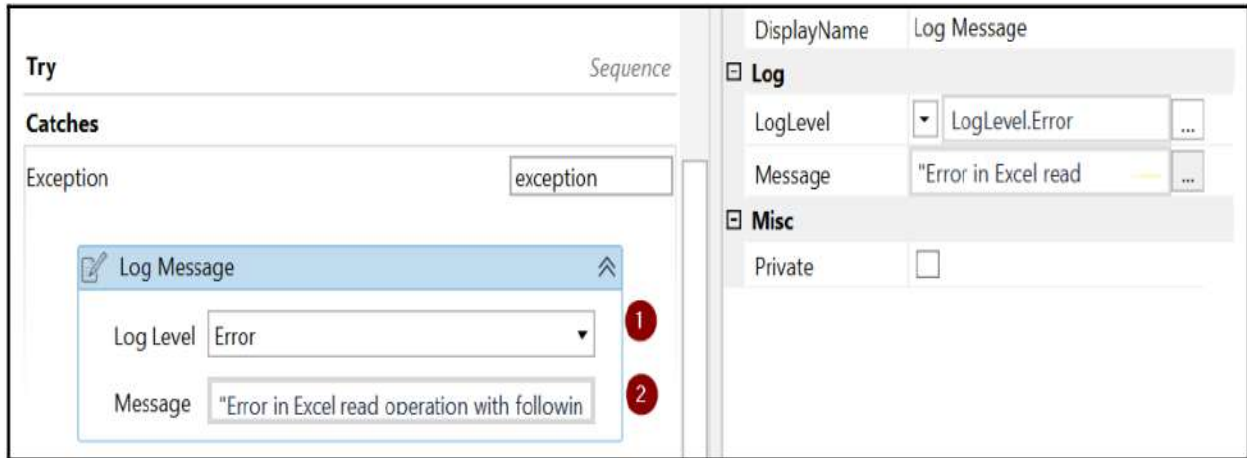
That completes our Try block sequence. We will now add exception handling to the Catches block.

### **Exception Handling:**

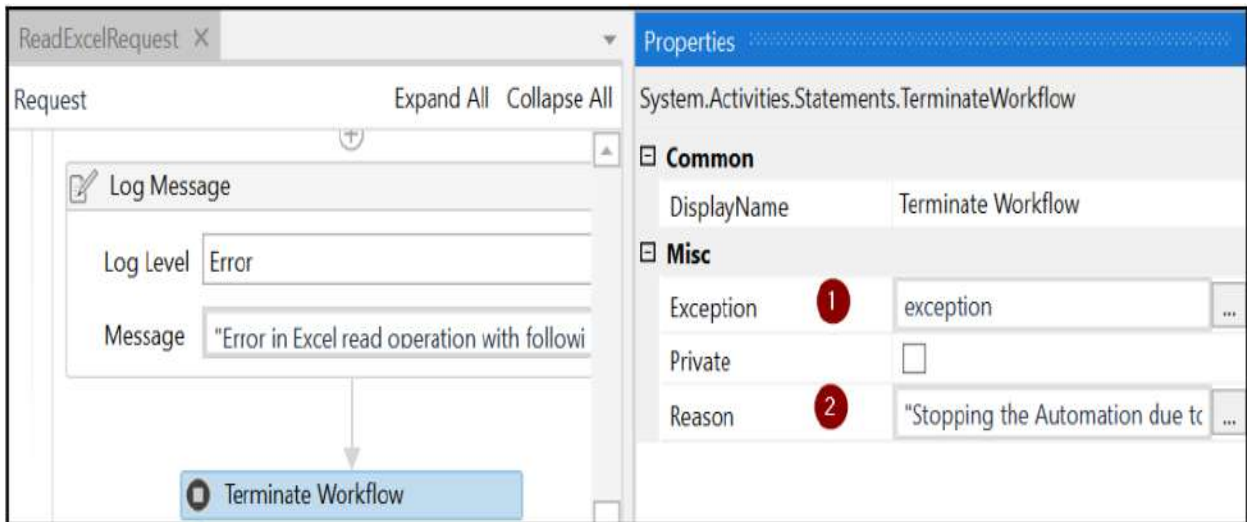
Let's handle any exceptions for this Excel automation:

- 1) For this, click on Add a new Catch in the Catches block beneath the Try block.
- 2) Choose exception as System.Exception and click the box next to it.
- 3) Also, add a Log Message activity to the catch block and add the following:
  - Error as the Log Level
  - "Error in Excel read operation with following exception: "+exception.Message" as the Message:





4) Finally, within the Catches block, add a Terminate Workflow activity to stop the automation if there are any exceptions:

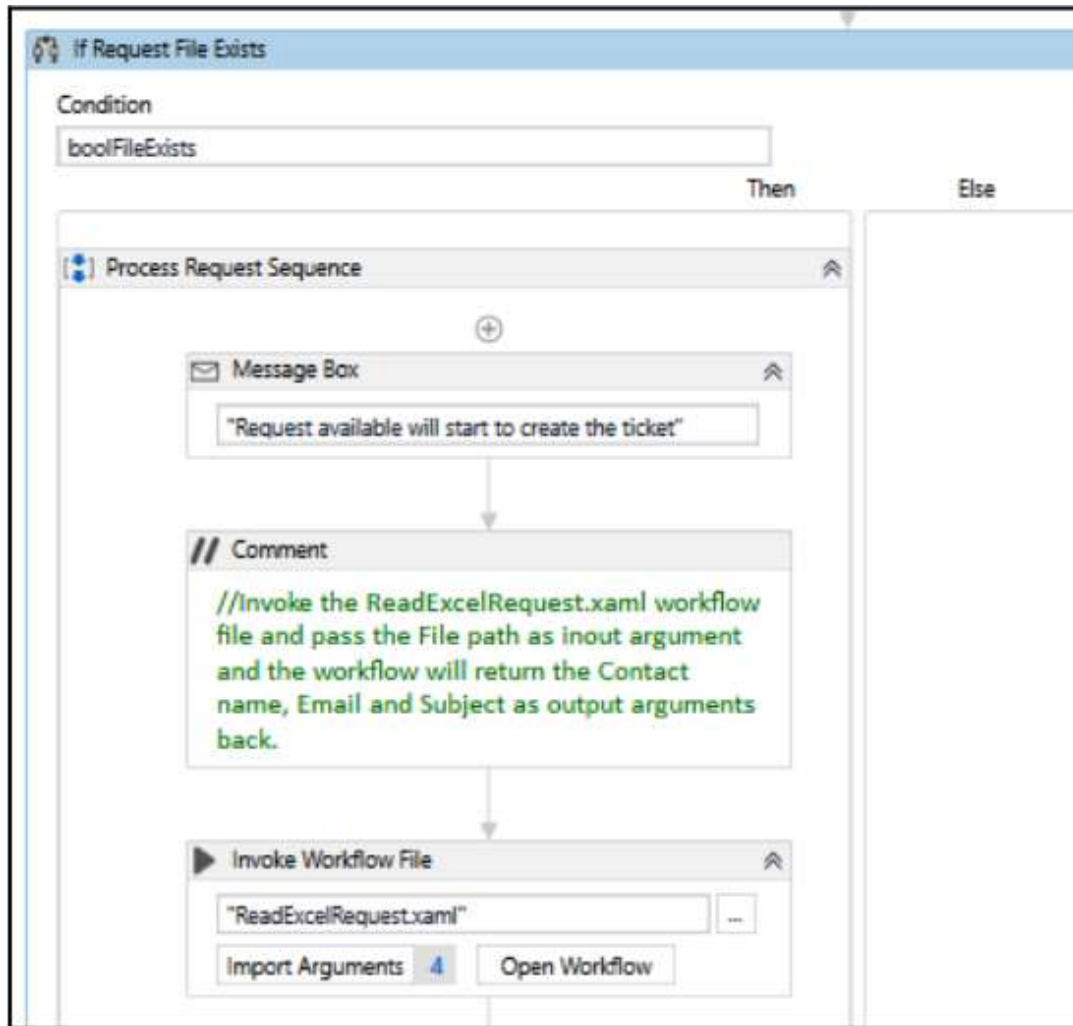


Great! This completes the ReadExcelRequest workflow where we read the Excel and stored the request data as arguments. Now, we will invoke this from the main workflow.

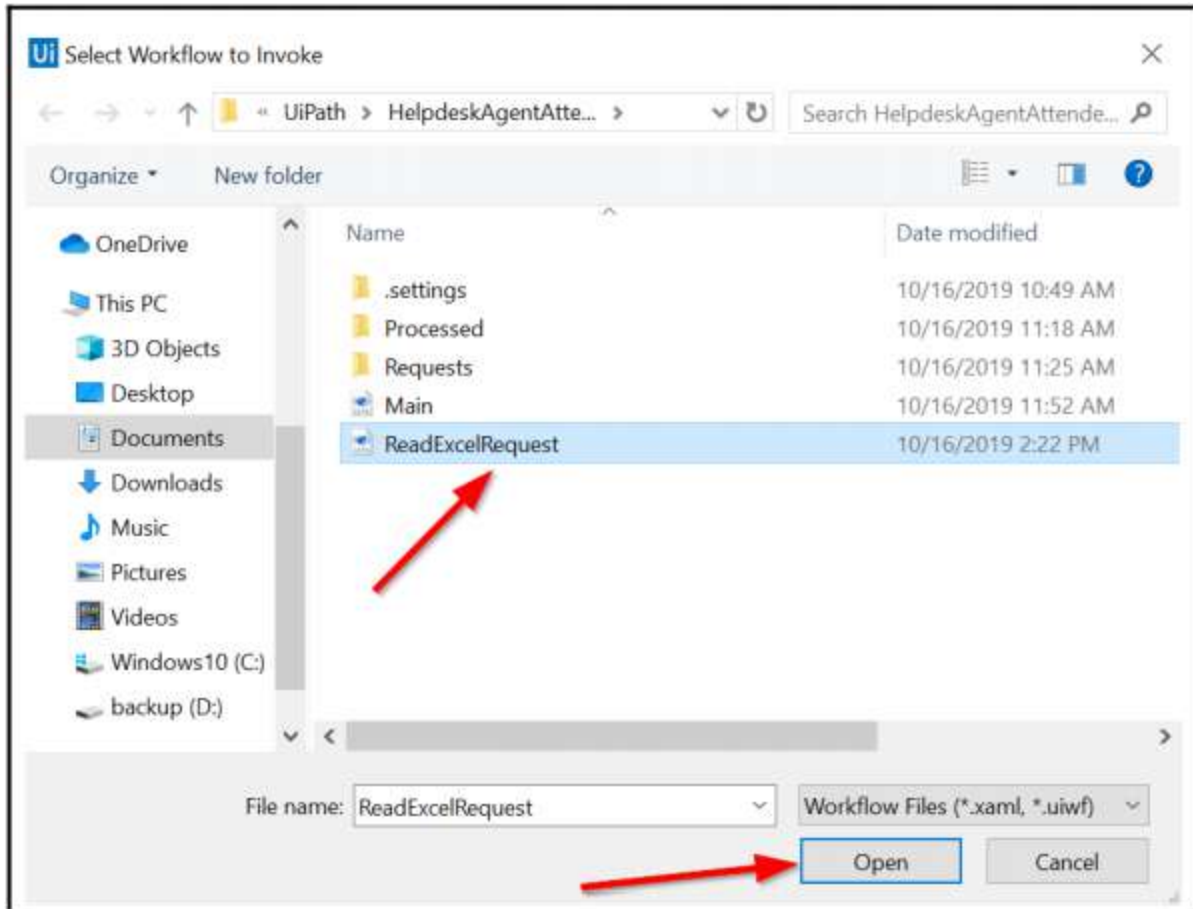
## Invoking the Excel Workflow from Main:

Let's now go back to the Main sequence to invoke this newly created ReadExcelRequest workflow. If you recall, we added a message within the main workflow if there are requests available to process. Let's invoke the read Excel workflow right after that:

- 1) Let's add the Invoke Workflow File UiPath activity in the Then block of the If control:



- 2) Let's populate this new activity with the ReadExcelRequest workflow path. To do that, click on the three dots on the right of the first parameter. Select the ReadExcelRequest.xaml file in your project folder:



3) Now, let's create three new variables to store the data that we would get from the ReadExcelRequest workflow. Go to the Variables pane at the bottom of Studio and add variables for contact name, email, and subject, as shown in the following screenshot:

Name	Variable type	Scope
EditableText	UiElement	Event Handler
boolFileExists	Boolean	Event Handler
strContactName	String	Sequence
strEmail	String	Sequence
strSubject	String	Sequence

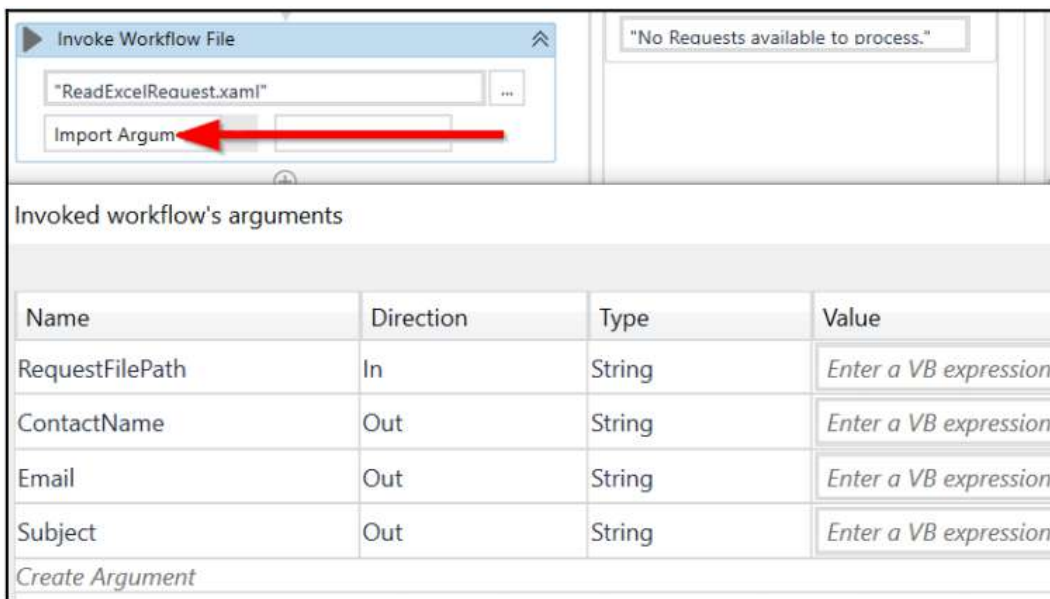
Note **Variable type** and **Scope** and ensure that you match what is shown.



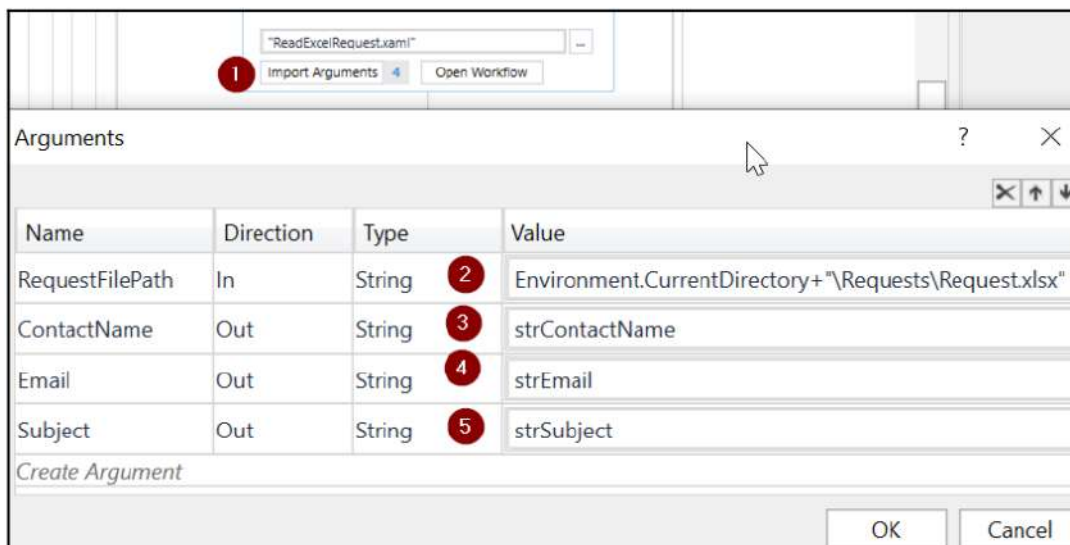
Naming convention: Please use descriptive names for variables and arguments to enable easy understanding. We recommend that variables follow camel case, with the standard prefixed with the type of variable, for example, `boolFileExists`. Arguments can follow Pascal case; for example, `ContactName`.

4) If you recall, we had a few arguments in the `ReadExcelRequest` workflow to pass data back to **Main**. Let's now pass data by clicking on **Import Arguments** and mapping the data. For that, within the **Invoked workflow's arguments** window, let's perform the following steps:

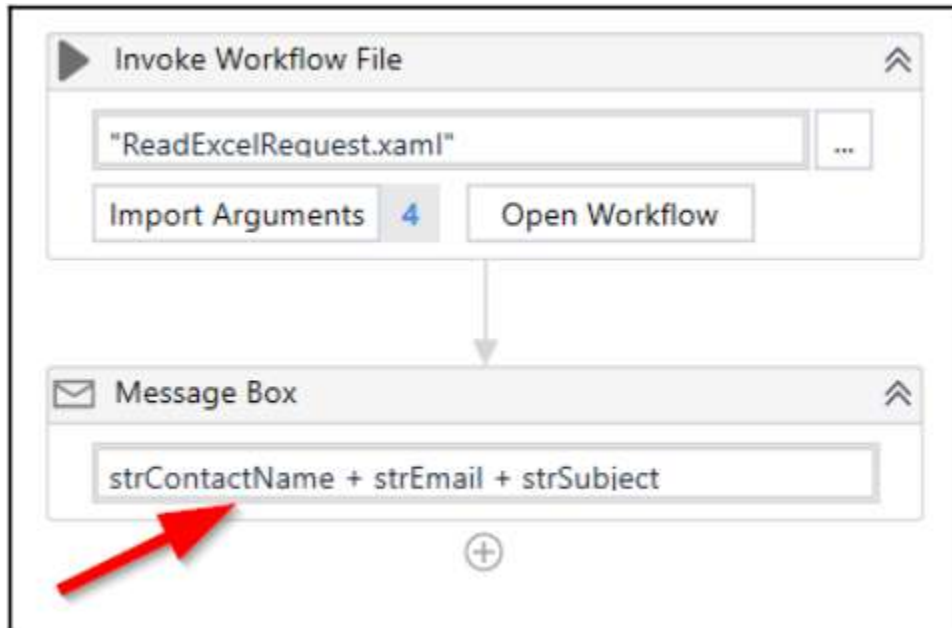
- Populate `RequestFilePath` with the path to the file: `Environment.CurrentDirectory+"\Requests\Request.xls x"`:



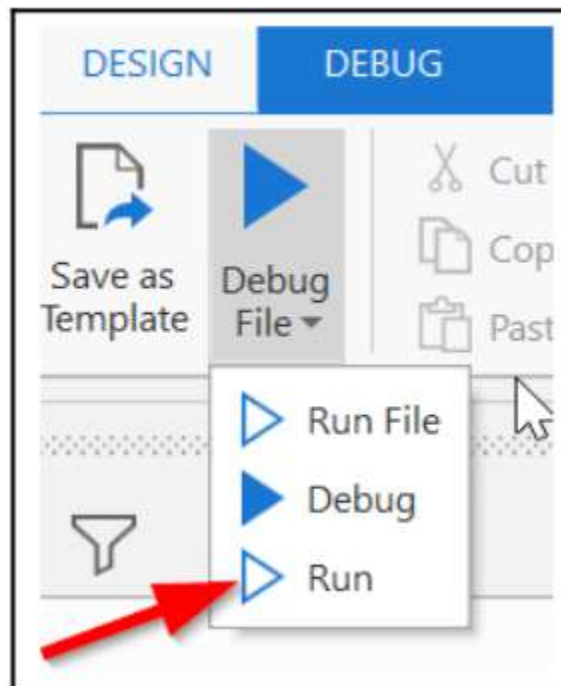
- Map the new Variables we added previously to the respective argument value:



- 5) Since this is a learning exercise, let's add a message box to display **ContactName**, **Email**, and **Subject** for us to establish whether the bot got it right:



- 6) Let's now perform a quick test of the workflow so far. Click on **Run** to run this main workflow. Please ensure that your Excel file is closed before you run the workflow:





You should get the initial message that we added: *Agent Ready*. Press **Alt + s** to trigger *Automation*. Click **OK** on this message box to acknowledge and press **Alt + S** to start the bot. Next, you should get the second message that there is a *Request* file to process and so to proceed with ticket creation. Finally, when it runs successfully, we can expect the message box with the name, email, and subject content that we added in the steps we just completed.

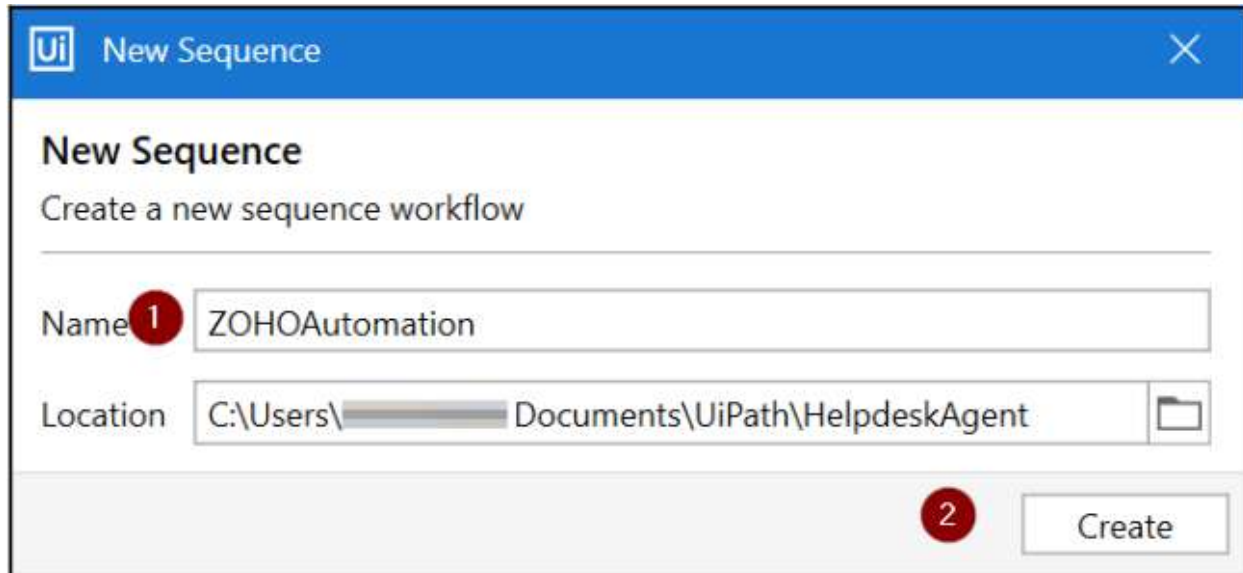
Automation will always continue to run by default. Therefore, please click on the Studio **Stop** button to stop the bot.

We have now completed the part where we read the data from the *Request* spreadsheet and are now ready to take this data and create our support ticket.

## Creating a support ticket in the Zoho Desk ticketing system:

In this final workflow that we will create for this project, we will use the data read from the Requests file to create the support ticket within Zoho Desk. This will help us understand how we can automatically input data into web applications through web application screens. Let's perform the following steps:

- 1) We'll start by creating another sequence for Zoho web app automation. You can call it ZOHOAutomation:



- 2) Within the UiPath default workflow, let's add a **Try Catch** activity. Let's also add four arguments, as shown in the following screenshot, to pass the data around:

Name	Direction	Argument type
ContactName	In	String
Email	In	String
Subject	In	String
Successful	Out	Boolean

Ensure that you match **Direction** and **Argument type**.

- 3) Next, we will use the UiPath web recorder to record the steps to enter the Ticket data in Zoho and create a new ticket. First, go to your Chrome browser and ensure that the Zoho Desk home page is open in one of the tabs. Also, ensure that you have installed the UiPath add-on for Chrome in your Chrome browser. It is available on the Chrome App store.



UiPath has a recorder that allows you to record mouse clicks and keyboard sequences to automatically generate UiPath scripts. You can also add these activities by yourself, but the recorder is a much faster way to create these sequences. Hence, we like to show you how you can do it.

- 4) Click within the **Try** block and activate the web recorder by clicking on the **Web** recorder option within **Recording**:



- 5) UiPath opens a web recording panel to control the recording. Click on the Record button with the Zoho Desk browser tab open:

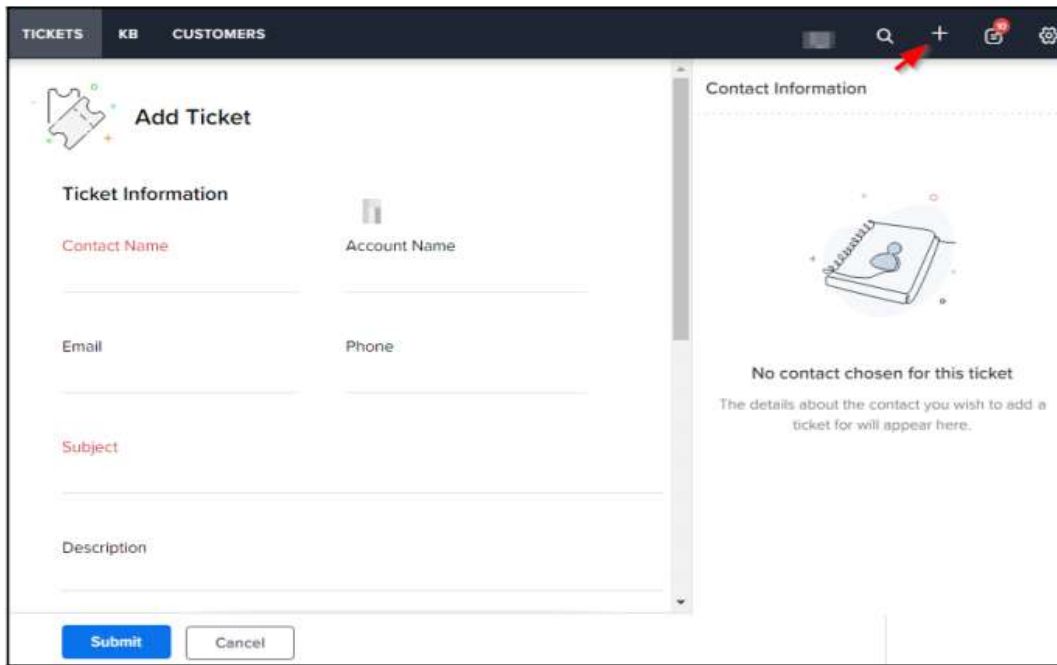


Now that we have the recording set up and ready, let's record the actions to create a ticket in Zoho.

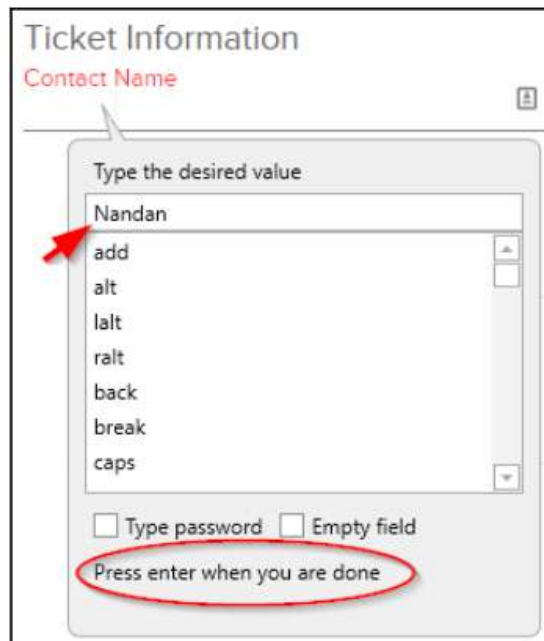
### Recording ticket creation activities:

On the Zoho desk browser tab, perform the following actions to enable the UiPath recorder to record:

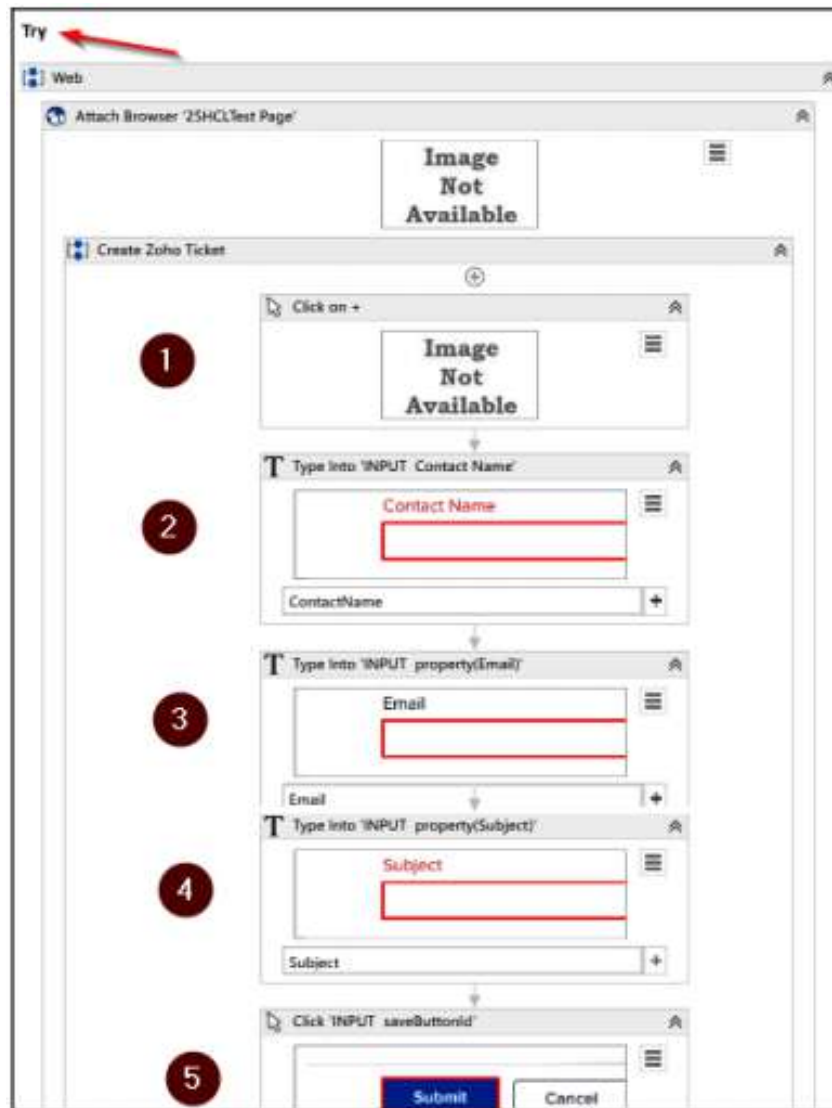
- 1) Click on the + symbol to create a new ticket (at the top right of the Zoho desk screen):



- 2) On the new TICKETS screen, type a contact name followed by the Enter key on your keyboard.



- 3) Similarly, type an email followed by the Enter key.
- 4) Type a subject followed by the Enter key.
- 5) Click on the **Submit** button on the Zoho **Add Ticket** screen.
- 6) Once you perform all the preceding steps, use the Windows Esc key to stop the recording. Then, click on **Save & Exit** on the UiPath web recording panel.
- 7) You may occasionally find the recorded steps outside the **Try** block. Move the recorded activity into the **Try** block if that is the case. Your workflow should look like the following:



Now that we have the recorded activities, let's configure them for our automation.

### **Configuring the recorded activities:**

We will now update the recorded activities as required to complete the ticket data input. Let's start with the browser title name:



- 1) You can see that the recorder has created an **Attach Browser** activity. This uses the browser title to attach to the browser tab and perform the recorded actions.

In our case here, the browser title is dynamic because there is a ticket number in it. So, we will need to use wildcards to attach to the browser tab. If your browser tab for the Zoho desk is "123zyx", we will just use "\*xyz\*" with wildcards on both sides.

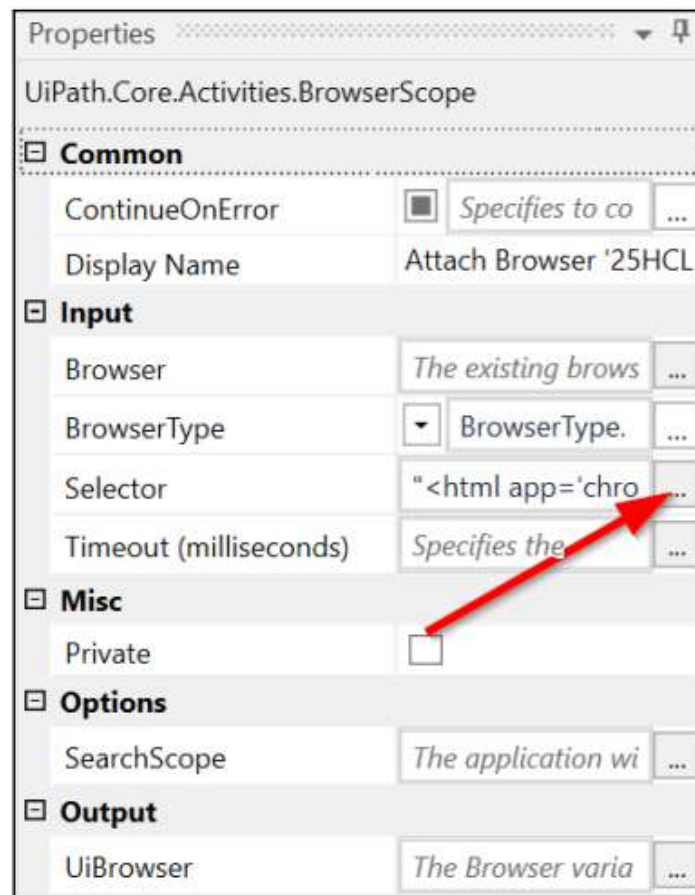


**Wild characters:** It is good practice to use wild characters such as \* (one or more characters) or ? (any single character) in the browser selectors if we know that the index, prefix, or postfix will dynamically change during execution.

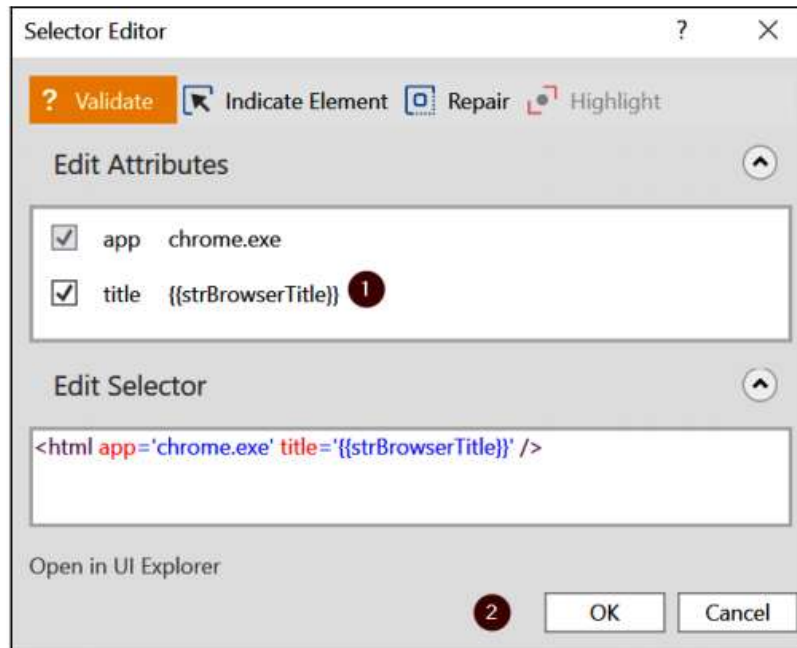
Since we may need the browser title in other activities, let's define a variable called `strBrowserTitle` and add this as a default value, as shown in the following screenshot:

Name	Variable type	Scope	Default
<code>strBrowserTitle</code> 1	String 2	ZOHOAutomation 3	"*xyz*" 4

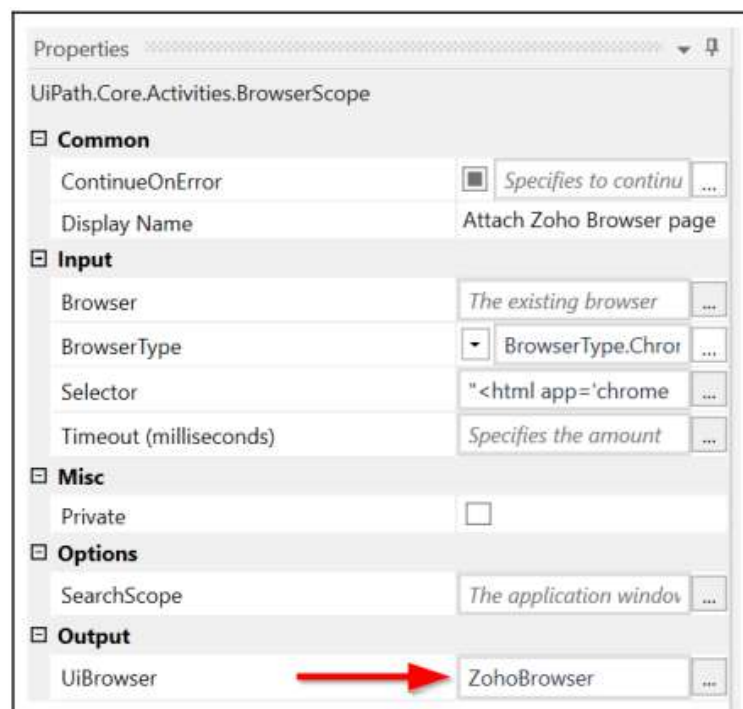
- 2) Now, let's update the Attach Browser activity that the recorder added for us with the browser title variable. Click on the Attach Browser activity within the Try block. In the properties panel on the right, click on the option to update the Selector:



- 3) In the Selector Editor window that pops up, click on title to update with the newly created strBrowserTitle variable, as shown in the following screenshot:



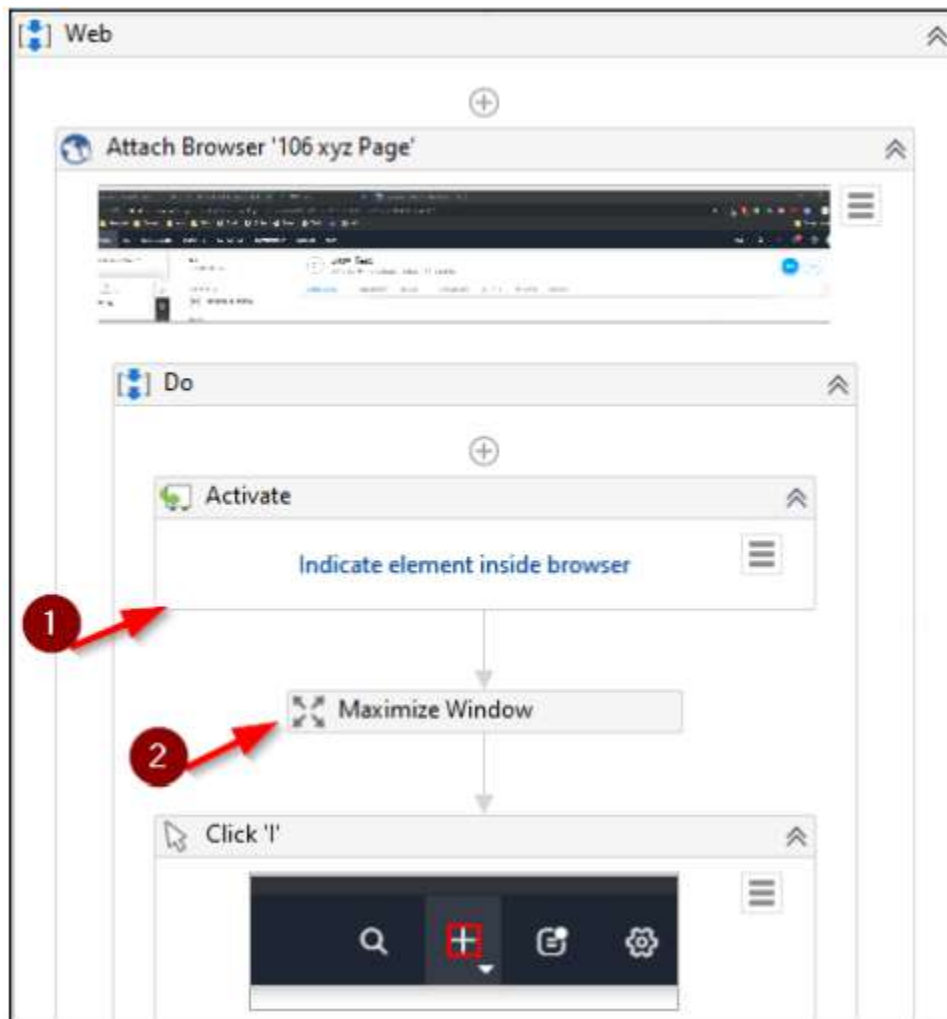
- 4) Let's also add a new variable within the **UiBrowser** output property for the **Attach Browser** activity. We will call it **ZohoBrowser** and set its scope to **ZOHOAutomation**. We will use this variable to handle exceptions later in the workflow. You can use Ctrl + K to add the variable and set the scope, or you can add it directly to the variables pane in Studio:



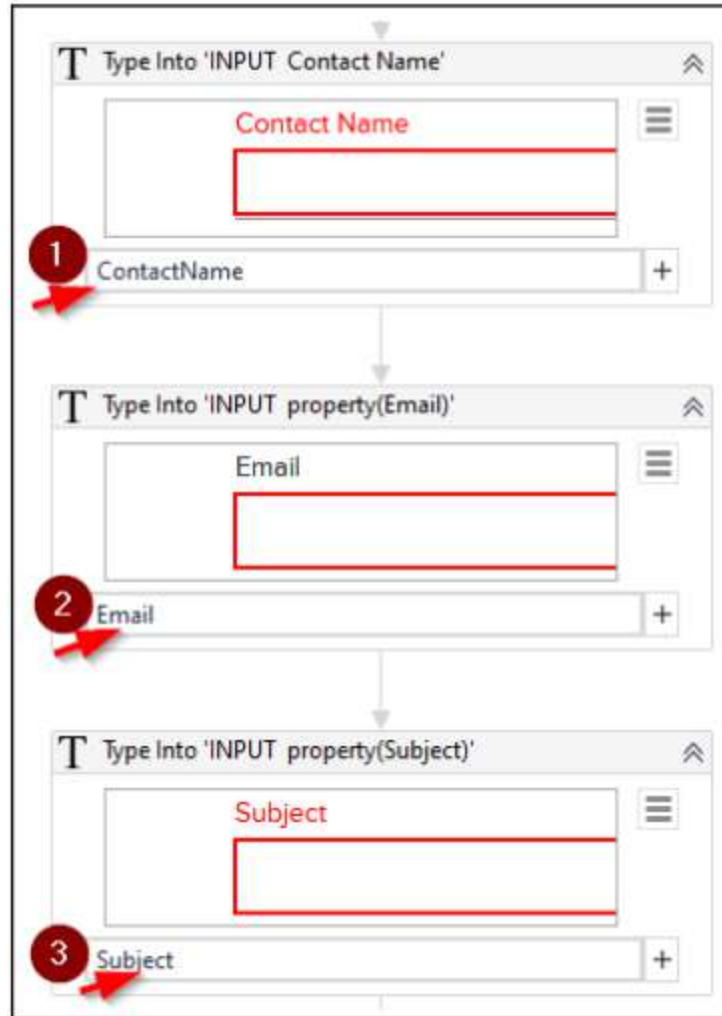


It is best practice to use a Browser variable when you attach the browser, so as to pass the control around during web automation. In our case, we will use this variable in the error handling sequence, as we will use the same browser session to perform error handling.

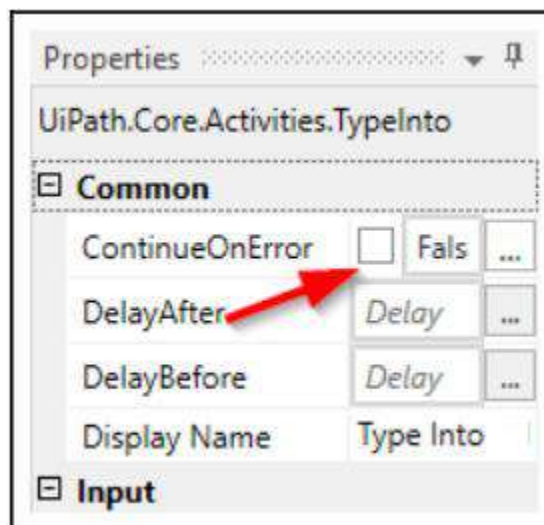
- 5) Next, let's activate the specific browser window by using the Activate UiPath activity. Add the Activate activity, click on Indicate element inside browser, and then click on the Chrome browser title. Let's also maximize the browser window if it's not already maximized. For that, let's use the Maximize Window UiPath activity:



- 6) To pass the ticket data to the Zoho desk fields that we recorded, let's replace the recorded text here with argument variables for Contact Name, Email, and Subject:



- 7) Let's also set the **ContinueOnError** flag to `False` in the Properties panel for these three activities so that we can stop execution and handle them if there are errors:



That is all the updates we require in order to make to the recording. Let's now check whether the ticket was created successfully.

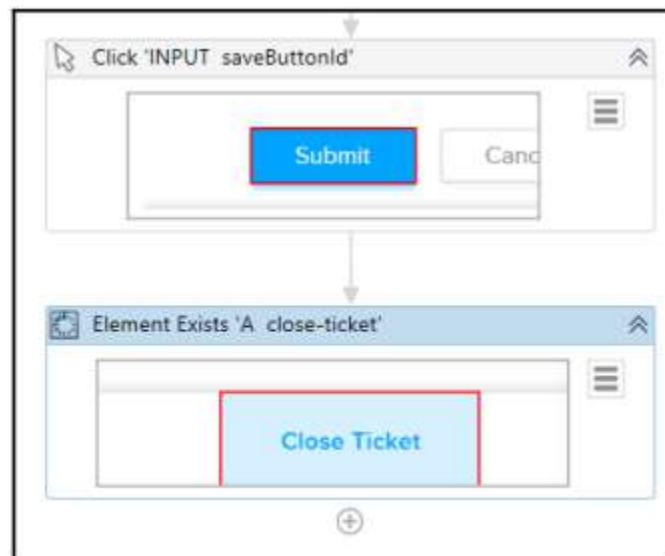
### Validating successful ticket creation:

By way of a final step in this ticket creation automation, let's ensure that the ticket was added successfully:

- 1) To do this, let's check whether Zoho Desk moved to the next page by checking whether the **Close Ticket** option is on screen.
- 2) Since our ticket is already created (during our record sequence), go back to the Zoho ticket application in Chrome and click on the newly created ticket. You should now see the Close Ticket option at the bottom of the screen:

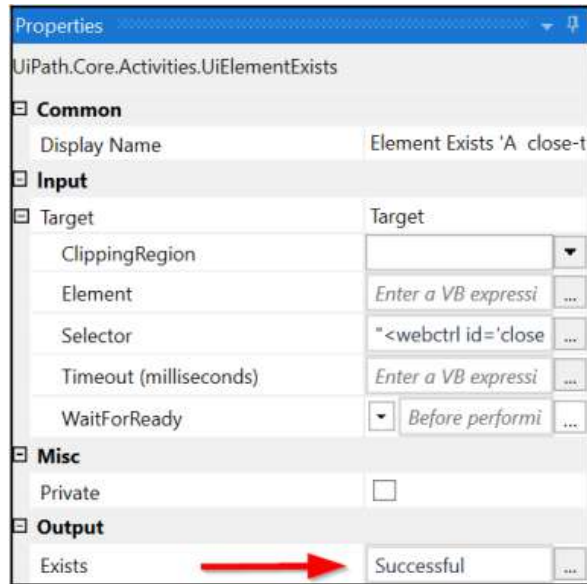


- 3) To check for the element, let's add an **Element Exists** activity within the **ZohoAutomation** workflow. Within the added activity, click on **Indicate element in the browser** and choose **Close Ticket** in the bottom-right corner of the Zoho ticket details screen:

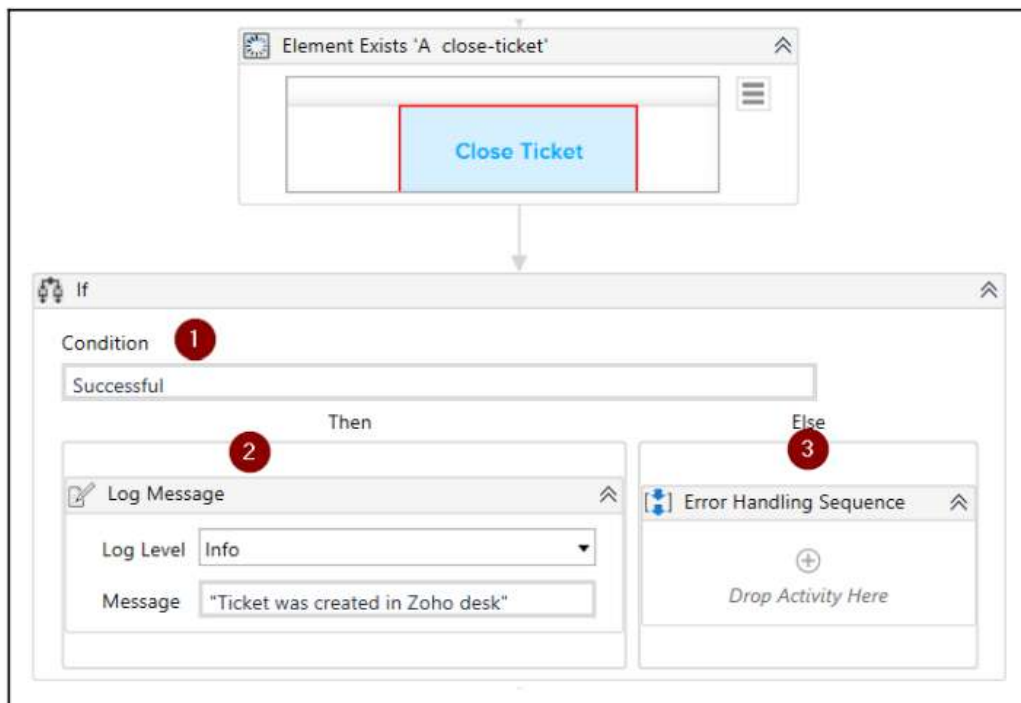


- 4) Also, go to the **Properties** window (on the right pane) of this **Element Exists** activity and add the Successful argument as output:





- 5) Let's now check whether the ticket was added successfully. Let's add an **If** activity to check for the **Close Ticket** element.
- 6) If the element exists, we will log a message to say Ticket was created in Zoho desk. Use the **Log Message** activity for that.
- 7) If the element does not exist, this means that we have a functional error (for example, there was no data in the sheet) and the ticket could not be created. In this scenario, let's log an error message indicating that the ticket could not be created. For that, add a new **Sequence** activity within the **Else** part. Within Sequence, add a **Log Message** activity with the **Log Level** Error and a **Message box** with a "Ticket Not created in Zoho desk" message:

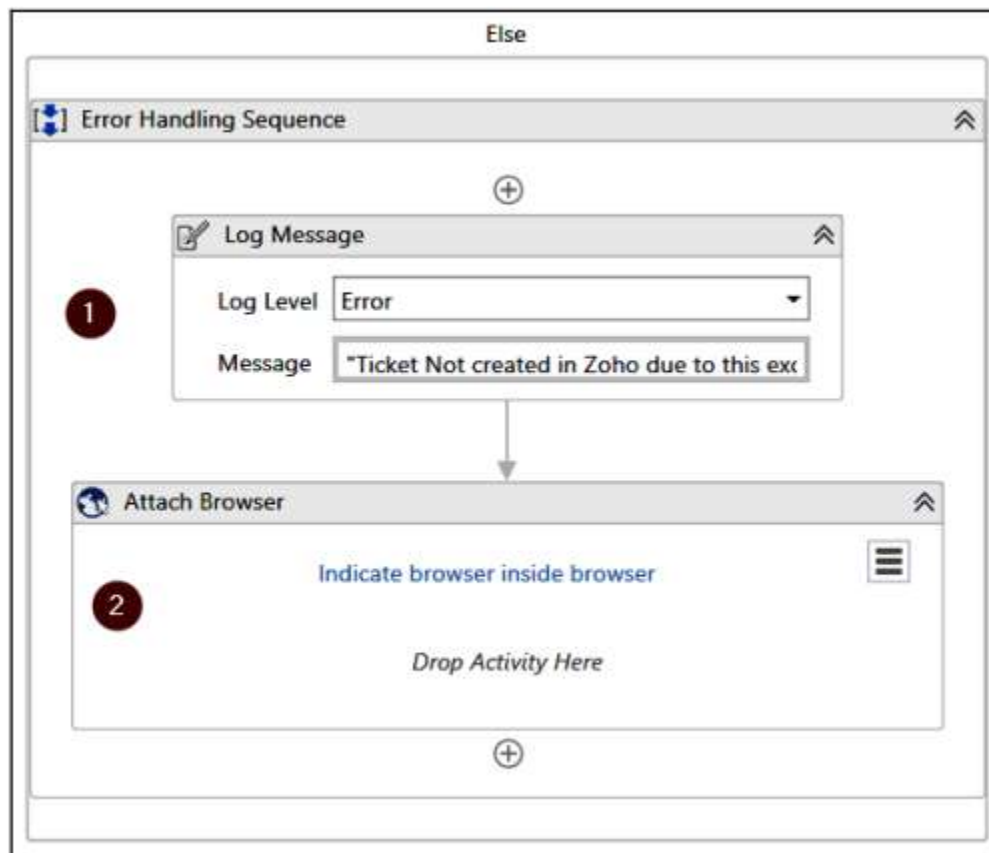


We checked for the successful creation of the ticket. Let's now handle any exception scenarios.

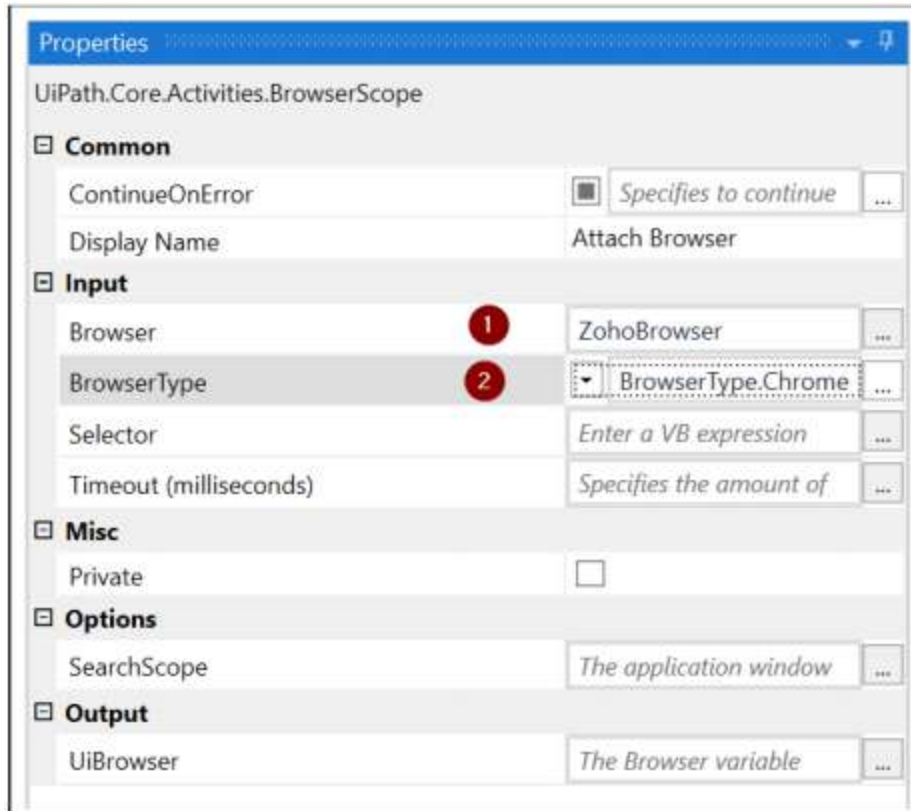
### Handling exceptions:

If there is an unexpected exception or error, then the bot should ensure that we bring the target application to a stable state where it can proceed with the next transactions. The following few steps guarantee this:

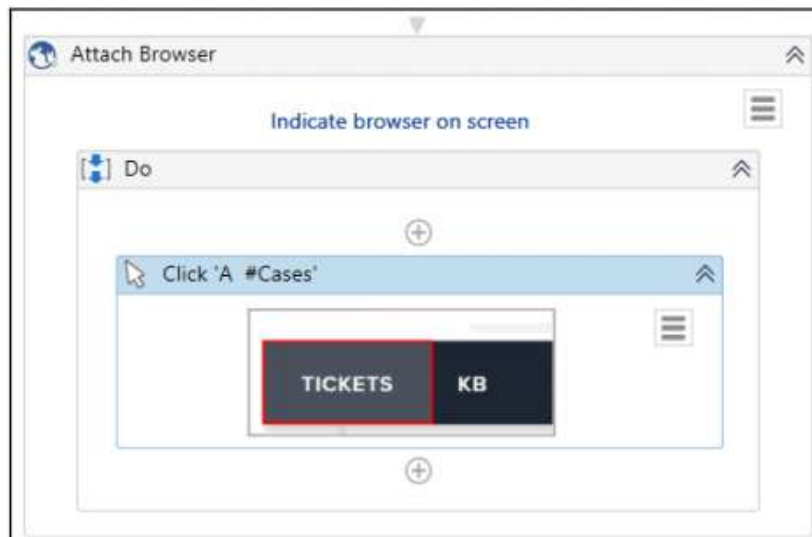
- 1) Within the **Else** block, to ensure that the target application is in a stable state, we will attach an element on the screen to the browser. Let's add a new **Attach Browser** activity to handle the error handling activity in the already opened Chrome browser:



- 2) On the properties side of Attach Browser, update Browser with the ZohoBrowser variable and set the BrowserType as Chrome to continue to use the same browser session:



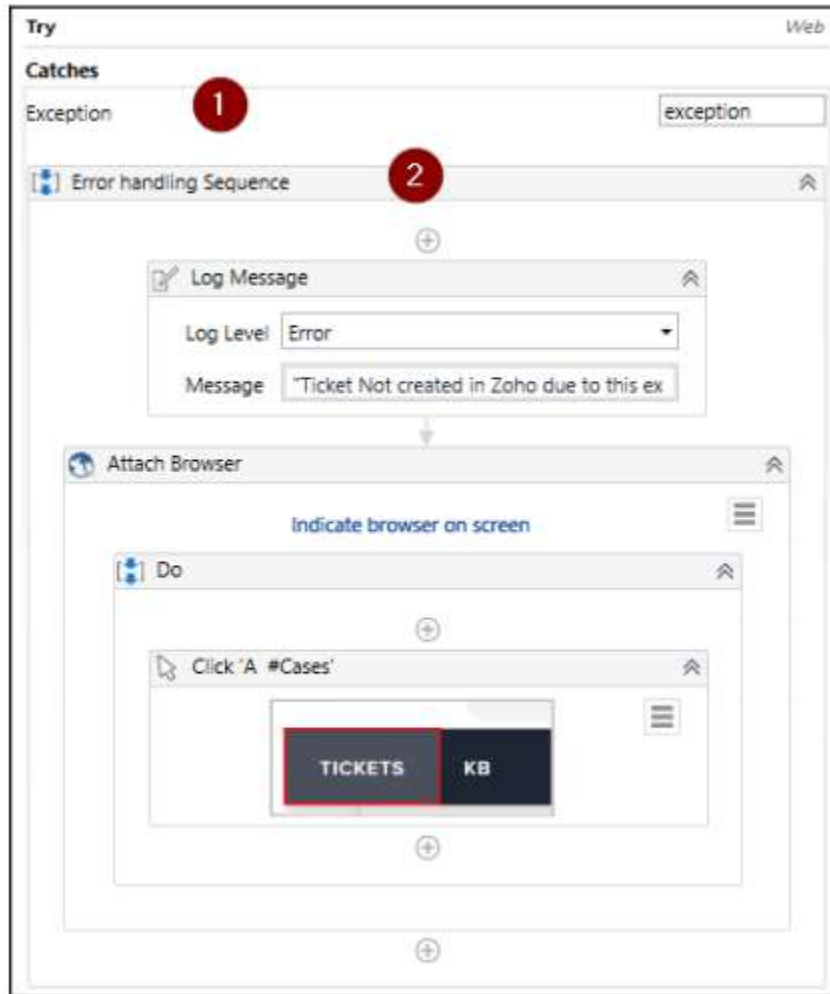
- 3) Add a Mouse Click activity to the newly created sequence and click on Indicate element inside the browser. Then, go to the browser, and click on the TICKETS menu option in the top left-hand corner of the Zoho desk screen:



This step will enable automation to get control of the home page of the web application if a ticket has not been created.

This completes the Try block. Now, let's handle any system exceptions.

- 4) Moving out of the overall **Try** block, let's update the **Catches** block. Add a new catch of the `System.exception` type to the Catches block. Copy the error handling sequence that we added in the **Else** block and paste it into this **Catches** block:



So we have now completed the web (Zoho Desk) automation as well. Here, we took the request data and incorporated it into Zoho Desk. Finally, we will go to the main workflow, invoke this workflow, and finalize the automation.

## Putting it all together:

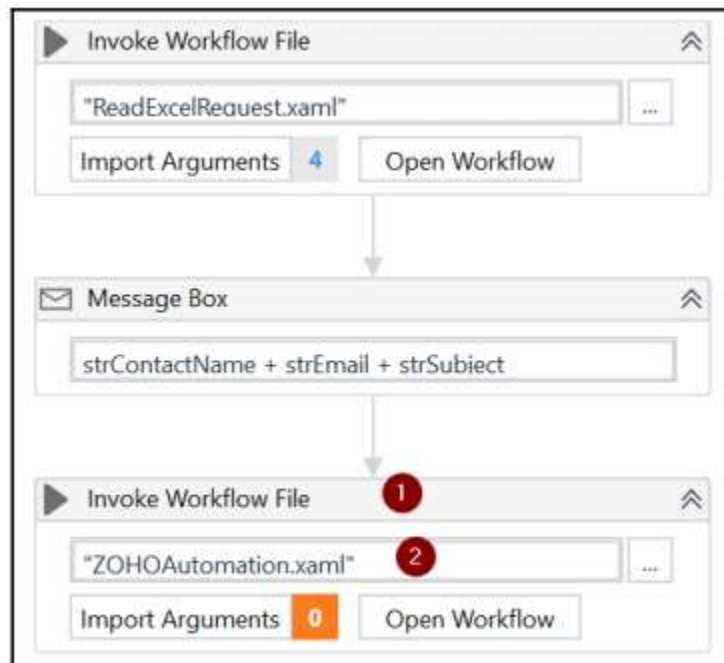
It is time to finish up the main workflow so that it reads the requests, creates the tickets, and then moves the Request spreadsheet out once processed. In order to do this, perform the following steps:

- 1) Go back to `Main.xaml`, create a new variable called `boolTicketCreated` of the Boolean type, set the scope to Event Handler sequence, and set the default value as `False`:

Name	Variable type	Scope	Default
<code>strEmail</code>	String	Sequence	<code>Enter</code>
<code>strSubject</code>	String	Sequence	<code>Enter</code>
<code>EditableText</code>	UiElement	Event Handler	<code>Enter</code>
<code>boolFileExists</code>	Boolean	Event Handler	<code>Enter</code>
<code>boolTicketCreated</code>	Boolean	Event Handler	<code>False</code>

We will use this to check whether the ticket was created successfully.

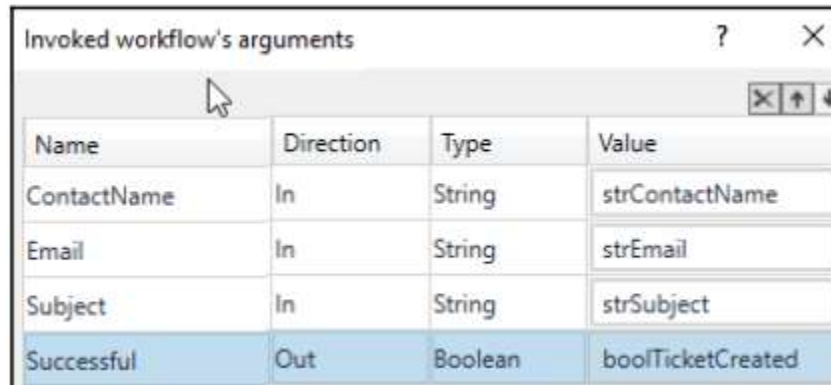
- 2) To invoke the Zoho Desk workflow that we just added, let's add a new **Invoke Workflow File** activity and browse to the `ZOHOAutomation.xaml` file:



Note that we are adding this to the **Then** part of the **If** control we last added in **Main**.

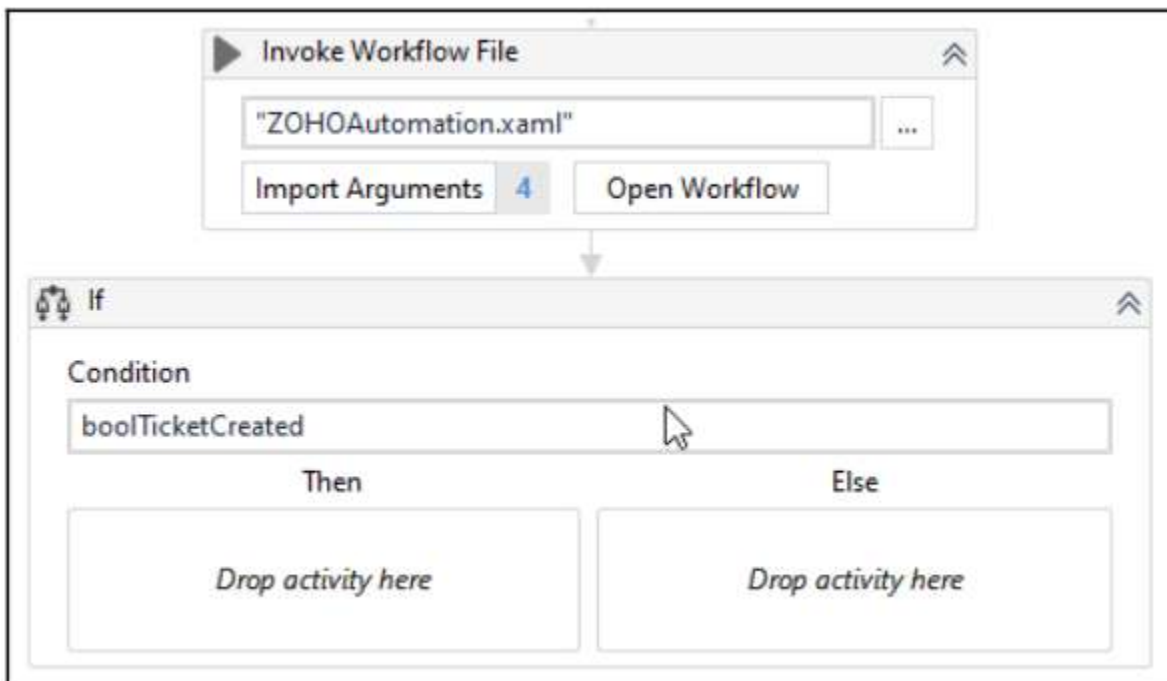


- 3) Let's import the arguments by clicking on **Import Arguments** within the Invoke activity. On the popup, map the arguments to the `strContactName`, `strEmail`, `strSubject`, and `boolTicketCreated` variables:



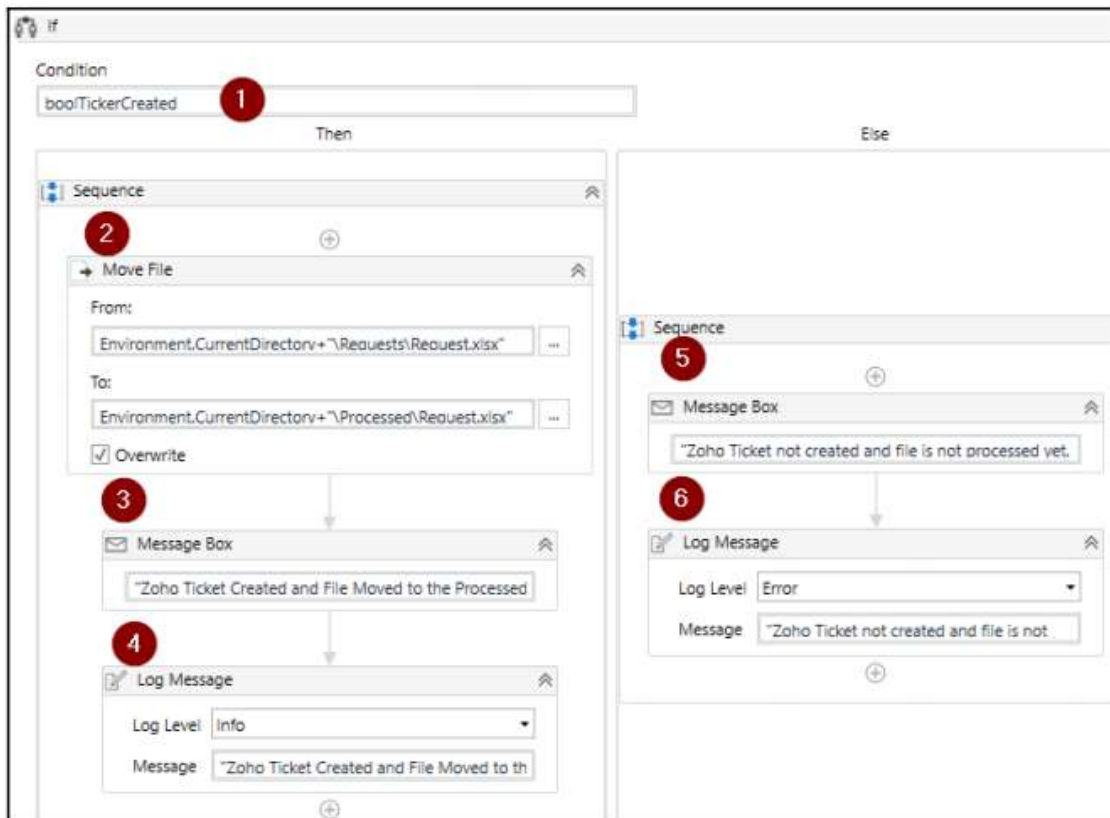
Name	Direction	Type	Value
ContactName	In	String	strContactName
Email	In	String	strEmail
Subject	In	String	strSubject
Successful	Out	Boolean	boolTicketCreated

- 4) Next, let's use this last variable, `boolTicketCreated`, and add an **If** control:

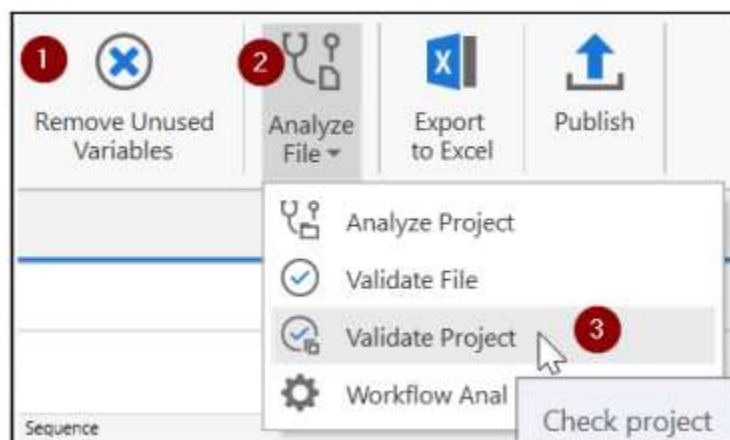


- 5) If the ticket was created, then we will move `Request.xlsx` from the `Requests` folder to the `Processed` folder. For that, let's add a `Move File` activity within the `Then` block with the following inputs:
- From: `Environment.CurrentDirectory+"\\Requests\\Request.xlsx"`.
  - To: `Environment.CurrentDirectory+"\\Processed\\Request.xlsx"`.
  - Check the `Overwrite` checkbox.

- 6) Finally, add a **Message Box** with the message "Zoho Ticket Created and File Moved to the Processed Folder. Use ALT+S to check for new requests to process.". Also, add a **Log Message** activity with the same message and a Log Level of Info.
- 7) Next, in the Else branch, let's add a Message Box saying "Zoho Ticket not created and file is not processed yet. Please check the input request file and Use ALT+s to reprocess the same request". Also, add a Log Message activity with the same message and a Log Level of Error:



- 8) Let's save the project. Go to Remove Unused Variables in Studio and click on Validate Project:

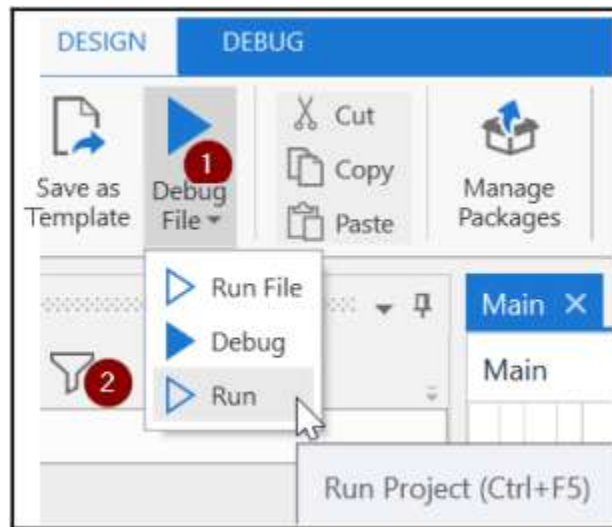


You should get a message from Studio saying No errors found. Now, we are ready to test the project.

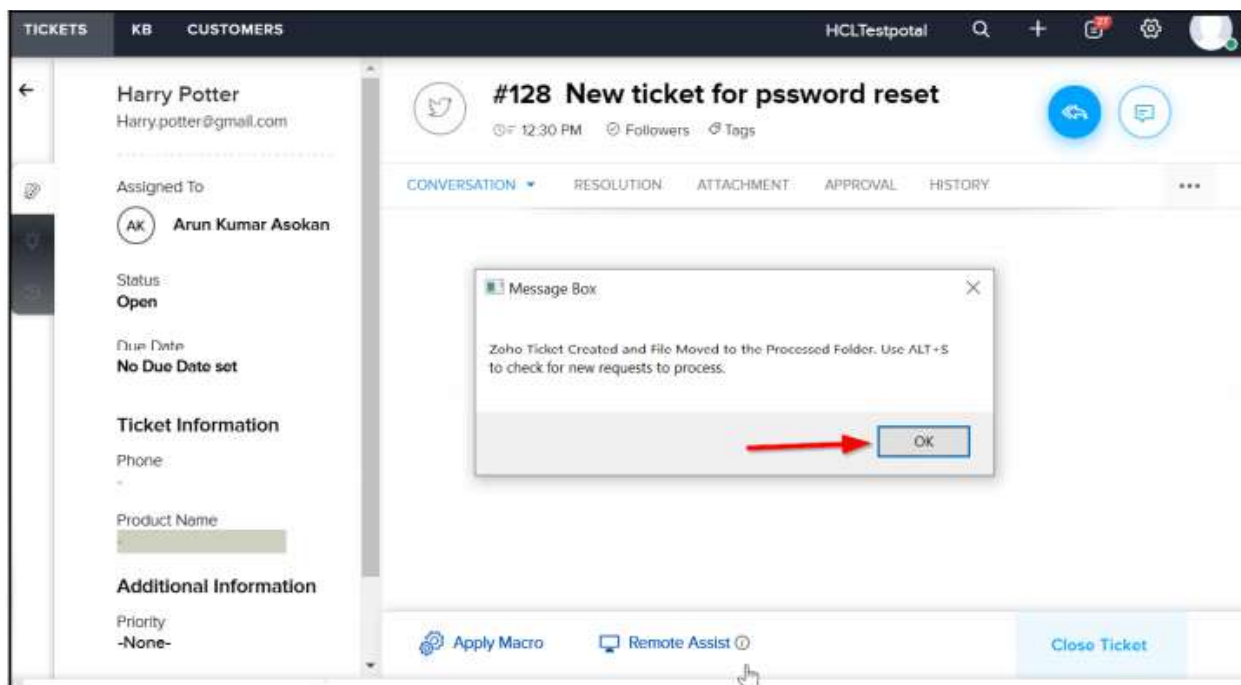
## Testing the Automation:

Let's now test the automation with all the workflows end to end:

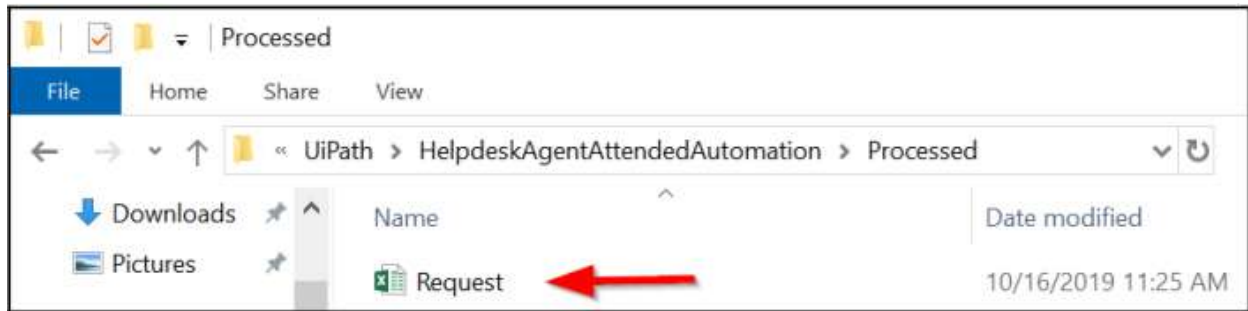
- 1) Go to the main workflow and click on Run, as shown in the following screenshot:



- 2) Once you get the first message box, click OK and then use ALT + S to trigger the automation. Click OK on the next few message box prompts. Remember that we added these message boxes to bring visibility to the workflow execution:



3) Go to the Processed folder and check whether the Request.xlsx file has been moved there:



If you encounter issues, you can use the Debug option to run through the steps and ascertain where the issues are.

4) Before you go, do not forget to stop the automation by clicking on the STOP button on UiPath Studio.

That's it! We have completed our first project in UiPath that automated the process of creating a support ticket.

We can implement a few enhancements and make things a little more interesting by trying out the following suggested enhancements.

## Future Scope of Project:

Here are a few simple, but interesting, things you can try out to enhance the project and learn more:

- 1) After processing, try to rename the Request file as Request + Date Timestamp before moving it to the Requests folders.
- 2) Try to capture all the fields (not just the mandatory three) to create the ticket in Zoho.
- 3) Enhance attended automation to include the option to Stop Automation by using a hotkey.

## Reference and Bibliography:

### Web References:

- <https://academy.uipath.com/static-page/5>
- [https://cloud.uipath.com/persojszopti/portal\\_/home](https://cloud.uipath.com/persojszopti/portal_/home)
- <https://docs.uipath.com>
- [www.google.com](http://www.google.com)
- [www.youtube.com](http://www.youtube.com)
- [www.stackoverflow.com](http://www.stackoverflow.com)
- <https://www.pwc.ch/en/insights/digital/rpa-data-analytics-an-unprecedented-force-for-digital-transformation.html>
- [https://www.researchgate.net/publication/335400552\\_Robotic\\_Process\\_Automation\\_Systematic\\_Literature\\_Review](https://www.researchgate.net/publication/335400552_Robotic_Process_Automation_Systematic_Literature_Review)
- <http://www.udaipur-icai.org/wp-content/uploads/2019/08/AI-Data-Analytics-RPA.pdf>
- <https://www.scielo.br/j/jistm/a/m7cqFWJPsWSk8ZnWRN6fR5m/?lang=en>
- <https://www.edureka.co/blog/rpa-projects>
- <https://forum.uipath.com>
- <https://www.rpaforum.net/forums/uipath.10>

### Book References:

- Build real-world RPA solutions using UiPath and Automation Anywhere
- Learning Robotic Process Automation
- The Robotic Process Automation Handbook



BHASKAR V. PATANKAR  
SALES TAX CONSULTANT.

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Mayuri Vinod Vora was working with me from 1<sup>st</sup> April, 2016. I found Ms. Mayuri Vinod Vora is regular, sincere and punctual in her work. I wish her for good prospect in her future life.

Regards,

BHASKAR V. PATANKAR





BHASKAR V. PATANKAR  
SALES TAX CONSULTANT.

---

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Harshali Atmaram Rane was working with me from 1<sup>st</sup> April, 2016. I found Ms. Harshali A. Rane is regular, sincere and punctual in her work. I wish her for good prospect in her future life.

Regards,

BHASKAR V. PATANKAR

Date: 15/4/2016

Sub: Rendering of Services

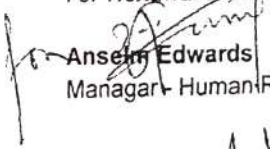
Dear Ankita Jalla

With reference to your application and our subsequent meetings and discussions we are pleased to engage your services as an "Associate" at our Mumbai office on the following terms:-

- a) The assignment shall commence on 15/4/2016.
- b) You will devote your full energy, knowledge and expertise for discharging the desired assignments.
- c) In consideration of your services, we will be pleased to offer you professional fees of Rs. 6000/- per month (Subject to tax deduction at source @ 10% if professional fees during a financial year exceeds Rs. 30,000 if PAN No. is provided & @ 20% if PAN No. is not provided).
- d) The payment will be made by Cheque for the period for which the services have been rendered.
- e) You shall co-operate in getting the invention or knowledge, if any, discovered in pursuance of your engagement, duly patented in the name of the Company.
- f) At no time, you shall divulge our trade secrets or business information to any outsider.
- g) During the assignment, you are not entitled to any paid leaves.
- h) This arrangement is liable to be terminated by either side, at any time, by giving three days prior notice in writing without assigning any reason whatsoever and no compensation in lieu thereof shall be payable.

Kindly sign and return the duplicate copy of this letter as a token of your having accepted the terms and conditions mentioned above.

Yours faithfully,  
For Hexaware Technologies Limited

  
Anselm Edwards  
Manager - Human Resources

Accepted:

Date: 15/4/2016



# SUPER TECH EQUIPMENTS

Factory : Unit No. C-7, Om Sai Ind. Estate,  
Plot No. B51/52, Road No. 30, Wagle Estate,  
Thane - 400 604. Tele Fax : 2580 4950 / 56  
e-mail : supertech1\_info@yahoo.co.in  
website : www.supertechinfo.net

Mfgs. of Industrial Vacuum Cleaners, Flux Recovery Units, Dust/Fume Extractors, Centralised Vacuum System, Scrubbers

To

Mr Sammer Katti

Date : 1<sup>st</sup> May 2016

Sub : Appointment as a "Marketing Trainee " in our Company

Dear Sameer,

We are glad to inform you that you have been selected for the position of trainee in our company with the Marketing department for a period of One month. During this training probation period you are required to undertake all duties and activities as assigned to you by the head of Marketing Mr.Kulkarni to whom you will be reporting.

Your salary as per Marketing Trainee will be Rs 2000/-month. You will nt be eligible for any monetary benefits from this company.

You can indicate your acceptance of the appointment as trainee by signing ans sending the same.

**Congratulations and Welcome to the prestigious company.**

Yours Sincerely

For Supertech Equipments





**Regd. Office :** W-44, M.I.D.C. Phase II, Manpada Road,  
Dombivli (E), Dist. Thane - 421203, Maharashtra India.  
**Phone :** +91-251-2871 354, 2870 941, 2873 052, 2871 635  
**E-mail :** admin@indoaminesltd.com/info@indoaminesltd.com  
**Website :** www.indoaminesltd.com  
**CIN :** L99999MH1992PLC070022

**INDO  
AMINES  
LIMITED**



Date:- 3<sup>rd</sup> February 2018.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Vanniyar E. Chitra**, is a student of SIA college appearing for S.Y.B.M.S (HR) from Mumbai University has done her Internship in INDO AMINES LTD, for the period of 18<sup>th</sup> December 2017 to 1<sup>st</sup> February 2018.

She has been completed the above Internship sincerely.

Thanking You,

For, **Indo Amines LTD.**

*[Handwritten Signature]*  
Authorised Signature.



Company Seal.





**Regd. Office :** W-44, M.I.D.C. Phase II, Manpada Road,  
Dombivli (E), Dist. Thane - 421203, Maharashtra India.  
**Phone :** +91-251-2871 354, 2870 941, 2873 052, 2871 635  
**E-mail :** admin@indoaminesltd.com/info@indoaminesltd.com  
**Website :** www.indoaminesltd.com  
**CIN :** L99999MH1992PLC070022

**INDO  
AMINES  
LIMITED**



Date:- 5<sup>th</sup> February 2018.

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Ambika Palanisadayan**, is a student of SIA college appearing for S.Y.B.M.S (Marketing) from Mumbai University has done her Internship in INDO AMINES LTD, for the period of 18<sup>th</sup> December 2017 to 1<sup>st</sup> February 2018.

She has been completed the above Internship sincerely.

Thanking You,

For, Indo Amines LTD.

*Dulhate*  
05/02/2018  
Authorized Signature.



Company Seal.



PEST-O-STOP

# Certificate of Training

THIS CERTIFICATE IS PRESENTED TO

## Dhiraj Kanojiya

*has successfully completed.*

*In appreciation for your successful work as Pest-O-Stop Pest Control Services Pvt Ltd intern at Dombivali  
From November 2017 to January 2018*

Signed



Date

2<sup>nd</sup> APRIL 2019



PEST-O-STOP  
Certificate of Training

THIS CERTIFICATE IS PRESENTED TO

Prathiksha Chauhan

*has successfully completed*  
*In appreciation for your successful work as Pest-O-Stop Pest Control Services Pvt Ltd intern at Dombivli*  
*From November 2017 to January 2018*

Signed



Date

2<sup>nd</sup> APRIL 2019

PEST-O-STOP

# Certificate of Training

THIS CERTIFICATE IS PRESENTED TO

## Swathi Hariharan

*has successfully completed*  
*In appreciation for your successful work as Pest-O-Stop Pest Control Services Pvt Ltd intern at Dombivali*  
*From November 2017 to January 2018*

Signed



Date

2<sup>nd</sup> APRIL 2019



PEST-O-STOP

# Certificate of Training

THIS CERTIFICATE IS PRESENTED TO

## Vivek Yadav

*has successfully completed*

*In appreciation for your successful work as Pest-O-Stop Pest Control Services Pvt Ltd intern at Dombivli  
From November 2017 to January 2018*

Signed



Date

2<sup>nd</sup> APRIL 2019



**ALKEM**  
**ALKEM LABORATORIES LTD.**

Regd. Office : "ALKEM HOUSE", Senapati Bapat Marg,  
Lower Parel, MUMBAI 400 013. Phone : 3982 9999, Fax : 022 - 2495 2955  
Email : contact@alkem.com Website : www.alkemlabs.com  
CIN :- L00305MH1973PLC174201

ALKEM  
**VISION**

To achieve value driven leadership in  
Indian Health Care Industry and beyond...  
Through  
Quality that is infinite  
Service that cares  
Hardwork that endures

08/06/2018

Dear Kum. Shreya Srinivasan,

We are glad to inform you that **Ms. Shreya Srinivasan** from **The S.I.A College Of Higher Education, Dombivali (East)**, has successfully completed her internship at **Alkem Laboratories Ltd. Lower Parel, Mumbai** from **8<sup>th</sup> May,2018 to 8<sup>th</sup> June,2018.**

During her internship she was exposed to various activities in the **Treasury Department.**

We found her extremely inquisitive, punctual and hard working. She was very much interested to learn the functions of our core division and also willing to put her efforts and get into the depth of the subject to understand it better.

Her association with us was very fruitful and we wish her all the best for her future endeavours.

Alkem Laboratories Ltd


Authorised Signatory

7 June 2018

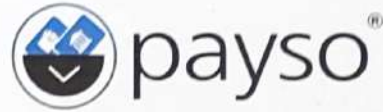
**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Ms. **Poornima Raju Shinde** from S.I.A. College of Higher Education, Dombivali, has undergone internship, from 8<sup>th</sup> May 2018 to 7<sup>th</sup> June 2018, in **Sales Department** of our Organization at Mahape, Navi Mumbai. She has successfully completed her Internship. We wish her every success in her future endeavors.

For NELCO LIMITED,

  
**Ajnav Deka**  
Head - HR & Admin.





*Certificate*  
OF  
**FINTERNSHIP™ 2018**

*We present this certificate to*  
**Suraj Bijendra Singh**

*in appreciation for your successful work as an intern at* **Payso Fintech Pvt. Ltd**

*The Finternship™ was conducted between* **07<sup>th</sup> May 2018 - 10<sup>th</sup> June 2018**

**Bertram D'souza**  
*(Head Digital Payments Initiatives)*  
Kotak Mahindra Bank

**07<sup>th</sup> July 2018**

**Date**

**Tushar Trivedi**  
*(Leader & Chief Executive)*  
Payso Fintech Pvt Ltd.

**FINTERNSHIP™ 2018**

MENTOR

GOAL

KNOWLEDGE

EXPERIENCES

SKILLS

TRAINING

OPPORTUNITY

PERSONAL  
DEVELOPMENT

# HARIOM INFOCOMM INDIA PVT. LTD.

*"Telecom, Audio-Visual, Security & IT Solutions."*  
B-204, 2<sup>nd</sup> Floor, Ashapura Apt, Maneklal Estate, S.N Mehta Marg, Ghatkopar (W), Mumbai - 86  
Phone: 91-022-25113080. M: 9324146789  
Email: sales@hoipl.com. Website: www.hoipl.com

## TO WHOM IT MAY CONCERN

This is to certify that **Mr. Abhay Vipul Pethani, Student of Bachelor of Management Studies (BMS) of S.I.A College of Higher Education** Has successfully completed a Summer Internship in the field of **Finance** from **May 2017 to July 2017 (3 Months)** Long Internship Program at **Hari Om Infocomm** Under the Guidance of **Mr. Harshal Mamtora**.

During this Internship He was Found Punctual, Hardworking and Inquisitive and was able to reach our Expectations.

We wish Him Every Success in his Life and Carrer.

**Harshal Mamtora**

Director

**Hari Om Infocomm**

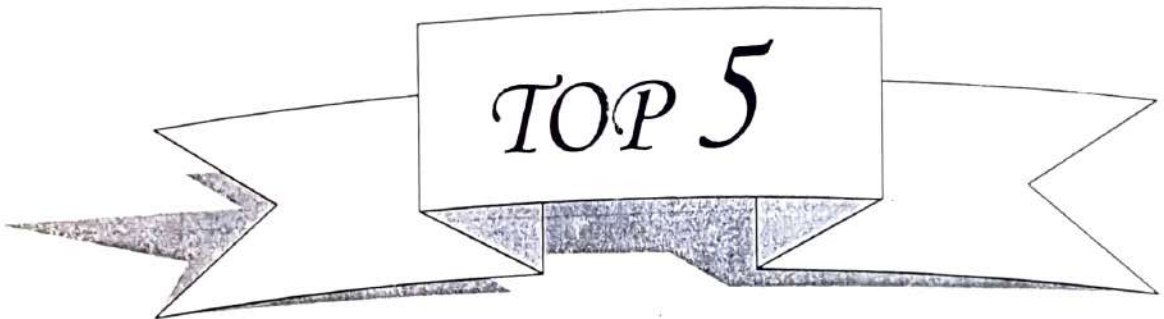




## *Congratulations*

*Suraj Singh*

---



*In recognition of your  
Outstanding performance in  
the year of 2017-2018*

*Nikesh Ruparel*  
*Senior Business Mentor*



CERTIFICATE

This is to certify that Mr. / Ms Suraj Singh has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



**Birla Sun Life**  
*Insurance*

**CERTIFICATE**

This is to certify that Mr. / Ms Kavita. Davda has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was Excellent.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



## *Congratulations*

*Kavita . Davda .*

---



*TOP 5*

*In recognition of your  
Outstanding performance in  
the year of 2017-2018*



*Nikesh Ruparel  
Senior Business Mentor*

**CERTIFICATE**

This is to certify that Mr. / Ms Ashwini . Desale has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive, & performance oriented.

His/her performance towards client acquisition was Excellent.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.



**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**

Young  
Turk



Birla Sun Life  
Insurance

## *Certificate of Achievement*

*This certificate is awarded to*

Nikhitha. Rai

*In recognition of best coordinator in training  
program.*

*Awarded on 30<sup>th</sup> December, 2017*



Birla Sun Life  
Insurance

CERTIFICATE

This is to certify that Mr. / Ms Nikhitha . Rai has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

NIKESH RUPAREL

Sr. BUSINESS MENTOR





### CERTIFICATE

This is to certify that Mr. / Ms Rupesh Shetty has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on **IRDA, Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



Young  
Turk

  
Birla Sun Life  
Insurance

## *Congratulations*

**RUPESH RAVINDRA SHETTY**

---

*First 5*

*In recognition of your  
Outstanding performance in  
the year of 2017-2018*



**Birla Sun Life**  
**Insurance**

**CERTIFICATE**

This is to certify that Mr. / Ms Swati Poojary has successfully completed his / her training from 23<sup>rd</sup> October/2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



### CERTIFICATE

This is to certify that Mr. / Ms Pravinkumar Ganesan has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR

### CERTIFICATE

This is to certify that Mr. SALMAN SHAIKH has successfully completed his training and internship in Birla Sun Life from 19<sup>th</sup> Oct 2017 to 20<sup>th</sup> Mar 2018.

During the internship, he was found to be punctual, positive & performance oriented.

He has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him success in his career.



NIKESH RUPAREL

LIFE INSURANCE



PROTECTIVE INVESTING FINANCIAL GROUP

CERTIFICATE OF APPRECIATION

Awarded to

Salman Shaikh

for successfully completing

the **Rookie** Criteria  
for the month of Jan'18.

A handwritten signature in black ink, appearing to read 'Nitin Mehta'.

**Nitin Mehta**

Head - Distribution Development and Management

A handwritten signature in black ink, appearing to read 'Parag Raja'.

**Parag Raja**

Chief Distribution Officer





### CERTIFICATE

This is to certify that Mr. / Ms Shrividhyalakshmi S. Iyer has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on **IRDA, Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

A handwritten signature in black ink, appearing to read 'Nikesh Ruparel', is written over a horizontal line.

**NIKESH RUPAREL**

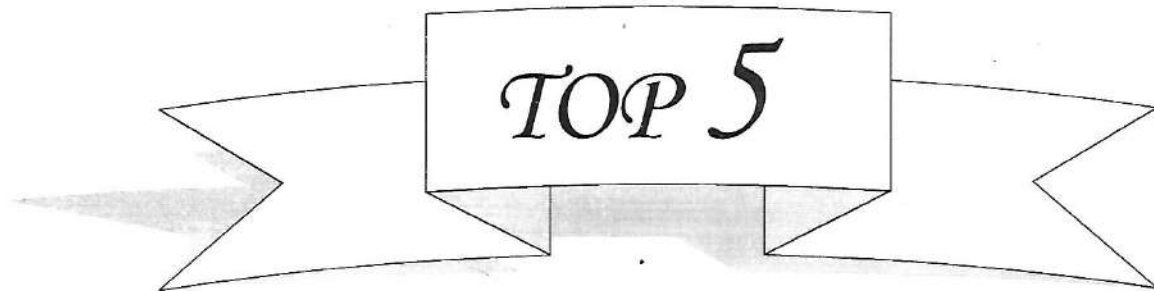
**Sr. BUSINESS MENTOR**



# *Congratulations*

*SHRIVIDHYALAKSHMI S. IYER*

---



*In recognition of your  
Outstanding performance in  
the year of 2017-2018*

  
*Nikesh Ruparel*  
*Senior Business Mentor*



**CERTIFICATE**

This is to certify that Mr. / Ms Prajakta. Nikam has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



Birla Sun Life  
Insurance

### CERTIFICATE

This is to certify that Mr. / Ms Deepika Moolya has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was Excellent.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

*NR*  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



### CERTIFICATE

This is to certify that Mr. / Ms Tajnya Poojary has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



CERTIFICATE

This is to certify that Mr. / Ms. Bhagvashree Pawar has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR

## *Congratulations*

**POORNIMA RAJU SHINDE**

---



*First 5*

*In recognition of your  
Outstanding performance in  
the year of 2017-2018*



**CERTIFICATE**

This is to certify that Mr. / Ms Poornima. Shinde has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on **IRDA, Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



**CERTIFICATE**

This is to certify that Mr. / Ms Janaki Naik has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was Excellent.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



CERTIFICATE

This is to certify that Mr. / Ms Shubham Chauhan has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.



NIKESH RUPAREL

Sr. BUSINESS MENTOR



Young  
Turk

  
Birla Sun Life  
Insurance

# *Congratulations*

**SUPRIYA YADAVA MOOLYA**

---



*First 5*

*In recognition of your  
Outstanding performance in  
the year of 2017-2018*



### CERTIFICATE

This is to certify that Mr. / Ms. Supriya Moolya has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on **IRDA, Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR

*Congratulations*

*Alisha . Rodrigues*

---



*TOP 5*

*In recognition of your  
Outstanding performance in  
the year of 2017-2018*

*  
Nikesh Ruparel  
Senior Business Mentor*

Work



**Birla Sun Life**  
**Insurance**

**CERTIFICATE**

This is to certify that Mr. / Ms Alisha Rodrigues has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**CERTIFICATE**

This is to certify that Mr. / Ms Sayali. Khanolkar has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR





Birla Sun Life  
Insurance

CERTIFICATE

This is to certify that ~~Mr~~ / Ms Anjali Iyer has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, ~~he~~/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was Excellent.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

NIKESH RUPAREL

Sr. BUSINESS MENTOR

Young  
Turk



Birla Sun Life  
Insurance

*Congratulations*

**MANASI UPENDRA NANDEDKAR**

---



*First 5*

*In recognition of your  
Outstanding performance in  
the year of 2017-2018*



CERTIFICATE

This is to certify that Mr. / Ms Manasi. Nandedkar has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

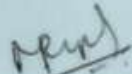
During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on **IRDA, Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



### CERTIFICATE

This is to certify that Mr. / Ms Yogita Parab has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was Excellent.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

NIKESH RUPAREL

Sr. BUSINESS MENTOR





### CERTIFICATE

This is to certify that Mr. / Ms Abhay. Pethani has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on **IRDA, Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR





# *Certificate of Achievement*

*This certificate is awarded to*

*Abhay . Pethani<sup>2</sup>*

---

*In recognition of best coordinator in training  
program.*

*Awarded on 30<sup>th</sup> December, 2017*



Birla Sun Life  
Insurance

### CERTIFICATE

This is to certify that Mr. / Ms Yash. More has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

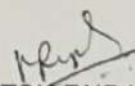
During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was Excellent.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

  
NIKESH RUPAREL

Sr. BUSINESS MENTOR



Birla Sun Life  
Insurance

### CERTIFICATE

This is to certify that Mr. / Ms Shantanu Saswade has successfully completed his / her training from 23<sup>rd</sup> October 2017 to 30<sup>th</sup> December 2017.

During the training, he/she was found to be punctual, positive & performance oriented.

His/her performance towards client acquisition was **Excellent**.

He/she has attended the training on IRDA, Portfolio Management, Equity Research & Investment banking which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- Fundamental Analysis
- Technical Analysis
- Sources of Finance
- Investment options.

We wish him / her success in his / her career.

NIKESH RUPAREL

Sr. BUSINESS MENTOR





## CERTIFICATE

This is to certify that Mr. / Ms. **SAHA NAVAMI MAHADEB** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



## CERTIFICATE

This is to certify that Mr. / Ms. **SUROSHI RADHIKA PANDURANG** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "N. Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**





## CERTIFICATE

This is to certify that Mr. / Ms. **ADAVI SWEETHA KOTRAGOVDA** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in blue ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*



## CERTIFICATE

This is to certify that Mr. / Ms. **SHETTY SUSHMITA SACHIDANANDA** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel", written over a horizontal line.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



### CERTIFICATE

This is to certify that Mr. / Ms. **GUPTA ANJALI BECHULAL** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*



### CERTIFICATE

This is to certify that Mr. / Ms. **TIWARI PRATIBHA RAKESH** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in blue ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*





### CERTIFICATE

This is to certify that Mr. / Ms. **PANDIT PRADNYA DINESH** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*





### CERTIFICATE

This is to certify that Mr. / Ms. **PALAN MEGHNA SANJEEVA** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
Insurance



### CERTIFICATE

This is to certify that Mr. / Ms. **NAGDA SALONI PARESH** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
Insurance



## CERTIFICATE

This is to certify that Mr. / Ms. JAIN PARIDHI ANIL has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in blue ink, appearing to read "N. Ruparel", with a horizontal line underneath.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



## CERTIFICATE

This is to certify that Mr. / Ms. **IYER LAVANYA HARIHARAN** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "N. Ruparel", with a horizontal line underneath.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**





### CERTIFICATE

This is to certify that Mr. / Ms. **TIWARI ASHUTOSH RAKESH** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "N. Ruparel", with a horizontal line underneath.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**





## CERTIFICATE

This is to certify that Mr. / Ms. **DURGAM SWAROOP SRINIWAS** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel", written over a horizontal line.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



## CERTIFICATE

This is to certify that Mr. / Ms. **KADAM KAUSTUBH ASHOK** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in blue ink that reads "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*



### CERTIFICATE

This is to certify that Mr. / Ms. **SAHASRABUDDHEY NEEL VILAS** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel", written over a horizontal line.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



### CERTIFICATE

This is to certify that Mr. / Ms. **DYARAM VARUN GANESH** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**





## CERTIFICATE

This is to certify that Mr. / Ms. JAIWAL SHIKHER NANDLAL has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in blue ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*





### CERTIFICATE

This is to certify that Mr. / Ms. **BORRA ISAAC RAJU** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*



## CERTIFICATE

This is to certify that Mr. / Ms. **CHOUHARY ASHUTOSH SUNIL** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "N. Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



### CERTIFICATE

This is to certify that Mr. / Ms. **BEHERE MANASI PRASAD** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "N. Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



## CERTIFICATE

This is to certify that Mr. / Ms. **AYYASWAMY KASTHURI KRISHNAN** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in blue ink, appearing to read "Nikesh Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**



**Birla Sun Life**  
*Insurance*





## CERTIFICATE

This is to certify that Mr. / Ms. VISHWAKARMA NIKEETA DINESH has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in black ink, appearing to read "N. Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**





## CERTIFICATE

This is to certify that Mr. / Ms. **THORAT VIRAJ ASHOK** has successfully completed his/her training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, He/she was found to be punctual, positive & performance oriented.

He/she has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him/her success in his/her career.

A handwritten signature in blue ink, appearing to read "N. Ruparel".

**NIKESH RUPAREL**

**Sr. BUSINESS MENTOR**

29/04/2019 - 31/05/2019

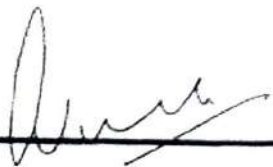
# Certificate of Internship

This certificate is awarded to

JESINTH. NADAR

---

In appreciation of your successful completion of 40 days  
Internship at Flipkart's MotherHub during APRIL-MAY 2019.



Anurag Verma  
Senior Director – HR  
(Flipkart)



Sameer Hassan  
Director – L&D  
(Flipkart)



Rituparna Chakraborty  
Executive Vice President  
(Teamlease Services Limited)

December 7, 2018

**To Whomsoever It May Concern**

This is to certify that **Ms. Shruti Nehere**, has successfully completed her internship with us from **November 5, 2018 to December 5, 2018**.

During her internship we found her motivated, hardworking and honest.

We wish her all the very best for her future endeavors.

For Orion Enterprises

  
Partner





Reg. No. - E-10269/Thane

# युग फाउंडेशन

तिमिराकडून



तेजाकडे

एक बहु उद्देशीय सामाजिक संस्था

कार्यालय : जी-१, ग्राऊंड फ्लोअर, अत्रीनंदन सोसायटी, महात्मा फुले रोड, महाराष्ट्र नगर, डोंबिवली (प.)  
फोन : ०२५१-२४०६६६६ / ९८६७४ ००४४१ Email : yugfoundationindia@gmail.com

प्रमाणपत्र

प्रमाणीत करण्यात येत आहे की,

ऋजुता मिमिंद माडवरे यांना  
इंटरशिप केल्याबाबत

सन्मानीत करण्यात येत आहे.

स्थळ : डोंबिवली

दिनांक : २४ फेब्रुवारी २०१३

*Kiratkar*

YUG FOUNDATION  
PRESIDENT

हार्दिक  
अभिनंदन

मा. कल्पनाताई दयानंद किरतकर

संस्थापक, अध्यक्ष



# युग फाउंडेशन

तिमिराकडून



तेजाकडे

एक बहु उद्देशीय सामाजिक संस्था

कार्यालय : जी-१, माऊंड फ्लोअर, अश्वीनंदन सोसायटी, महात्मा फुले रोड, महाराष्ट्र नगर, डोंबिवली (प.)  
फोन : ०२५१-२४०६६६६ / ९८६५४ ००४४१ Email : yugfoundationindia@gmail.com

प्रमाणपत्र

प्रमाणीत करण्यात येत आहे की,

निधी श्रींकु भारद्वाज

यांना

इंटरनॅशनल कल्याणवात

सन्मानीत करण्यात येत आहे.

स्थळ :

डोंबिवली

दिनांक :

२६ फेब्रुवारी २०१९

Kiratkar

YUG FOUNDATION  
PRESIDENT

हार्दिक  
अभिनंदन

मा. कल्याणाताई दयानंद किरतकर

संस्थापक, अध्यक्ष



CERTIFICATE

This is to certify Miss. JYALA USHA LALSINGH has successfully completed her training and in Vortex Engineering Works India PVT LTD from

7<sup>th</sup> September 2018 to 31<sup>st</sup> December 2018

During the internship, she was found to be punctual, positive and performance oriented.

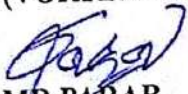
She has attended the training on Training and development as well as Recruitment which included:

- Goal Setting
- Payroll Administration
- Employment terms and conditions
- Career Development
- Holidays and Leave Administration
- Process paperwork
- Updating database

We wish her success in her career.

With Best Wishes,

For  
(VORTEX ENGINEERING WORKS INDIA PVT LTD)

  
MR. PARAB



इंडियन ऑयल कॉर्पोरेशन लिमिटेड

प्रधान कार्यालय

'इंडियन ऑयल भवन', जी-9, अली यावर जंग मार्ग,  
बान्द्रा (पूर्व), मुंबई - 400 051

**Indian Oil Corporation Limited**  
Head Office,

'Indian Oil Bhavan', G-9, Ali Yavar Jung Marg,  
Bandra (E), Mumbai - 400 051.

Tel.: +91 22 2644 7655 / 2644 7644



IndianOil

विपणन प्रभाग

Marketing Division

HO/L&D/23

18<sup>th</sup> June 2018

TO WHOMSOEVER IT MAY CONCERN

*This is to certify that Ms. Shrividhyalakshmi S. Iyer student of The S.I.A College of Higher Education, Mumbai has carried out Project on "Banking and Cash Flow Management" as a part of her Internship Training from 18<sup>th</sup> May 2018 to 18<sup>th</sup> June 2018 in Finance Department at Marketing Head Office, Mumbai. She has attended the training regularly and our internal guide has expressed satisfaction over the project report.*

*We wish the student all success in her academic career.*

For Indian Oil Corporation Ltd.

*Kajal Ray* 18/6/18

(Dr. Kajal Ray)

Chief Manager (L&D)



HDFC Bank Limited,  
Human Resources Division  
HDFC Bank House, 2nd Floor,  
Senapati Bapat Marg,  
Lower Parel, Mumbai 400 013  
Tel. : 6652 1000  
Fax : 2490 4016  
CIN : L65920MH1994PLC080618

August 26, 2018

**Nikhil Dabade**  
**Thane**

Dear Nikhil,

We are pleased to appoint you as a Project Trainee in **Retail Branch Banking** at **Thane**, from **September 03, 2018** to **December 03, 2018**. During this period of training, you will undertake the following project:

**"Inactive Customer Activation."**

You will be paid a consolidated stipend of **Rs.3500/-p.m.** You will not be entitled to any other benefits.

Please sign the copy of this letter as a token of acceptance of your Training with the Bank.

We wish you all the best for your assignment.

Yours truly,  
For **HDFC BANK LIMITED,**

  
\_\_\_\_\_  
**Vastav Pandya**  
**Assistant Vice President - Human Resources**

सक्षम डोंबिवलीकर  
२०१८

In the Memory of Shradhyey Shree Atal Bihari Vajpayee Ji

## CERTIFICATE OF INTERNSHIP

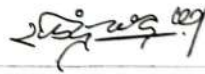
*This certifies that*

*Rupali Uday Parab*

*has completed Internship for the event*

**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**



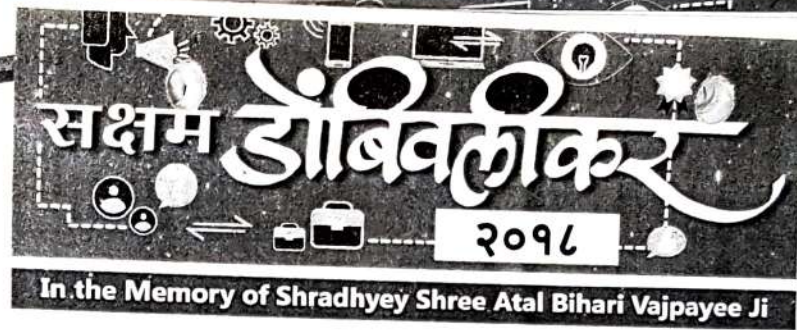
**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.



REDIRECTING





# CERTIFICATE OF INTERNSHIP

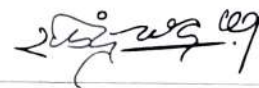
*This certifies that*

*Pooja Amrut Sulakhi*

*has completed Internship for the event*

**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**



**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.







mf17106. s4BMS:HR

श्री अटल बिहारी वाजपेयी

२०१८

In the Memory of Shradhivay Shree Atal Bihari Vajpayee Ji

## CERTIFICATE OF INTERNSHIP

*This certifies that*

*Harijiv Umakant Dalvi*

*has completed Internship for the event*

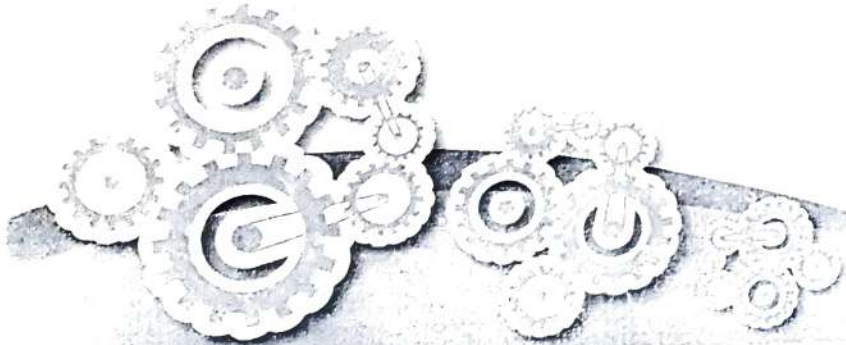
**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

*Ravindra Chavan*

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.





In the Memory of Shradhyey Shree Atal Bihari Vajpayee Ji

# CERTIFICATE OF INTERNSHIP

*This certifies that*

*Nidhi Jagdish Rajgor*

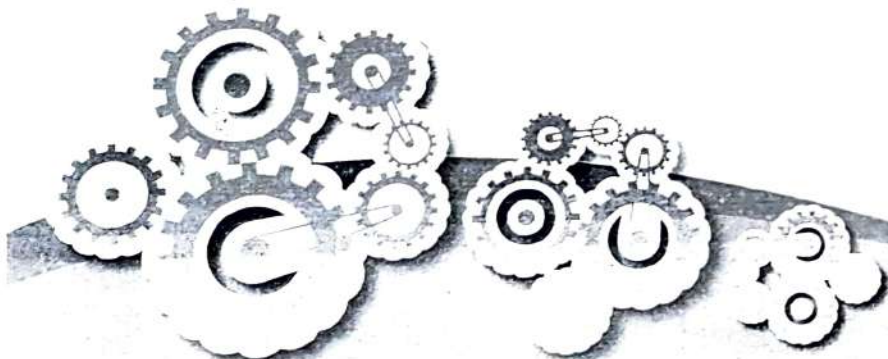
*has completed Internship for the event*

**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.





सक्षम डोंबिवलीकर

२०१८

In the Memory of Shradhyey Shree Atal Bihari Vajpayee Ji

# CERTIFICATE OF INTERNSHIP

*This certifies that*

*Saloni Pareesh Nagada*

*has completed Internship for the event*

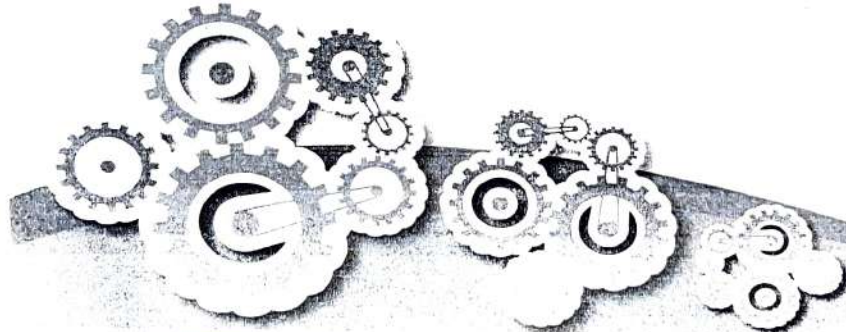
**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

*Ravindra Chavan*

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.



MF17029

सक्षम डोंबिवलीकर

२०१८

In the Memory of Shradhyey Shree Atal Bihari Vajpayee Ji

# CERTIFICATE OF INTERNSHIP

*This certifies that*

*Roshni Ramesh Naik*

*has completed Internship for the event*

**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

*Ravindra Chavan*

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.





Rollno:- MF17119

२०१८  
In the Memory of Shradhye Shree Afa Bihari Vajpayee Ji

## CERTIFICATE OF INTERNSHIP

*This certifies that*

*Sakshi Ravindra Jadhav*

*has completed Internship for the event*

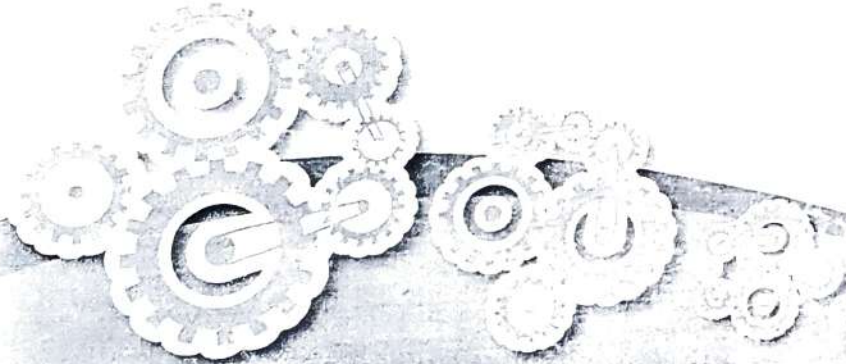
**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

*Ravindra Chavan*

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.



MF17110

सक्षम डोंबिवलीकर

२०१८

In the Memory of Shradhye Shree Atal Bihari Vajpayee Ji

# CERTIFICATE OF INTERNSHIP

*This certifies that*

*Rutuja Jaywant Gaikwad*

*has completed Internship for the event*

**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

*Ravindra Chavan*

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.





सक्षम डोंबिवलीकर

२०१८

In the Memory of Shradhyey Shree Atal Bihari Vajpayee Ji

# CERTIFICATE OF INTERNSHIP

*This certifies that*

*Urmila Nenaram Prajapati*

*has completed Internship for the event*

**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

*Ravindra Chavan*

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.

सक्षम डोंबिवलीकर

२०१८

In the Memory of Shradhyey Shree Atal Bihari Vajpayee Ji

# CERTIFICATE OF INTERNSHIP

*This certifies that*

*Ashutosh Sunil Chaudhary*

*has completed Internship for the event*

**Saksham Dombivlikar 2018**

**on 25th, 26th & 27th December 2018 at Brahman Sabha, Dombivli (E).**

*Ravindra Chavan*

**Ravindra Chavan**

Minister of State for Ports,  
Medical Education, Information and Technology,  
Food and Civil Supplies, Consumer Protection  
Guardian Minister, Raigad Dist.



An ISO 9001 : 2015



23.06.2018

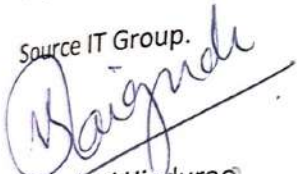
To whomsoever it may concern

This is to certify that, **Ms. Malde Puja Lalit** has successfully completed her Ten Days training with Source IT group under the guidance of Mr. Sharad Shinde, towards fulfilment of her BMS Second Year course.

We found her performance satisfactory.

Regards,

Source IT Group.

  
Kadambari Hindurao



# frozen spoons

C/o Thanco's Natural Icecream, Shop no 8 & 9, Mai Mauli CHS, Manpada Road, Opp Gaondevi Mandir, Dombivli (East), 421201. Email Id: frozenspoons18@gmail.com.

March 6<sup>th</sup>, 2020.

## TO WHOMSOEVER IT MAY CONCERN


This is to certify that Ms Prachi Pramod Chaudhari completed internship with M/s Frozen Spoons - A Franchisee of Thanco's Natural Foods Pvt Ltd. (Dombivli East Outlet) from 5<sup>th</sup> November, 2019 to 6<sup>th</sup> March, 2020.

Prachi completed her project as a Sales Executive and her job was to directly interact with customers, understand their requirements to increase sale and constantly work with Management to provide insights to boost overall sales and increase brand awareness.

During the tenure of her internship, we found her sincere and hard working. She has shown willingness to learn and apply new concepts and will be an asset for any firm/organisation.

We wish her all the best for future endeavours and a successful career.

For Frozen Spoons,  
For **FROZEN SPOONS**



**Partner**

Mr Rahul Kadam - Partner





**VARSHA**  
REFRACTORIES PVT. LTD.

Reg / Corres Office : 04, Gr. floor, Kailash Apartment, Tapasi  
Pandey Compound, R.P. Road, Kalyan (West)

Mobile: 9820339394, 9820046755

Tel : 0251-2314832/2318832 Fax: 0251 - 2314831

Sales Office: Opp.Om Pancharatna Hotel, Next to Welcome  
Hotel, Navada Phata, Mumbra-Panvel Highway, Taloja,  
Navi-Mumbal - 410208.

E-Mail : refractory@vsnl.com Web page : www.refractory.in

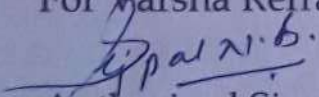
**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Ms. Pranjal / Arun Nandgaonkar daughter of Mr. Arun Nandgaonkar Student of 'SY BMS (Finance) of Mumbai University' from S.I.A. College of Higher Education, Dombivli has successfully completed internship with us in our Account Department from 23 Oct 2019 to 22 Nov 2019.

During the period of her Internship Program with us she has been exposed to accounting software Tally ERP9 and she found punctual, hardworking and inquisitive.

We wish her every success in her life and career.

For Varsha Refractories Private Limited

  
Authorised Signatory

22 Nov 2019





**Earth Career Grow**  
HR Solution Pvt. Ltd.

Date: 02/01/2020

**Certificate for Internship**

TO WHOM IT MAY CONCERN

This is to certify that **Disha Arun Sangoi S/O Arun Sangoi**, a student of **South Indian College of Higher Education, Mumbai** has successfully completed 02 (Two) months ( From 1<sup>st</sup> November 19 to 31 December 19) Internship programme at EARTH CAREER GROW HR SOLUTION PVT.LTD, Mumbai.

During the period of his internship programme with us she has closely work as a part of the HR Recruitment. She has worked under the guidance of Ms. Anjali Yadav and she was found punctual, hard working and inquisitive.

We wish her every success in life

For Earth Career Grow HR Solution Pvt Ltd

Prashant Tripathi

HR Manager

**Earth Career Grow HR Solution Pvt. Ltd.**

Registered Office : 27 First Floor, CARAVS Main Building, 15 Civil Lines, Jabalpur 482001 M.P. +91 761 4700023  
Corporate Office : F-9, First Floor, Kohinoor Mall, LBS Road, Near Holy Cross Church, Kurla West, Mumbai 400072 M.S.



14<sup>th</sup> June 2019

**Certificate**

This is to certify that **Mr. Kaustubh Kadam** successfully completed Industrial Internship from 14<sup>th</sup> May 2019 to 14<sup>th</sup> June 2019 with our organization. During his internship, he was working on project management and processes. He has also worked on planning and scheduling of projects like: Reliance Foundation website, RFS Lodhivali website, Creatives for Monsoon Masti (Corporate Services).

He did well to research and absorb the requisite knowledge and apply it to the problems at hand, successfully completing the projects assigned to him.

The project was completed successfully under the able supervision of **Mr. Shailesh Naik**.

During his project work period, we found him very sincere and hardworking.

We wish him all the best for the future.

**For Reliance Corporate IT Park Ltd.,**



**Authorized Signatory**



To whomsoever it may concern

This is hereby declared that Gayatri Munnalal Shahu resident of E/12 Bholenath Chawl, Mumbra Devi Colony, Dativali Rd, and Diva (E) Thane: 400612 has done internship in HR Dept. as HR Recruiter from 06/05/2019 -06/07/2019. This internship was for 2 months. Her conduct has been satisfactory. We wish all the very best for her future endeavours.

Date 06/07/2019

**For A&A ASSOCIATES**

*Abhay M. Coor* *Abhay M. Coor*  
Partner

Warm Regards  
Abhay Gautam  
Managing Partner  
A & A Associates  
Mumbai & Delhi



June 28, 2019

Ms. Krunali Nathwani  
B 104, Gokuldhara,  
Ayodhya Nagar, Manpada Road,  
Dombivli East - 421 201

Sub: Letter of Internship

This is to certify that Ms. Krunali Nathwani (BMS) student of S.I.A College of Higher Education, Dombivli East-421 201 has successfully completed her 1 month of Training from May 06, 2019 to June 05, 2019 under the guidance of **Raina Soares (Business Partner - Human Resources)**

We found her performance to be excellent. She is quick at grasping and undertakes responsibilities beyond the scope of her role. Attendance during the above period was regular.

With Best Wishes,  
For Tech Mahindra Limited



Aditya Suhas Pawar  
Associate Manager- Human Resources

May 06, 2019

To whom so ever it may concern

This is with reference to the request received for summer internship

We confirm our willingness to accept Ms. Krunali Nathwani (Enrollment No BMS/MF17030; 2018-19 Batch) of S.I.A College of Higher Education, Dombivli East-421 201 for summer internship at our organization starting from May 06, 2019 to June 05, 2019.

For Tech Mahindra Ltd.

Yours Faithfully,



Aditya Suhas Pawar

Associate Manager- Human Resources

Tech Mahindra Limited  
Oberoi Gardens Estate,  
Off. Saki Vihar Road, Chandivali,  
Andheri (East), Mumbai - 400072, India

Tel. +91 22 6688 2000  
Fax. +91 22 2847 8959

techmahindra.com  
connect@techmahindra.com

Registered Office:  
Gateway Building, Apollo Bunder  
Mumbai 400 001, India

CIN L64200MH1986PLCO41370

May 06, 2019

To whom so ever it may concern

This is with reference to the request received for summer internship.

We confirm our willingness to accept Ms. Priya Gupta (Enrollment No BMS/MF17014; 2018-19 Batch) of S.I.A College of Higher Education, Dombivli East-421 201 for summer internship at our organization starting from May 06, 2019 to June 05, 2019.

For Tech Mahindra Ltd.  
Yours Faithfully,

  
  
Aditya Suhas Pawar  
Associate Manager- Human Resources

May 06, 2019

To whom so ever it may concern

This is with reference to the request received for summer internship.

We confirm our willingness to accept Mr. Suraj Mhatre (Enrollment No BMS/MF17130; 2018-19 Batch) of S.I.A College of Higher Education, Dombivli East-421 201 for summer internship at our organization starting from May 06, 2019 to June 05, 2019.

For Tech Mahindra Ltd.  
Yours Faithfully,



Aditya Suhas Pawar  
Associate Manager- Human Resources



**June 28, 2019**

Mr. Suraj Mhatre

Jitendra Niwas, Millenium Park,

Kajal Bldg, MP Road,

Dombivli West – 421 202

**Sub: Letter of Internship**

This is to certify that Mr. Suraj Mhatre (BMS) student of S.I.A College of Higher Education, Dombivli East-421 201 has successfully completed his 1 month of Training from May 06, 2019 to June 05, 2019 under the guidance of Raina Soares (Business Partner - Human Resources)

We found his performance to be excellent. He is quick at grasping and undertakes responsibilities beyond the scope of his role. Attendance during the above period was regular.

With Best Wishes,

For Tech Mahindra Limited



**Aditya Suhas Pawar**  
Associate Manager- Human Resources



June 28, 2019

Ms. Bhagyashree Shinde

Shree Colony, Chawl No.2/8,

Next ZP School, Manpada Rd,

Dombivli East - 421 201

Sub: Letter of Internship

This is to certify that Ms. Bhagyashree Shinde (BMS) student of S.I.A College of Higher Education, Dombivli East - 421 201 has successfully completed her 1 month of Training from May 06, 2019 to June 05, 2019 under the guidance of Priyanka Palave (Business Co-ordinator - RMG)

We found her performance to be excellent. She is quick at grasping and undertakes responsibilities beyond the scope of her role. Attendance during the above period was regular.

With Best Wishes,

For Tech Mahindra Limited


Aditya Suhas Pawar

Associate Manager - Human Resources



PROTECTING INVESTING FINANCING ADVISING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Ms. **KAVITA PAL** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **GAYATRI KANOJIYA** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **GOOD**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **SUCHITA DUBEY** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **PARTH SATRA** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **OUTSTANDING**.

We wish him all the very best in his future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **SUMAN SAHU** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **EXCELLENT**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **MANISHA UPADHYAY** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **RAHUL GAUD** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **EXCELLENT**.

We wish him all the very best in his future endeavors.



**Senior Business Mentor**



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **NIKKI BHEDA** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **OUTSTANDING.**

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **RAHUL GAUD** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **EXCELLENT**.

We wish him all the very best in his future endeavors.



**Senior Business Mentor**





**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **SHRIKANT DHARMADHIKARI** has successfully completed his summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE**.

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **CHINMAY KARDAM** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE**.

We wish him all the very best in his future endeavors.



**Senior Business Mentor**



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **SHUBHAM YADAV** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE**.

We wish him all the very best in his future endeavors.



**Senior Business Mentor**



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **AKASH TIWARI** has successfully completed his summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **GOOD**.

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **DIVYA CHAVAN** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **VARSHA POOJARY** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **OUTSTANDING**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **MAGHASHREE MUDALIYAR** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **REMA ASH** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **EXCELLENT**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **TANAYA VICHARE** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.**

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE.**

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **DEVIKA NAIR** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.**

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE.**

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **KAVERI SHIRAKANAHALLI** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **SHRIDHAR RAO** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **EXCELLENT**.

We wish him all the very best in his future endeavors.



**Senior Business Mentor**



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **ADWAIT PHADKE** has successfully completed his summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE**.

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **SHERYL CABRAL** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **EXCELLENT**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **CHITRA VELLADURAI** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.**

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE.**

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **DAMODAR REDDY** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE**.

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **SHUBHAM MANJREKAR** has successfully completed his summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **EXCELLENT**.

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **CHAITALI SHETTIGAR** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **MANISHA UPADHYAY** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **PRATIKSHA BAWKAR** has successfully completed her Summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020**.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **DAMODAR REDDY** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE**.

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

**PROTECTING INVESTING FINANCING ADVISING**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **JEBESH REJO ARUL RAJAN** has successfully completed his summer internship and BOP with us from **17<sup>th</sup> October 2019 to 15<sup>th</sup> February 2020**.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **EXCELLENT**.

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **RAHUL HARALE** has successfully completed his summer Internship and BOP with us from **17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.**

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE.**

We wish him all the very best in his future endeavors.



Senior Business Mentor



**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Ms. **AATHIRA RAMESH** has successfully completed her Summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

She has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training her Performance was **AVERAGE**.

We wish her all the very best in her future endeavors.



Senior Business Mentor





**ADITYA BIRLA  
CAPITAL**

PROTECTING INVESTING FINANCING ADVISING

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Mr. **JESINTH NADAR** has successfully completed his summer Internship and BOP with us from 17<sup>TH</sup> October 2019 to 15<sup>TH</sup> February 2020.

He has also attended the training on **Portfolio Management and Market Research** which includes :-

- Equity
- Debt
- Product Knowledge
- Customer Experience
- Lead Generation
- Insurance

During the Summer Training his Performance was **AVERAGE**.

We wish him all the very best in his future endeavors.



Senior Business Mentor





**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Divya Azad Bohat has successfully completed the Summer Internship project in Human Resource Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: An Internship Report on Future Generali
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Divya Azad Bohat during the period of internship was Good.

We wish Divya Azad Bohat all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Neeraj Raju Solanki has successfully completed the Summer Internship project in Marketing Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name:
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Neeraj Raju Solanki during the period of internship was Good.

We wish Neeraj Raju Solanki all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Abhinav Jagannath Nigade has successfully completed the Summer Internship project in Finance Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: Needs & Benefits of insurance policy
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Abhinav Jagannath Nigade during the period of internship was Good.

We wish Abhinav Jagannath Nigade all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Samith Rai has successfully completed the Summer Internship project in Marketing Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: A Report on Future Generali Insurance company
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Samith Rai during the period of internship was Good.

We wish Samith Rai all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Aditya Kiran Potdar has successfully completed the Summer Internship project in Finance Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: Consumer Feedback
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Aditya Kiran Potdar during the period of internship was Good.

We wish Aditya Kiran Potdar all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources





**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Harsh Ratilal Nagda has successfully completed the Summer Internship project in Marketing Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: An Internship Report on Future Generali
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Harsh Ratilal Nagda during the period of internship was Good.

We wish Harsh Ratilal Nagda all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Shivani Mukund Lokhande has successfully completed the Summer Internship project in Marketing Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: An internship report on Future Generali Life Insurance Company
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Shivani Mukund Lokhande during the period of internship was Good.

We wish Shivani Mukund Lokhande all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Philominal Visuvasam has successfully completed the Summer Internship project in Human Resource Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: A Report on Future Generali Insurance company
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Philominal Visuvasam during the period of internship was Good.

We wish Philominal Visuvasam all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Abhinav Jagannath Nigade has successfully completed the Summer Internship project in Finance Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: Needs & Benefits of insurance policy
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Abhinav Jagannath Nigade during the period of internship was Good.

We wish Abhinav Jagannath Nigade all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources



**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Neha Sampat Shinde has successfully completed the Summer Internship project in Finance Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: A Report on Overview of Future Generali Insurance Company
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Neha Sampat Shinde during the period of internship was Good.

We wish Neha Sampat Shinde all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources





**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that Priya Gyan Singh has successfully completed the Summer Internship project in Finance Department at Future Generali India Life Insurance Co. Ltd.

Details of the project undertaken are as follows:

- Project Name: A Report on Future Generali Insurance company
- Project Duration: 22nd October 2019 to 22nd December 2019
- Location: Navi Mumbai-vashi branch

Performance of Priya Gyan Singh during the period of internship was Good.

We wish Priya Gyan Singh all the best for the future endeavors.

For Future Generali India Life Insurance Co. Ltd

Regards

Shalabh Chowdhary  
Vice President - Human Resources

# CERTIFICATE OF INTERNSHIP

This is to Certify that Joel Saji, of college The SIA College of higher education, has been a part of MyCaptain Campus Ambassador Program from 17th January 2021 to 16th February 2021.

During the internship, Joel Saji has gained experience in Business Development, Marketing and Sales along with a focus on Community building for creating an impact.

We wish Joel Saji all the very best for their future endeavours and thank them for all their contributions.



---

Anush Ramachandran  
(Operations and HR Manager)

Certificate Reference ID: MCAP282452

## CERTIFICATE OF INTERNSHIP

This is to Certify that Aum Shinde, of college The SIA College of higher education, has been a part of MyCaptain Campus Ambassador Program from 15th January 2021 to 14th February 2021.

During the internship, Aum Shinde has gained experience in Business Development, Marketing and Sales along with a focus on Community building for creating an impact.

We wish Aum Shinde all the very best for their future endeavours and thank them for all their contributions.



Anush Ramachandran  
(Operations and HR Manager)

Certificate Reference ID: MCAP360917

Date: 19 NOVEMBER 2020

## WEGROW SELECTION LETTER

Dear NEERAJ BHANDARI

We are happy to inform you that, you've been selected as Young Leader/**Intern** under the *Wegrow Leadership Program* at **Homeflic Wegrow**. Your Internship period starts from the day of receiving this document and shall last for atleast 1 month (Subject to extension based on performance).

Welcome to **Homeflic Wegrow Community Pvt Ltd**. Hope this tenure of yours at Wegrow turns out to be as best experience of your life and opens up new ways of growth and learning for you, while achieving the common goals and succeeding in all future endeavours.

Hoping you'll give your best and put all your efforts to complete the given tasks/projects on time. Again congratulations and let me tell you that all of us at Wegrow very excited about this, and having you on board.

Welcome once again.

Epic Stuff is in order, my friend

**Thanks & Regards**

For Homeflic Wegrow Community Pvt Ltd



**Kunal Kapoor**

Co-Founder & Vice President  
Homeflic Wegrow



22nd February,2021

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Ms. Karishma Udaykumar Thakker.** has undergone summer internship in our organization from **22<sup>nd</sup> February,2021 to 22<sup>nd</sup>April 2021.**

She has successfully completed her project “**RECRUITMENT & SELECTION**”,at **H & R Johnson (India** under the guidance of Mrs Hema .Menon, Senior Manager HR

She completed the two months of her internship successfully and her efforts have been appraised and appreciated by the entire HR team. She completed every task assigned and delivered on time. Her academic training and understanding of HR principles is exceptional. The dedication and hard work shown by her is highly appreciated.

We wish her success in her future endeavors.

With Regards,  
For **Prism Johnson Limited**  
(Formerly **Prism Cement Limited**)  
H & R Johnson (India) Division

Sandeep Banerjee  
**Senior Vice President & Head HR**

REF : PJJ/SB/LTR/MD/2018





AdarshVikas No. 2, Opp Mega Mall, Lokhandwala Road,  
Anand Nagar, Andheri (W), Mumbai-400102  
Ph:7559134364, Email- info@cnrinfotech.com

**TO WHOM IT MAY CONCERN**

Mr. Jayesh Shridhar Barve

This is to certify that Mr. Jayesh Shridhar Barve student of B.M.S. "S.I.A" College" has successfully completed his internship program from 11 January 2021 to 07 April 2021. He was working with HR Department and was actively and diligently involved in projects and task assigned to him. During period of his internship program with us he was found punctual, hardworking and inquisitive.

Yours Sincerely

**CNR TECHNOLOGIES PVT. Ltd**

Received and Accepted

**Name:**

**Date:**

# Certificate

— Of Excellence —

This Is To Certify That

**Madhura Palkar**

of Sia collage has been a part of the Internshala Student Partner 19 program and participated in Talk-a-thon competition. In this, an Internshala Online Internship Talk was conducted to help their peers excel in their careers. Madhura, successfully hosted this talk demonstrating a wide variety of managerial skills: leadership, communication, and creativity.

We appreciate the efforts put in and wish the ISP all the best for future endeavours.



Date of certification: 27/11/2020

---

Manager  
Designation



# CERTIFICATE OF COMPLETION

THIS CERTIFICATE IS PROUDLY PRESENTED TO:

*Madhura Palhar*

FROM INTERNATIONAL MANAGEMENT INSTITUTE, KOLKATA,  
HAS SUCCESSFULLY COMPLETED 30 DAYS INTERNSHIP PROGRAMME ON Human Resource  
WITH US FOR A PERIOD OF 09/02/2021 to 09/03/2021

*Meghna Ghoshal*

GROUP CEO



# IFAS Edutech Private Limited

TO WHOM IT MAY CONCERN

This is to certify that **Mr. Ujval Rajpurohit** worked for **IFAS Publication** from 01<sup>st</sup> Nov 2020 to 31<sup>st</sup> June 2021.

During his tenure we found him hardworking and sincere. He fulfilled all the work responsibilities on time. We wish him good luck for his future endeavours.

**Name:** Mr. Ujval Rajpurohit


**Employee Code:** 51

**Resigned As:** Content Writer

**Location:** Jodhpur

Sincerely,

Authorized Signatory

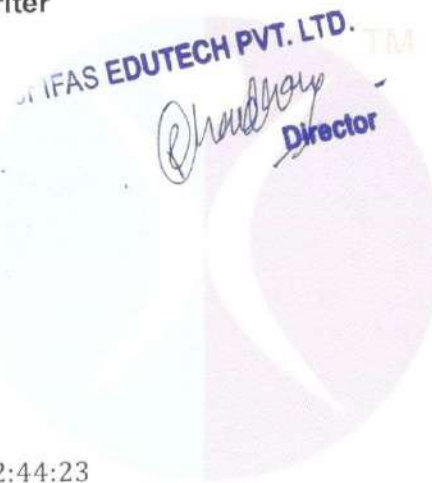
Signed by : 

**Name** : Romila Tutoo

**Date** : 10-08-2021 12:44:23

**Location:** Pune

**Reason:** Experience Letter





Registered Add - NL-5, Building – 7/16, Sec -11, Nerul, Navi Mumbai. 400706

[www.embcl.com](http://www.embcl.com) [contactus@embcl.com](mailto:contactus@embcl.com)

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### **Internship Completion Letter**

**To Whom so ever It May Concern**

This is to certify that **Ms. Ramya Shetty** has completed the Internship with EMBCL Team. The details for the same are mentioned below:

**Designation:** Project Associate - HR

**Date of Joining:** 16<sup>th</sup> June 2020

**Date of Completion:** 31<sup>st</sup> March 2021

**Industry Mentor:** Ms. Meena Sawant

**Mode:** Virtual/ Digital Internship

She has performed her duties with utmost sincerity and always been open to learning. We wish her all the best for her future endeavours.

**Thanking you**

**Yours truly,**

*A. Baberwal*

**Mr. A Baberwal**

**Managing Partner**

Date: 2<sup>nd</sup> April 2021

Place: Mumbai





# Certificate of Internship

We the undersigned do hereby proudly present this  
Certificate of Internship for the outstanding honorable effort of

**RUTUJA SURESH HARSHE**

from

**SIA COLLEGE OF HIGHER EDUCATION**

For his/her successful completion of **HR Executive**  
with LUDIFU for 1 month from **1st December to 31st December 2020**

Founder

**LUDIFU.com**

*Let Us Do It For U*



## CERTIFICATE OF INTERNSHIP

We are happy to certify that **ADITI NARKAR** has successfully completed a 1 month Internship Program from **26 NOVEMBER 2020** to **26 DECEMBER 2020** at **Homeflic Wegrow Community Private Limited** as a **HR INTERN** and was actively and diligently involved in the projects and tasks assigned to him/her.

We appreciate his/her hard work and dedication shown during the tenure of this internship. During his/her tenure of internship at Homeflic Wegrow, we found him/her to be extremely punctual and hard-working towards the work. He/She is a keen learner and picks up swiftly. Having him/her on board has been a great journey.

**We wish for his/her bright future and successful career ahead.**

A handwritten signature in blue ink, appearing to read "Arpit", written over a horizontal line.

**Arpit Lochan**  
Co-Founder & CEO  
Homeflic Wegrow

A handwritten signature in blue ink, appearing to read "Kunal", written over a horizontal line.

**Kunal Kapoor**  
Co-Founder & Vice President  
Homeflic Wegrow



CIN: U80900UP2020PTC136636

Homeflic Wegrow Community Pvt Ltd



Government of India  
Ministry of Commerce and Industry  
Department for Promotion of Industry  
and Internal Trade

#startupindia

# CERTIFICATE OF COMPLETION



This certifies that

**ADITI  
NARKAR**

has successfully completed one  
month virtual internship programme  
at **Homeflic Livings Pvt Ltd** as a  
**Market Research - Intern**

**YASH AGARWAL**  
Founder & CEO

CIN: U55101UP2020PTC131272



## CERTIFICATE OF INTERNSHIP

This is hereby awarded to

**ADITI NARKAR**

upon completing his/her internship at Esthetix Media and Digital Solutions Pvt Ltd for a duration of 1 month.

---

**Kunal Kapoor**  
Co-Founder & Director





# Certificate

This certificate is proudly presented to

*Sakshi Deshpande*

for successfully completing the  
**The Vista Campus Ambassador/Partner Internship**  
in the months of Sep-Oct 2020 with  
**IIM Bangalore's Vista 2020**



*Sasi Kumar*

SASI KUMAR VELUCHAMY  
SECRETARY, FII, IIM BANGALORE



IIM BANGALORE'S  
**VISTA**  
PORTRAITS OF PROGRESS

**INTERNSHALA**





**THE ENTREPRENEURSHIP NETWORK**

**Certification of Completion**

Date: October 1, 2020  
Employee ID: TEN/DM/B-4/199  
Document No.: TEN/CT/613

This is to certify that **Kirti Ramesh Nandan** pursuing **BMS**, from **The S.L.A College Of Higher Education**, has successfully completed her internship with **The Entrepreneurship Network** from **August 31, 2020** to **September 31, 2020**. During the period, she worked as a **Digital Marketing Executive**. During the course of her internship, **Kirti Ramesh Nandan** showed considerable interest in fulfilling her roles and responsibilities and her conduct was professional throughout.

We wish her all the very best for her future endeavours.

Best Regards,

Swetha Sabu  
HR Manager  
The Entrepreneurship Network



## The Entrepreneurship Network

Date: 4 September 2020  
Employee ID: TEN/DM/B-3/058  
Document No.: TEN/CT/003

This is to certify that **Poonam Pasi** pursuing **BMS**, from **The SIA College of Higher Education**, has successfully completed her internship with **The Entrepreneurship Network** from **13 August 2020** to **27 August 2020**.  
During the period, she handled **Digital Marketing**.  
During the course of her internship, **Poonam Pasi** showed considerable interest in fulfilling her roles and responsibilities and her conduct was professional throughout.

We wish her all the very best for her future endeavours.

*THE ENTREPRENEURSHIP NETWORK*

Best regards,

Aakar Aggarwal  
CMO



# CERTIFICATE

## OF LIVE PROJECT

### Aditi Narkar

has completed the live project as "**Campus Ambassador**" of InternIn successfully. The duration of this project was from 15th January 2021 to 29th January 2021. We appreciate hard work and dedication of candidate during this project and hereby certify that candidate done excellent work to the best of our knowledge.

*Harshal Fuse*

**Harshal Fuse**  
Founder, InternIn

 InternIn

Issued by **InternIn Enterprises** | Issued date **Jan 30th , 2021** | Certificate ID : 19A32F0C94



INTERNATIONAL  
MODEL UNITED NATIONS

# CERTIFICATE OF INTERNSHIP

International MUN recruited Campus Ambassador Interns and they were given different tasks of social media promotions as well as to get IMUN Online Conference referrals. Aditi Narkar was one of the Campus Ambassador Intern and performed tasks well.

We wish Aditi Narkar good luck for all the future endeavours.

*Mohneesh Bhardwaj*

Mohneesh Bharadwaj  
Executive Chairman

Date of internship: November 13th, 2020 - December 18th, 2020



## The Entrepreneurship Network

Date: 4 September 2020  
Employee ID: TEN/DM/B-3/191  
Document No.: TEN/CT/016

This is to certify that **Aishwarya Kadam** pursuing **BMS**, from **The SIA College of Higher Education**, has successfully completed her internship with **The Entrepreneurship Network** from **13 August 2020** to **27 August 2020**.

During the period, she handled **Digital Marketing**.

During the course of her internship, **Aishwarya Kadam** showed considerable interest in fulfilling her roles and responsibilities and her conduct was professional throughout.

We wish her all the very best for her future endeavours.

**THE ENTREPRENEURSHIP NETWORK**

Best regards,

Aakar Aggarwal  
CMO





**Date: 15<sup>th</sup> February 2021**  
**Intern ID: ATS/GM/0007**  
**Document No.: LOC/GM/0007**

This is to certify that **Aishwarya Kadam** pursuing **BMS** from **The Sia College of Higher Education**, has successfully completed her internship with **ATS Services** for the duration of **one month**. During this period, she was **General Manager**.

During the course of her internship, **Aishwarya Kadam** showed considerable interest in fulfilling her roles and responsibilities and her conduct was professional throughout.

We wish her all the very best for her future endeavors.

Best Regards,

A handwritten signature in black ink, reading 'Mahalakshmi'.

DS Mahalakshmi

HR Manager



# UNIVERSAL TRIBES

Empowerment & Uplifement of Tribal Art



**Corporate Office :** D-3/5, Bibvewadi, Pune, India -411037

**Contact :** [www.universaltribes.com](http://www.universaltribes.com) | [Universaltribes@gmail.com](mailto:Universaltribes@gmail.com)

---

## INTERNSHIP OFFER LETTER

14 \* APRIL 2021

Dear Vedashri,

With reference to your application and subsequent discussions, we have pleasure in offering you Internship in our organisation as HR INTERN.

You'll be representing our organisation and functioning based on our requirements. You'll be provided with number of opportunities to exhibit your leadership and managerial skills. At the end of the term, based on your performance you'll receive a certificate describing your achievements and active participation.

During the period of internship, you may have access to trade secrets and confidential business information belonging to the Company. By accepting this offer, you acknowledge that you must keep all of this information strictly confidential, and refrain from using it for your own purposes or from disclosing it to anyone outside the Company.

In addition, you agree that, upon conclusion of your internship, you will immediately return to the Company all of its property, equipment, and documents, including electronically stored information. Your appointment will be governed by the terms and conditions presented in the **Agreement**.

Best Regards,

**RAJAT RAGHATWAN,  
FOUNDER CEO.**



**Meera Enterprises**  
RECRUITMENT, ONE FOR ALL

DATE :- 12/04/2021

Certificate for Internship

**TO WHOM IT MAY CONCERN**

This is to certify that **MS. Vaishali Laxman Gonty S/O**, a student of **South Indian College of Higher Education, Mumbai** has successfully completed 01 ( one month ) from 28<sup>th</sup> of February 2021 to 12<sup>th</sup> April 2021 internship programme at MEERA ENTERPRISE CONSULTANCY, Mumbai.

During the period of this internship programme she was doing impeccable work as a HR recruiter. She was working under the guidance of **MS. RUHINA MOHSIN HASAN** and she was found punctual, hardworking and inquisitive.

**We wish her every success in life**

**From Meera Enterprise.**

Authorized Signatory

Sayed Sohail Designation: PROPRIETOR





# CERTIFICATE OF INTERNSHIP

We are happy to certify that **Komal Devanna Gowda** successfully completed a 2 Months Internship program from **20 November 2020** to **20 January 2021** at **Homeflic Wegrow Community Private Limited** as **Youth Leader** and was actively and diligently involved in the projects and tasks assigned to him/her.

We appreciate his/her hard work and dedication shown during the tenure of this internship. During his/her tenure of internship at Homeflic Wegrow, we found him/her to be extremely punctual and hard-working towards the work. He/She is a keen learner and picks up swiftly. Having him/her on board has been a great journey.

**We wish for his/her bright future and successful career ahead.**

**Arpit Lochan**  
Co-Founder & CEO  
Homeflic Wegrow

**Kunal Kapoor**  
Co-Founder & Vice President  
Homeflic Wegrow





REF: FT/HR-DS/OCT/2020/004

Dated: 10 October 2020

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. Narayan Chowdhari, a student of Bsc IT(IT), The Sia College of Higher Education, Kalyan has undergone Online Project Internship in Forsk Technologies Pvt. Ltd., Jaipur for a period from 14th September 2020 to 10th October 2020 under the guidance of Dr. Sylvester Fernandes, Data Scientist (Research and Development Wing).

During the internship, he has successfully completed the data science project titled "Terrorism Analysis using Python". He started working by understanding Python, Numpy, Pandas, Dash and developing modules involving data preprocessing.

We found him keen on acquiring insights into organizational systems & Procedures. Besides, he is enthusiastic in applying the concepts and theories that are followed at Forsk Technologies Pvt. Ltd.

During the internship, his performance was good and satisfactory. We wish him all the best and success for his future endeavors.

Warm Regards,

For Forsk Technologies Pvt. Ltd.



Dr. Sylvester Fernandes  
Co-Founder







Innov8 DLF Infinity Tower Ground Floor, DLF Cyber City, DLF Phase 2, Sector 24, Gurugram,  
Haryana 122002

Phone No.: 7042721995 E-mail: [internship@complaydigital.com](mailto:internship@complaydigital.com) Website:  
[www.complaymedia.com](http://www.complaymedia.com)

Ref: CSHALA/CTG/2020/8088

Date:16/09/2020

**TO WHOM IT MAY CONCERN**

This is to confirm that **Ms.Tanvi Bhalekar** has been selected for 50 days blogging internship program with creatorshala in the field of **DIGITAL CONTENT CREATION** from 18th September 2020 to 8th November 2020 under the guidance of our internship management team..During the period of the Internship Program with creatorshala she has to create content on creatorshala app/website & will be working to improve her digital content. After the internship completion she will be getting an internship completion certificate from Complay Digital Media Pvt Ltd & Perks/Gifts.

**We wish her all the best for this internship program with creatorshala community**

**Himanshu Mittal**

For Complay Digital Media Pvt. Ltd.  
*Himanshu Mittal*  
Director

Director & Founder

Complay Digital Media Pvt. Ltd.

[www.complaymedia.com](http://www.complaymedia.com)

[www.creatorshala.com](http://www.creatorshala.com)



# CERTIFICATE *of* ACHIEVEMENT

THIS ACKNOWLEDGES THAT

---

**PRITI MORE**

---

HAS SUCCESSFULLY COMPLETED THE SOCIAL MEDIA MARKETING INTERNSHIP FOR THE TENURE OF ONE MONTH AT FRIENDS EVENTS MANAGEMENT

*Social Media Marketing*



*Shiva Pandey*

---

SHIVA PANDEY (CEO OF FRIENDS EVENTS MANAGEMENT)

# DESIARTROOM

## CERTIFICATE OF COMPLETION

DATE: - 22ND JANUARY 2021

THIS IS TO CERTIFY THAT SANSKRUTI KAMBLE HAS SUCCESSFULLY COMPLETED HER INTERNSHIP WITH DESIARTROOM DURING THE PERIOD 06TH NOVEMBER 2020 TO 14TH JANUARY 2021.

DURING THIS PERIOD, SHE HANDLED THE CONTENT WRITING/ EDITING DEPARTMENT FOR OUR COMPANY, FULFILLED ALL TARGETS AND HELPED US WITH THE PRODUCTION OF QUALITY CONTENT

WE WISH HER ALL THE VERY BEST FOR THE FUTURE.



---

**PAWAN RAI**

Founder and Recruitment Manager

# DESIARTROOM

## LETTER OF RECOMMENDATION

### TO WHOMSOEVER IT MAY CONCERN

DATE: -22ND JANUARY 2021

I AM WRITING THIS LOR IN THE FAVOUR OF SANSKRUTI KAMBLE WHO IS APPLYING FOR AN INTERNSHIP/ JOB AT YOUR ESTEEMED ORGANIZATION. I HAVE KNOWN SANSKRUTI AS HER MENTOR FOR A PERIOD OF 2 MONTHS DURING THE COURSE OF AN INTERNSHIP IN DESIARTROOM.

SANSKRUTI HAS SHOWN A GREAT AMOUNT OF RESPONSIBILITY & SINCERITY IN PRODUCING QUALITY OUTPUT. IN PARTICULAR, HER COORDINATION AND COMMUNICATION SKILLS ARE PAR EXCELLENCE, AS WELL AS HER ATTENTION TO DETAILS, WERE IMPRESSIVE.

HENCE SHE MIGHT BE AN IDEAL CANDIDATE TO WORK IN A PROFESSIONAL ENVIRONMENT.

WE WISH HER ALL THE VERY BEST FOR THE FUTURE.



**RAJAT SRIVASTAVA**

Co-founder, Mentor and Recruitment  
Manager



Dated- 5<sup>th</sup> June, 2020

Dear **Keshav Shelar**,

I am delighted & excited to welcome you to **THE CRAZY PARTNER** as an **Intern in Operations Department**. At THE CRAZY PARTNER, we believe that our team is our biggest strength and we take pride in hiring only the best and the brightest. We are confident that you would play a significant role in the overall success of the venture and wish you the most enjoyable, learning packed and truly meaningful internship experience with us.

You will be responsible for the following:

1. To generate leads for THE CRAZY PARTNER.
2. To get 300 other business profiles for their promotions.
3. Take a short interview of the client asking questions based on their business.

You will directly be reporting to the Head HR.

You will be paid a stipend of ₹1,000 on the completion of the tasks given.

This is a work from home internship and hence, you need not to come to the office physically. You can work 5 days a week.

We look forward to you joining us. Please do not hesitate to call us for any information you may need. Also, please sign the duplicate of this offer as your acceptance and forward the same to us.

Head HR

Saksham Pruthi



**Date: 29-Mar-2021**

**Name: Keshav Bhaskar Shelar**

**Employee Code: OPO083827**

**Department: Operations**

**Designation: Customer Response Executive**

**Location: Mumbai**

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that “**Keshav Bhaskar Shelar**” was employed in this organization from “**12-Aug-20**” to “**28-Feb-21**”.

He has resigned from the services on his own accord.

The resignation letter has been accepted by the Management and he has been relieved from the services of the company with effect from “**28-Feb-21**”.

At the time of leaving, he was designated as “**Customer Response Executive**”.

His conduct and the performance during the employment period were found satisfactory.

We wish him all the best for his future endeavors.

**For One Point One Solutions Limited**



**Authorized Signatory**

# # we are crazy

## CRAZY FOR SUCCESS FOUNDATION

TO WHOMSOEVER IT MAY CONCERN

14-02-2021

Certificate no: 206089

This is to certify that **Nishita Shinde**, has successfully completed his/her online internship with **CRAZY FOR SUCCESS FOUNDATION** during the period **01-02-2021 to 14-02-2021**.

During the period, he/she handled the position of **Social Media Marketing** for the organization.

During the course of internship, **Nishita Shinde** has shown great amount of responsibility, sincerity and a genuine willingness to learn and zeal to take on new assignments & challenges. In particular, his/her coordination skills and communication skills are par excellence and his/her attention to detail is impressive.

We wish him/her all the very best for the future.

With regards,



**Himanshu Singh**

Vice President

**Crazy for Success Foundation**

## Certificate of Internship

To,

Miss. Nishita Shinde,

This is to certify that Miss. **Nishita Pradeep Shinde** from the SIA College of Higher Education, has completed 3 months Internship at Padma Corporation from 19<sup>th</sup> April 2021 to 19<sup>th</sup> July 2021.

During her internship she worked on the marketing projects (Digital Marketing) and found to be dedicated inquisitive and hardworking.

We wish her luck for all her future endeavors.

Sincerely,



Krutika Pawar  
Manager  
Padma Corporation



Fowls & Fish, Shop No. 3,  
Vikrant Villa I, Ghatla Village Road,  
Chembur, Mumbai - 400011.

**CONTACT:** 7208644370

**EMAIL:** [contactfowlsandfish@gmail.com](mailto:contactfowlsandfish@gmail.com)

## EXPERIENCE CERTIFICATE

It is certified that **Ms. Nishita Shinde** was under the employer of **Fowls & Fish Enterprises** as a **Social Media Content Curator/Social Media Manager**, in the department of **Social Media Management Team** from **17<sup>th</sup> April 2021** to **17<sup>th</sup> June 2021**.

During her tenure, we observe her to be very obedient, honest and dedicated towards her assignments and the tasks allotted.

We sincerely hope and pray bright and good future in her life.

Sincerely,  
Parimal Aglawe.



## The Entrepreneurship Network

Date: October 21, 2020  
Employee ID: TEN/DM/B-3/057  
Document NO.: TEN/CT/375

This is to certify that **Rishi Suryanarayanan** pursuing **BAMMC**, from **SIA college**, has successfully completed his internship with **The Entrepreneurship Network** from **August 13, 2020 to October 6, 2020**. During the period, he did **Digital Marketing** and led a team as a **Digital Marketing leader**. During the course of his internship, **Rishi Suryanarayanan** showed considerable interest in fulfilling his roles and responsibilities and his conduct was professional throughout.

We wish him/her all the very best for his future endeavours.

Best regards,

Aakar Aggarwal  
CMO

THE ENTREPRENEURSHIP NETWORK





# Certificate of Selection

**Rishi Suryanarayanan**

from **SIA COLLEGE** has successfully secured **Social Media Marketing** internship  
at **Only One Giulia** through Internshala.

**Sarvesh Agrawal**  
Founder & CEO, Internshala

Date of certification: November 08, 2020

Certificate Number: 5B607A56-59D8-F1E0-4154-44A47133702A  
For certificate authentication please visit [https://internshala.com/verify\\_certificate](https://internshala.com/verify_certificate)

*Certificate* of Experience  
Aarambh 2.0



UNIVERSAL TRIBES  
Department of Entrepreneurship & Social Innovation

It is certified that

*Aam Shinde*

was working with us as  
an Sales & Marketing Intern from 1st May 2021 to 31st May 2021.  
We hope and pray for bright and good speed in his/her future life.  
(UTARo2SE152)

31.05.2021

Awarded on

Rajat Raghatwan

CEO

**A**  
**PROJECT ON**  
**DERIVATIVES MARKET IN INDIA**  
**SUBMITTED TO**  
**THE UNIVERSITY OF MUMBAI**  
**IN PARTIAL FULFILLMENT FOR THE AWARD OF**  
**THE DEGREE OF BACHELOR OF MANAGEMENT STUDIES (BMS)**  
**SEMESTER VI**  
**SUBMITTED BY**  
**Mr. ASHUTOSH CHOUDHARY**  
**SEAT NO : MF17006**  
**UNDER THE GUIDANCE OF**  
**PROF. KIRAN SHAW**



**The SIA College of Higher Education.**  
**P88, MIDC Residential Area Dombivli Gymkhana Road,**  
**Near Balaji Mandir, Dombivli (East). 421 203**

## **DECLARATION**

**I ASHUTOSH SUNIL CHOUDHARY** hereby declare that project titled **“DERIVATIVES MARKET IN INDIA”** Submitted by me is based on Actual work carried out by me under the guidance and supervision **MS. KIRAN SHAW**.

Any reference to work done by other person or institution or any material obtain from other sources have been duly cited and reference.

It is in feature to state that this work is not submitted anywhere else for any Examination.

Signature of Student

**(ASHUTOSH CHOUDHARY)**

## ACKNOWLEDGEMENT

I would like to acknowledge the following as being idealistic channels and fresh dimensions in the completion of this project.

I take this opportunity to thank the **UNIVERSITY OF MUMBAI** for giving me chance to do this project.

I would like to thank my **PRINCIPAL, DR. PADMAJA ARVIND** for providing the necessary facilities required for completion of this project.

I would like to take this opportunity to thank and express my deep sense of Gratitude to the organization Aditya Birla Capital and **External Guide Mr. IQBAL SINGH BANSAL.**

I take this opportunity to thank our **Coordinator Dr. PADMAJA ARVIND**, for her moral support and guidance.

I would also like to express my sincere gratitude towards my project guide **Prof. KIRAN SHAW** whose guidance and care made the project successful.

Lastly, I would like to thank each and every person who directly or indirectly helped me in the completion of the project especially **My Parents and Peers** who supported me throughout my project.





**The SIA College of Higher Education.**  
**P88, MIDC Residential Area Dombivli Gymkhana Road,**  
**Near Balaji Mandir, Dombivli (East). 421 203**  
**Email: [sia.college@yahoo.com](mailto:sia.college@yahoo.com)**

**CERTIFICATE**

This is to certify that, **Mr. ASHUTOSH SUNIL  
CHOUDHARY**  
Student of (BACHELOR OF MANAGEMENT STUDIES - VI)  
2019- 2020  
Seat No. \_\_\_\_\_ has successfully completed his  
Project Work on under the guidance of  
**PROF. KIRAN SHAW**  
as per Mumbai University syllabus.

**PROJECT GUIDE**

**COURSE COORDINATOR**

**EXTERNAL EXAMINER**

**PRINCIPAL**

CERTIFICATE

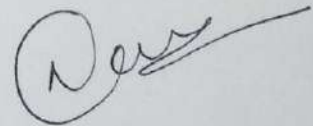
This is to certify that Mr CHOUDHARY ASHUTOSH SUNIL has successfully completed his training and internship in Birla Sun Life from 16<sup>th</sup> Aug 2018 to 27<sup>th</sup> Sept 2018.

During the internship, he was found to be punctual, positive & performance oriented.

He has attended the training on **Portfolio Management, Equity Research & Investment banking** which included

- Goal Setting
- Risk Profiling
- Equity
- Debt
- Mutual Fund
- Life/General Insurance
- M & A
- Venture Capital & Private Equity
- Sources of Finance
- Investment options.
- Structured Finance

We wish him success in her career.



NIKESH RUPAREL

Sr. BUSINESS MENTOR

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## **Chapter 1 - EXECUTIVE SUMMARY**

I have taken “**DERIVATIVE MARKETS IN INDIA**”. **As a project topic as part of my final year project .This project is based on my internship work that I have completed** as internship cum Training program with Aditya Birla Capital. I attended the training on IRDA, Portfolio Management, Equity Research and Investment Banking. The reason behind this was to understand the expertise in the Field of Finance.

The Objective of the project was to understand the Scope and Market Scenario of Derivatives in India i.e., Factors Contributing Growth, Types of Derivatives, Participants and Role of Derivatives in India and many other topics that are covered under this Project

During the internship I learned about Insurance Sector and the steps required to take a policy also I learned the basics about Share Market and thus also Learned Sales and Marketing of Products of Aditya Birla Capital. I also learned Leadership Skills . The insight of knowledge that I acquired in these two months internship with Aditya Birla Capital was Quite impressive.



## **Chapter 2 – Company Profile**

### **2.1 - Introduction about Aditya Birla Capital & Birla Sunlife Insurance**

- Aditya Birla Capital Limited (ABCL), is the financial services platform of the Aditya Birla Group.
- Formerly known as Aditya Birla Financial Services Limited, ABCL has a strong presence across the life insurance, asset management, private equity, corporate lending, structured finance, project finance, general insurance broking, wealth management, equity, currency and commodity broking, online personal finance management, housing finance, pension fund management, health insurance and asset reconstruction business.
- Aditya Birla Sun Life Insurance Company Limited (ABSLI), is a subsidiary of Aditya Birla Capital Ltd (ABCL). is one of the leading private sector life insurance companies in India. ABSLI was incorporated on August 4th, 2000 and commenced operations on January 17th, 2001. ABSLI is a 51:49 a joint venture between the Aditya Birla Group and Sun Life Financial Inc., a leading international financial services organization in Canada.
- Formerly known as Birla Sun Life Insurance Company Limited, ABSLI is one of India's leading life insurance companies offering a range of products across the customer's life cycle, including children future plans, wealth protection plans, retirement and pension solutions, health plans, traditional term plans and Unit Linked Insurance Plans ("ULIPs").
- Anchored by more than 17,000 employees, ABCL has a nationwide reach and more than 2,00,000 agents / channel partners, ABCL is committed to serving the end-to-end financial services needs of its retail and corporate customers under a unified brand - Aditya Birla Capital.

- As of December 31st, 2019, Aditya Birla Capital manages aggregate assets worth Rs. 3,000 billion and has a consolidated lending book of over Rs. 619 billion, through its subsidiaries and joint ventures.
- Aditya Birla Capital is a part of the Aditya Birla Group, a US\$ 48.3 billion Indian multinational, in the league of Fortune 500. Anchored by an extraordinary force of over 120,000 employees, belonging to 42 nationalities, the Aditya Birla Group operates in 35 countries across the globe.
- Aditya Birla Capital is financial services for collecting the savings of public and providing them with risk coverage.
- The main function of Aditya Birla Capital is to provide the protection against the possible chance generating losses. It eliminates the worries and miseries of losses by destruction of property and death. It also provided the capital to society as the fund accumulated to be invested in productive heads.
- The Company offers a complete range of protection solutions to help secure your family's future and provide financial support for your child's education, wealth with protection solutions, health and wellness solutions, retirement solutions and savings with protection solutions to help you stay financially secure in the future with small disciplined savings at regular intervals. ABSLI puts people's need first and aims to protect what is dear to the customer, with assurance. While, Life Insurance cannot prevent risk, it can compensate financial losses arising from risk.

## 2.2 – History

- Company was originally incorporated on October 15, 2007 under the Companies Act, 1956 as ‘Aditya Birla Financial Services Private Limited’ with the Registrar of Companies, Mumbai, Maharashtra and had received a certificate of registration from the Reserve Bank of India
- On May 19, 2009 to commence / carry on the business of non-banking financial institution without accepting public deposits. The Company was converted from a private limited company to a public limited company and thereafter the name of the Company was changed from ‘Aditya Birla Financial Services Private Limited’ to ‘Aditya Birla Financial Services Limited’ with effect from December 4, 2014.
- The name of our Company was further changed to its present name ‘Aditya Birla Capital Limited’ and a fresh certificate of incorporation was issued by the RoC on Jun 21, 2017.
- The Company has been set up as a holding company for the financial services business of Aditya Birla Nuvo Limited.
- 2009 -Aditya Birla Financial Services Group acquires Apollo Sindhoori Capital, a leading brokerage firm in India.
- 2011 -Company launched the Private Equity Fund.
- 2012 -Company launched MyUniverse, an online personal finance management portal.

- 2014 - Company commenced its housing finance business through its subsidiary Aditya Birla Housing Finance Limited. -Company acquired mutual fund schemes & portfolio accounts of ING Mutual Fund. -IFC acquired strategic investment in the online personal finance management portal MyUniverse.
  
- 2015 - Company was granted a certificate of registration as a non - deposit taking - systematically important core investment company by the RBI.
  
- 2016 -Sun Life Financial (India) Insurance Investment Inc. increased its stake in one of our key Subsidiaries engaged in the life insurance business, Aditya Birla Sun Life Insurance Company Limited, from 26% to 49%.
  
- 2017 -Company launched its health insurance and incentivised wellness business through our Subsidiaries Aditya Birla Health Insurance Co. Limited and Aditya Birla Wellness Private Limited. -Company, through its subsidiary Aditya Birla ARC Limited, applied for the grant of an asset reconstruction and securitization license with the RBI.

## **2.3 – Objectives**

- Proper understanding and analysis of Life Insurance and Finance Industry
- To know the customer awareness regarding the Aditya Birla Capital and its Products.
- To Determine whether the customers are satisfied with the Policies of the Company
- To Study and determine the competitor position in the market.



## 2.4 – Mission and Vision

### ➤ **Mission -**

To be the first preference of our customers by providing innovative need based life insurance and retirement solutions to individual as well as corporate. Well -trained professionals through a multi-channel distribution network and superior technology will make these solutions available. Our endeavor will be to provide constant value addition to customers throughout their relationship with us, within the regulatory framework. We will provide career development opportunities to our employees and the highest possible returns to our shareholders.

### ➤ **Vision –**

To be a world-class of financial security to individuals and corporate and to be amongst the top three private sectors life insurance companies in India.

To be the most trusted name in investment and wealth management, to be the preferred employer in the industry and to be a catalyst for growth and excellence of the asset management business in India.

## 2.5 - Members and Board Executives

- **Key Executives -**

- Ajay Srinivasan - Chief Executive Officer
- Pinky Atul Mehta - Chief Financial Officer
- Mukesh Malik - Chief Operating Officer
- A. Balasubramanian - Chief Executive Officer of Aditya Birla Sun Life AMC Limited
- Mayank Bathwal - Chief Executive Officer of Aditya Birla Health Insurance Company Limited

- **Board of Directors –**

- Kumar Mangalam Birla - Thai Rayon Public Company Limited
- Arun Kumar Adhikari - Vodafone Idea Limited
- Hayagreeva Ravikumar Puranam - Bharat Financial Inclusion Limited
- Vijayalakshmi Rajaram Iyer - The Jammu and Kashmir Bank Limited
- Subhash Chandra Bhargava - A. K. Capital Services Limited

## 2.6 – SWOT Analysis

### ➤ **STRENGTHS –**

- Market Leadership Position - Aditya Birla Capital has a strong market leadership position in the Consumer Financial Services industry. It has helped the company to rapidly scale new products successes.
- Wide geographic presence - Aditya Birla Capital has extensive dealer network and associates network that not only help in delivering efficient services to the customers but also help in managing competitive challenges in Consumer Financial Services industry.
- Strong brand recognition - Aditya Birla Capital products have strong brand recognition in the Consumer Financial Services industry. This has enabled the company to charge a premium compare to its competitors in Consumer Financial Services industry.

### ➤ **WEAKNESS –**

- Loyalty among suppliers is low - Given the history of Aditya Birla Capital coming up with new innovations to drive down prices in the supply chain.
- Low investments into Aditya Birla Capital's customer oriented services - This can lead to competitors gaining advantage in near future. Aditya Birla Capital needs to increase investment into research and development especially in customer services-oriented applications.
- Niche markets and local monopolies that company's like Aditya Birla Capital able to exploit are fast disappearing. The customer network that Aditya Birla Capital has promoted is proving less and less effective.

➤ **OPPORTUNITIES –**

- Local Collaboration - Tie-up with local players can also provide opportunities of growth for the Aditya Birla Capital in international markets. The local players have local expertise while Aditya Birla Capital can bring global processes and execution expertise on table.
- Rapid Expansion of Economy as the US economy is improving faster than any other developed economy, it will provide Aditya Birla Capital an opportunity to expand into the US market. Aditya Birla Capital already have know-how to operate into the competitive US market.
- Lower inflation rate - The low inflation rate brings more stability in the market, enable credit at lower interest rate to the customers of Aditya Birla Capital. This will increase the consumption of Aditya Birla Capital products.

➤ **THREATS -**

- Distrust of institutions and increasing threat of legal actions for Aditya Birla Capital - As the WTO regulations and laws are difficult to enforce in various markets. Legal procedures have become expensive and long drawn process. It can lead to less investment into emerging markets by Aditya Birla Capital thus resulting in slower growth.
- Saturation in urban market and stagnation in the rural markets - For Aditya Birla Capital this trend is an ongoing challenge in the Consumer Financial Services segment. One of the reasons is that the adoption of products is slow in rural market. Secondly it is costlier for Aditya Birla Capital to serve the rural customers than urban customers given the vast distances and lack of infrastructure.

- Growing technological expertise of local players in the export market One of the biggest threat of tie-up with the local players in the export market for Aditya Birla Capital is threat of losing IPR. The intellectual property rights framework is not very strong in emerging markets especially in China.



## **2.7 - Portfolio of Products & Services**

- **Protecting Solutions**

- Life Insurance
- Health Insurance
- Multiply Wellness
- Motor Insurance
- Travel Insurance

- **Investing solutions**

- Mutual Funds
- Wealth Management
- PMS
- Pension Funds
- Stocks and Securities
- Real Estate Investments

- **Financing solutions**

- Home Finance
- Personal Finance
- SME Finance
- Loan Against Securities
- Real Estate Finance

## 2.8 – Learning Experience -

- Being an Intern at Aditya Birla Capital and Getting Dwelled into their Work Culture wasn't a Hard Task Knowing their Passion for Empowering Youth and Providing Satisfaction to their Customers and also to their Employees it was a Great Learning Experience.
- Aditya Birla Capital, one of India's largest financial services conglomerates operate across a wide range of businesses within financial services and are a provider of Universal Financial Solutions to their customers. Company's range of products and services allow them to offer their customers solutions through their lifetime. Their businesses serve millions of Indians in more than 400 cities through 1,300+ points of presence, anchored by 12,000+ employees from diverse cultures, cities and backgrounds.
- Given the scope and span of company's businesses, they offer a wide range of career opportunities to those fearless enough to dream and pursue that dream with relentless passion.
- During the project I understand the Scope and Market Scenario of Derivatives in India i.e., Factors Contributing Growth, Types of Derivatives, Participants and Role of Derivatives in India and many other topics that are covered under this Project
- During the internship I also learned about Insurance Sector and the steps required to take a policy

- Also, I learned the basics about Share Market and thus also Learned Sales and Marketing of Products of Aditya Birla Capital.
- I also learned Leadership Skills , Communication Skill ,Time Management, Punctuality , Teamwork , Problem Solving Skills .
- The insight of knowledge that I acquired in these two months internship with Aditya Birla Capital was Quite impressive.

- **Portfolio Management**

The second task which we received from our superior Mr.Iqbal Singh sir is portfolio management they gave us introduction about share trading and how the market works, and how we can plan our strategy for effective portfolio management .

Sir introduced A website called as **Sharekhan trade Tiger**



## **It is the official icon of Sharekhan Trade Tiger**

- **The Sharekhan trade Tiger is the platform through which we learned basic features about Sharekhan Trade Tiger like**
  - **Market Watch**
  - **Stop Loss**
  - **Portfolio making**
  - **Profit calculator**
- **The Sir given us a task of portfolio for formation during our working days sir divided us in Different groups, and gave a particular sector to each and every one in group**

**The Sector Which Sir given me for market watch , and portfolio management is FMCG**

**FMCG Sector means (Fast moving consumer goods)**

- **Companies Included under FMCG Sector are**

- 1. Britannia industries**
- 2. Parle Argo**
- 3. Nestle**
- 4. Colgate**
- 5. ITC Limited**
- 6. Hindustan Unilever Limited**



7. Amul
8. Dabur
9. Emami
10. Johnson & Johnson

➤ Our Sir Said to calculate the loss or profit during 1 business day of market from 9:15 AM to 3:30 PM

The screenshot displays a trading software interface with the following components:

- Market Data Table:** A table listing various stocks with columns for % change, Current price, Avg price, Open price, High price, Low price, and Close price. The highlighted row is for 'AXISBANK 23-F' with a current price of 491.20 and an open price of 484.20.
- New Order Window:** A green window for placing a new order. It shows:
 

Order Ty	Exchange	Scrp	Series	Quantity	Dis. Qty	Price	Trigger Price
Buy	NSEFO	AXISBANK 23-Feb-2017	FS	1200	0	491.4	0

 Below this, it shows 'Product Type' as 'Investm' and 'Validity' as 'GFD'.
- Price Chart:** A candlestick chart for 'AXISBANK 23-Feb-2017' showing price movement. The current price is 483.00. Below the chart is an RSI indicator labeled 'RSI(F,9,14,close)'.
- Market by Price at 15:29:59:** A sub-window showing the order book with columns for Buyers, Bid Qty, Bid Price, Offer Price, Offer Qty, and Sellers.

28-09-2010		Nifty		Sensex		MCX		NCDEX		11:11:35											
		6033.00(-2.65) A:776 D:568 S:51		20109.14(-8.24) A:1853 D:1209 S:821		2789.96(+2.34) A:13 D:49 S:1		2991.85(+0.00) A:23 D:49 S:1		Release Note 1.0.4.7											
EQ Open 5201.17		FO Open 41250.31		Open 1855.78		Open 2443.65		Open 0.05													
Login MarketWatch Reports Alert Tools MF IPO Funds Links Misc <b>CHETAN_B3 [447894]</b> Help																					
Limit[Cash/FO: 20427.07 Com: 0 ] BP/L[Cash: 0.00 FO: 0.00 Com: 0.00 ] MTM [Cash: 0.00 FO: 0.00 Com: 0.00 ] OpenPos[Cash: 0 FO: 0 Com: 0 ]																					
NIFTY																					
Exc...	Scrp Name	Last Tra...	Current	Bid Qty	Bid Price	Offer Price	Offe...	Open	High	Low	Close	Last Traded...	% Change	Diff	Qty	TurnOver	Tick...	CAL...	STRI...	LOT ...	52 ...
NSE	ABB	...	925.40	6	925.40	926.30	5	912.00	930.90	908.05	908.05	11:11:28	1.91	17.35	149632	1382	923.71			0	930.90
NSE	ACC	...	1020.90	34	1020.10	1020.90	10	1010.00	1027.95	1008....	1012.70	11:11:21	0.81	8.20	131308	1341	1021....			0	1032....
NSE	AMBUJACEM	...	146.05	692	146.05	146.15	118	145.90	147.70	145.00	145.25	11:11:21	0.55	0.80	521154	765	146.77			0	150.35
NSE	AXISBANK	...	1510.10	103	1510.10	1511.00	223	1504.00	1519.90	1495....	1507.15	11:11:23	0.20	2.95	381330	5754	1508....			0	1582....
NSE	BHARTIARTL	...	374.05	265	373.95	374.00	500	371.05	376.95	370.00	373.15	11:11:32	0.24	0.90	1430834	5353	374.12			0	459.00
NSE	BHEL	...	2494.90	180	2494.90	2495.00	386	2472.45	2498.50	2463....	2467.60	11:11:34	1.11	27.30	200034	4977	2488....			0	2585....
NSE	BPCL	...	784.00	70	783.90	784.00	230	789.95	793.10	782.50	788.40	11:11:21	-0.56	-4.40	259866	2049	788.38			0	840.00
NSE	CAIRN	...	335.50	91	335.45	335.50	278	334.80	336.50	331.80	334.20	11:11:30	0.39	1.30	1097831	3670	334.27			0	368.05
NSE	CIPLA	...	322.25	114	322.25	322.45	1005	321.00	323.25	320.00	321.30	11:11:10	0.30	0.95	436745	1406	321.92			0	363.50
NSE	DLF	...	369.45	40	369.45	369.50	200	369.00	372.00	367.60	369.50	11:11:34	-0.01	-0.05	1510368	5589	370.04			0	519.90
NSE	GAIL	...	482.20	305	482.20	482.25	507	479.50	483.50	477.50	479.85	11:11:30	0.49	2.35	395944	1907	481.52			0	516.70
NSE	GRASIM	...	2198.05	1	2198.00	2198.05	12	2180.75	2212.60	2175....	2180.75	11:11:28	0.79	17.30	30859	679	2199....			0	2988....
NSE	HCLTECH	...	414.55	34	414.45	414.55	28	419.90	419.90	412.50	417.65	11:11:03	-0.74	-3.10	312018	1293	414.35			0	431.95
NSE	HDFC	...	719.65	51	719.60	719.65	1074	728.45	730.10	718.10	728.45	11:11:27	-1.21	-8.80	1433375	10344	721.68			0	3145....
NSE	HDFCBANK	...	2433.80	61	2433.80	2434.00	23	2436.00	2456.20	2421....	2438.45	11:11:31	-0.19	-4.65	281872	6870	2437....			0	2510....
NSE	HEROHONDA	...	1861.00	15	1861.05	1862.00	5	1860.35	1875.00	1852....	1860.35	11:11:28	0.03	0.65	93669	1746	1864....			0	2094....
NSE	HINDALCO	...	195.50	1241	195.45	195.50	1566	197.00	198.00	195.15	196.85	11:11:32	-0.69	-1.35	1637847	3216	196.33			0	199.70
NSE	HINDUNILVR	...	306.70	219	306.70	306.75	1	309.00	309.80	306.00	308.85	11:11:28	-0.70	-2.15	600182	1846	307.58			0	319.55
NSE	ICICIBANK	...	1109.25	50	1109.00	1109.25	487	1112.00	1115.10	1104....	1115.10	11:11:34	-0.52	-5.85	1073143	11896	1108....			0	1148....
NSE	IDEA	...	76.90	291	76.85	76.90	6614	76.90	77.40	76.20	76.90	11:11:14	0.00	0.00	652147	501	76.86			0	80.00
NSE	INFOSYSTCH	...	3007.35	5	3007.20	3007.35	5	3025.00	3028.10	3001....	3032.60	11:11:24	-0.83	-25.25	346852	10457	3014....			0	3065....
NSE	ITC	...	178.75	2210	178.75	178.80	10620	178.90	180.00	178.00	178.40	11:11:31	0.20	0.35	2387982	4278	179.14			0	313.45
NSE	LT	...	2038.10	218	2038.10	2038.15	81	2030.10	2044.70	2020....	2026.80	11:11:31	0.56	11.30	294228	5998	2038....			0	2075....
NSE	M&M	...	708.00	250	707.90	708.00	189	695.80	711.90	695.80	694.50	11:11:32	1.94	13.50	787690	5552	704.81			0	1199....
NSE	MARUTI	...	1474.00	25	1473.50	1473.95	49	1452.00	1484.60	1452....	1479.10	11:11:22	-0.34	-5.10	172366	2567	1472....			0	1737....

## A Working Market Screen in Sharekhan Trade Tiger

### 2.9 – Area of Operation

- Insurance & Sales Sector
- Finance & Trading Sector
- Human Resources Management
- Batch Head (Co-Ordinator)
- Orientor
- Fashion
- Telecom Service
- Textile Industry
- Grasim Industry

- Cement
- Minacs

## 2.10: Scope of Project

- The Project is Based on the Internship Done by me at Aditya Birla Capital
- This Project covers the Topic of “Derivatives Market in India” and Explains the Basics of Derivatives
- This Project Covers the Company Profile of Aditya Birla Capital which Includes;
  - Introduction about the Aditya Birla Capital which Includes,
  - History, Objectives, Mission and Vision of the Organization, Members and Board Executives of the Company
  - It also Includes, Strength, Weakness, Opportunities and Threat (SWOT) Analysis of Aditya Birla Capital.
  - Also, it includes Portfolio of Products which Includes – Investing, Protecting and Financing Solutions,
  - Further it Includes My Learning Experience During the Internship at Aditya Birla Capital,
  - It also Includes My Area of Operation at Aditya Birla Capital which includes – Insurance & Finance Sector, HR, Batch Head and Orientor at Aditya Birla Capital.
  - Further it also Includes Scope and Limitations of the Project.
- This Project also Covers the Topic “Derivatives Market in India” which Includes,
  - Introduction to Derivatives which includes - Definition, History and Derivatives in India
  - It also Includes Factors contributing Growth of Derivatives and Types of Derivatives which Includes – Forward, Futures, Options and Swaps It also includes Terminologies for the same.
  - Further it Includes Application of Futures and Options which Includes Futures and Options Payoff Charts
  - It also Includes Participants in Derivatives Markets which are – Hedger, Speculator and Arbitrageurs and the Intermediary Participants in the Market.

- It also Includes Role of Derivatives Futures and Options Trading System which Includes – Order Types and Conditions in which there is Time Condition, Price Condition and Other Conditions
- Also, it Includes Contract Cycle and Specifications and Clearing and Settlement Mechanism of Derivatives.



## **2.11: Limitations of Project**

- The Project Covers the Topic of “Derivatives Markets in India”
- Researching about the Company Aditya Birla Capital and Knowing about it Helped me to get a Deeper information about the Company and its Code of Conduct, Morals and Ethical Values of the Organization.
- The Project Covered Each and Every Detailed Information about the Company and the Topic “Derivatives Markets in India”
- Covering the Company Profile wasn’t a Hard Task as it was all Covered and Explained to us During the Internship at Aditya Birla Capital
- During the Research of the Project I Faced a bit difficulty covering and Understanding the topic of “Contract Cycle and Specifications”
- I also faced a bit difficulty covering the Clearing & Settlement Mechanism and Making the Perfect Payoff Charts with Tables and Terminologies to explain the Same.
- Overall, I can say that covering this Topic and Knowing about the Company “Aditya Birla Capital” was quiet a Good Experience.

## **CHAPTER 3 - INTRODUCTION**

### **3.1 - Introduction to Derivatives**

Derivatives are one of the most complex instruments. The word derivative comes from the word 'to derive'. It indicates that it has no independent value. A derivative is a contract whose value is derived from the value of another asset, known as the underlying asset, which could be a share, a stock market index, an interest rate, a commodity, or a currency. The underlying is the identification tag for a derivative contract. When the price of the underlying changes, the value of the derivative also changes. Without an underlying asset, derivatives do not have any meaning. For example, the value of a gold futures contract derives from the value of the underlying asset i.e., gold. The prices in the derivatives market are driven by the spot or cash market price of the underlying asset, which is gold in this example.

Derivatives are very similar to insurance. Insurance protects against Specific risks, such as fire, floods, theft and so on. Derivatives on the other hand, take care of market risks - volatility in interest rates, currency rates, commodity prices, and share prices. Derivatives offer a sound mechanism for insuring against various kinds of risks arising in the world of finance. They offer a range of mechanisms to improve redistribution of risk, which can be extended to every product existing, from coffee to cotton and live cattle to debt instruments.

In this era of globalization, the world is a riskier place and exposure to risk is growing. Risk cannot be avoided or ignored. Man, however is risk averse. The risk averse characteristic of human beings has brought about growth in derivatives. Derivatives help the risk averse individuals by offering a mechanism for hedging risks.

Derivative products, several centuries ago, emerged as hedging devices against fluctuations in commodity prices. Commodity futures and options have had a lively existence for several centuries. Financial derivatives came into the limelight in the post-1970 period; today they account for 75 percent of the financial market activity in Europe, North America, and East Asia. The basic difference between commodity and financial derivatives lies in the nature of the underlying instrument. In commodity derivatives, the underlying asset is a commodity; it may be wheat, cotton, pepper, turmeric, corn, orange, oats, Soya beans, rice, crude oil, natural gas, gold, silver, and so on. In financial derivatives, the underlying includes treasuries, bonds, stocks, stock index, foreign exchange, and Euro dollar deposits. The market for financial derivatives has grown tremendously both in terms of variety of instruments and turnover.

Presently, most major institutional borrowers and investors use derivatives. Similarly, many acts as intermediaries dealing in derivative transactions. Derivatives are responsible for not only increasing the range of financial products available but also fostering more precise ways of understanding, quantifying and managing financial risk.

Derivatives contracts are used to counter the price risks involved in assets and liabilities. Derivatives do not eliminate risks. They divert risks from investors who are risk averse to those who are risk neutral.

### 3.1.1 - DEFINITION OF DERIVATIVES

Derivative is a product whose value is derived from the value of one or more basic variables, called bases (underlying asset, index, or reference rate), in a contractual manner. The underlying asset can be equity, forex, commodity or any other asset.

According to Securities Contracts (Regulation) Act, 1956 {SC(R)A},

Derivatives is

- ❖ A security derived from a debt instrument, share, loan, whether secured or unsecured, risk instrument or contract for differences or any other form of security.
- ❖ A contract which derives its value from the prices, or index of prices, of underlying securities.
- ❖ Derivatives are securities under the Securities Contract (Regulation) Act and hence the trading of derivatives is governed by the regulatory framework under the Securities Contract (Regulation) Act.

### **3.1.2 - HISTORY OF DERIVATIVES**

The history of derivatives is quite colorful and surprisingly a lot longer than most people think. Forward delivery contracts, stating what is to be delivered for a fixed price at a specified place on a specified date, existed in ancient Greece and Rome. Roman emperors entered forward contracts to provide the masses with their supply of Egyptian grain. These contracts were also undertaken between farmers and merchants to eliminate risk arising out of uncertain future prices of grains. Thus, forward contracts have existed for centuries for hedging price risk.

The first organized commodity exchange came into existence in the early 1700's in Japan. The first formal commodities exchange, the Chicago Board of Trade (CBOT), was formed in 1848 in the US to deal with the problem of 'credit risk' and to provide centralized location to negotiate forward contracts. From 'forward' trading in commodities emerged the commodity 'futures'. The first type of futures contract was called 'to arrive at'. Trading in futures began on the CBOT in the 1860's. In 1865, CBOT listed the first 'exchange traded' derivatives contract, known as the futures contracts. Futures trading grew out of the need for hedging the price risk involved in many commercial operations. The Chicago Mercantile Exchange (CME), a spin-off of CBOT, was formed in 1919, though it did exist before in 1874 under the names of 'Chicago Produce Exchange' (CPE) and 'Chicago Egg and Butter Board' (CEBB). The first financial futures to emerge were the currency in 1972 in the US. The first foreign currency futures were traded on May 16, 1972, on International Monetary Market (IMM), a division of CME. The currency futures traded on the IMM are the British Pound, the Canadian Dollar, the Japanese Yen, the Swiss Franc, the German Mark, the Australian Dollar, and the Euro dollar. Currency futures were followed soon by interest rate futures. Interest rate futures contracts were traded for the first time on the CBOT on October 20, 1975. Stock index futures and options emerged in 1982. The first stock index futures contracts were traded on Kansas City Board of Trade on February 24, 1982.



The CBOT and the CME are two largest financial exchanges in the world on which futures contracts are traded. The CBOT now offers 48 futures and option contracts (with the annual volume at more than 454 million in 2003). The CBOE is the largest exchange for trading stock options. The CBOE trades options on the S&P 100 and the S&P 500 stock indices. The Philadelphia Stock Exchange is the premier exchange for trading foreign options.

The most traded stock indices include S&P 500, the Dow Jones Industrial Average, the Nasdaq 100, and the Nikkei 225. The US indices and the Nikkei 225 trade almost round the clock. The N225 is also traded on the Chicago Mercantile Exchange.

### **3.1.3 - DERIVATIVES IN INDIA**

The first step towards introduction of derivatives trading in India was the promulgation of the Securities Laws (Amendment) Ordinance, 1995, which withdrew the prohibition on options in securities. The market for derivatives, however, did not take off, as there was no regulatory framework to govern trading of derivatives. SEBI set up a 24—member committee under the Chairmanship of Dr. L. C. Gupta on November 18, 1996 to develop appropriate regulatory framework for derivatives trading in India

The committee submitted its report on March 17, 1998 prescribing necessary preconditions for introduction of derivatives trading in India. The committee 21 recommended that derivatives should be declared as 'securities' so that regulatory framework applicable to trading of 'securities' could also govern trading of securities.

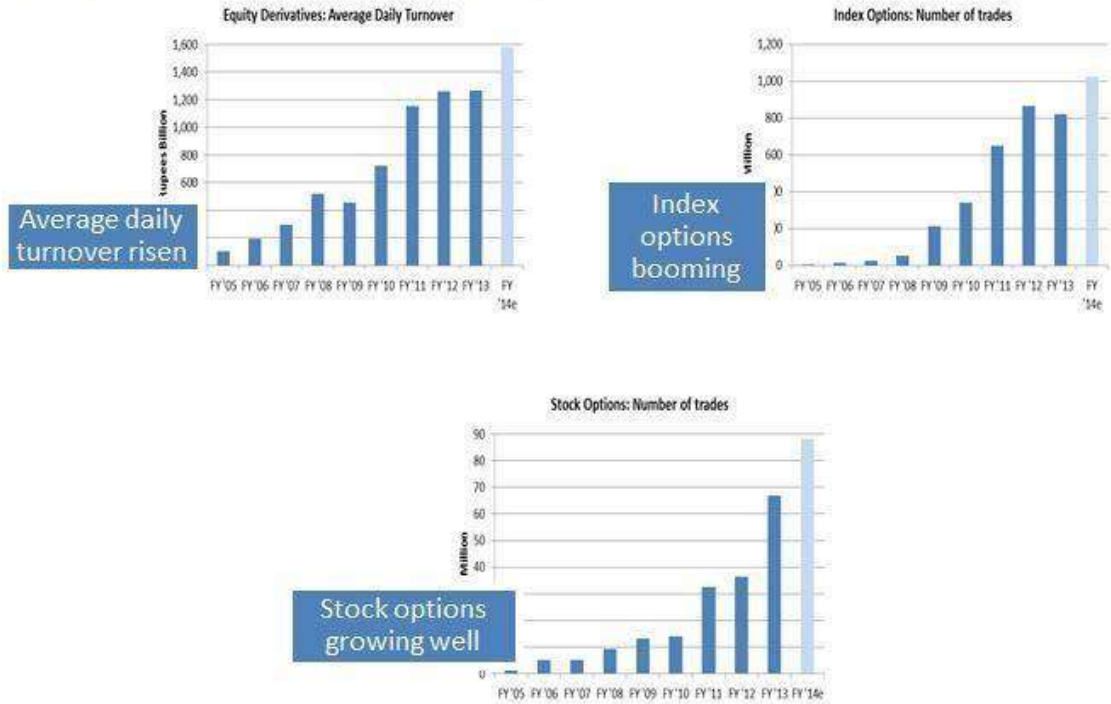
SEBI also set up a group in June 1998 under the Chairmanship of Prof. J. R. Varma, to recommend measures for risk containment in derivatives market in India. The report, which was submitted in October 1998, worked out the operational details of margining system, methodology for charging initial margins, broker net worth, deposit requirement and real—time monitoring requirements.

The SCRA was amended in December 1999 to include derivatives within the ambit of 'securities' and the regulatory framework was developed for governing derivatives trading. The act also made it clear that derivatives shall be legal and valid only if such contracts are traded on a recognized stock exchange, thus precluding OTC derivatives. The government also rescinded in March 2000, the three—decade old notification, which prohibited forward trading in securities. Derivatives trading commenced in India in June 2000 after SEBI granted the final approval to this effect in May 2000. SEBI permitted the derivative segments of two stock exchanges, NSE and BSE, and their clearing house/corporation to commence trading and settlement in approved derivatives contracts. To begin with, SEBI approved trading in index futures contracts based on S&P CNX Nifty and BSE-30 (Sensex) index. This was

followed by approval for trading in options based on these two indexes and options on individual securities. The trading in index options commenced in June 2001 and the trading in options on individual securities commenced in July 2001. Futures contracts on J 22 individual stocks were launched in November 2001. Trading and settlement .in derivative contracts is done in accordance with the rules, byelaws, and regulations of the respective exchanges and their clearing house/corporation duly approved by SEBI and notified in the official gazette.

### 3.1.3.1 - EQUITY DERIVATIVES IN INDIA

#### Strong Performance in 2013 for NSE Equity Derivatives



In the decade of 1990's revolutionary changes took place in the institutional infrastructure in India's equity market. It has led to wholly new ideas in market design that has come to dominate the market. These new institutional arrangements, coupled with the widespread knowledge and orientation towards equity investment and speculation, have combined to provide an environment where the equity derivatives market is now India's most sophisticated financial market. One aspect of the sophistication of the equity market is seen in the levels of market liquidity that are now visible. The market impact cost of doing program trades of Rs.5 million at the NIFTY index is around 0.2%. This state of liquidity on the equity spot and derivatives market does well for the market efficiency

Stock trading is widely prevalent in India; hence it seems easy to think that derivatives based on individual securities could be very important. The index is the counter piece of portfolio analysis in modern financial economies. Index fluctuations affect all portfolios. The index is much harder to manipulate. This is particularly important given the weaknesses of Law Enforcement in India, which have made numerous manipulative episodes possible. The market capitalization of the NSE-50 index is Rs.2.6 trillion. This is six times larger than the market capitalization of the largest stock and 500 times larger than stocks such as Sterlite, BPL and Videocon. If market manipulation is used to artificially obtain 10% move in the price of a stock with a 10% weight in the NIFTY, this yields a 1% in the NIFTY. Cash settlements, which is universally used with index derivatives, also helps in terms of reducing the vulnerability to market manipulation, in so far as the 'short-squeeze' is not a problem. Thus, index derivatives are inherently less vulnerable to market manipulation.



### 3.1.3.2 - COMMODITY DERIVATIVES TRADING IN INDIA



In India, the futures market for commodities evolved by the setting up of the “Bombay Cotton Trade Association Ltd.”, in 1875. A separate association by the name "Bombay Cotton Exchange Ltd” was established following widespread discontent amongst leading cotton mill owners and merchants over the functioning of the Bombay Cotton Trade Association. With the setting up of the ‘Gujarati Vyapari Mandali’ in 1900, the futures trading in oilseed began. Commodities like groundnut, castor seed and cotton etc. began to be exchanged.

Raw jute and jute goods began to be traded in Calcutta with the establishment of the “Calcutta Hessian Exchange Ltd.” in 1919. The most notable centers for existence of futures market for wheat were the Chamber of Commerce at Hapur, which was established in 1913. Other markets were located at Amritsar, Moga, Ludhiana, Jalandhar, Fazilka, Dhuri, Barnala and Bhatinda in Punjab and Muzaffarnagar, Chandausi, Meerut, Saharanpur, Hathras, Ghaziabad, Sikenderabad and Bareilly in U.P. The Bullion Futures market began in Bombay in 1990. After the economic

reforms in 1991 and the trade liberalization, the Govt. of India appointed in June 1993 one more committee on Forward Markets under Chairmanship of Prof. K.N. Kabra. The Committee recommended that futures trading be introduced in basmati rice, cotton, raw jute and jute goods, groundnut, rapeseed/mustard seed, cottonseed, sesame seed, sunflower seed, safflower seed, copra and soybean, and oils and oilcakes of all of them, rice bran oil, castor oil and its oilcake, linseed, silver and onions.

All over the world commodity trade forms the major backbone of the economy. In India, trading volumes in the commodity market in India have also seen a steady rise - to Rs 176 lakh crores in FY12 from Rs 16.87lakh, crores in FY05. In the current fiscal year, trading volumes in the commodity market have already crossed Rs 3,50,000 crore in the first four months of trading. Some of the commodities traded in India include Agricultural Commodities like Rice Wheat, Soya, Groundnut, Tea, Coffee, Jute, Rubber, Spices, Cotton, Precious Metals like Gold & Silver, Base Metals like Iron Ore, Aluminum, Nickel, Lead, Zinc and Energy Commodities like crude oil, coal. Commodities form around 50% of the Indian GDP. Though there are no institutions or banks in commodity exchanges, as yet, the market for commodities is bigger than the market for securities.

## **3.2 - FACTORS CONTRIBUTING TO THE GROWTH OF DERIVATIVES**

Factors contributing to the explosive growth of derivatives are price volatility, globalization of the markets, technological developments and advances in the financial theories.

### **3.2.1 - PRICE VOLATILITY**

A price is what one pays to acquire or use something of value. The objects having value maybe commodities, local currency or foreign currencies. The concept of price is clear to almost everybody when we discuss commodities. There is a price to be paid for the purchase of food grain, oil, petrol, metal, etc. the price one pays for use of a unit of another person's money is called interest rate. And the price one pays in one's own currency for a unit of another currency is called as an exchange rate.

Prices are generally determined by market forces. In a market, consumers have 'demand' and producers or suppliers have 'supply', and the collective interaction of demand and supply in the market determines the price. These factors are constantly interacting in the market causing changes in the price over a short period of time. Such changes in the price is known as 'price volatility'. This has three factors: the speed of price changes, the frequency of price changes and the magnitude of price changes.

The changes in demand and supply influencing factors culminate in market adjustments through price changes. These price changes expose individuals, producing firms and governments to significant risks. The breakdown of the BRETTON WOODS agreement brought an end to the stabilizing role of fixed exchange rates and the gold convertibility of the dollars. The globalization of the markets and rapid industrialization of many underdeveloped countries brought a new

scale and dimension to the markets. Nations that were poor suddenly became a major source of supply of goods. The Mexican crisis in the south east-Asian currency crisis of 1990's has also brought the price volatility factor on the surface. The advent of telecommunication and data processing brought information very quickly to the markets. Information which would have taken months to impact the market earlier can now be obtained in matter of moments. Even equity holders are exposed to price risk of corporate share fluctuates rapidly.

These price volatility risk pushed the use of derivatives like futures and options increasingly as these instruments can be used as hedge to protect against adverse price changes in commodity, foreign exchange, equity shares and bonds.

### **3.2.2 - GLOBALISATION OF MARKETS**

Earlier, managers had to deal with domestic economic concerns; what happened in other part of the world was mostly irrelevant. Now globalization has increased the size of markets and as greatly enhanced competition .it has benefited consumers who cannot obtain better quality goods at a lower cost. It has also exposed the modern business to significant risks and, in many cases, led to cut profit margins

In Indian context, south East Asian currencies crisis of 1997 had affected the competitiveness of our products vis-à-vis depreciated currencies. Export of certain goods from India declined because of this crisis. Steel industry in 1998 suffered its worst set back due to cheap import of steel from south east Asian countries. Suddenly blue-chip companies had turned in to red. The fear of china devaluing its currency created instability in Indian exports. Thus, it is evident that globalization of industrial and financial activities necessitates use of derivatives to guard against future losses.

This factor alone has contributed to the growth of derivatives to a significant extent.

### **3.2.3 - TECHNOLOGICAL ADVANCES**

A significant growth of derivative instruments has been driven by

technological breakthrough. Advances in this area include the development of high speed processors, network systems and enhanced method of data entry. Closely related to advances in computer technology are advances in telecommunications. Improvement in communications allow for instantaneous worldwide conferencing, Data transmission by satellite. At the same time there were significant advances in software program without which computer and telecommunication advances would be meaningless.

These facilitated the more rapid movement of information and consequently its instantaneous impact on market price. Although price sensitivity to market forces is beneficial to the economy as a whole resource are rapidly relocated to more productive use and better rationed overtime the greater price volatility exposes producers and consumers to greater price risk. The effect of this risk can easily destroy a business which is otherwise well managed. Derivatives can help a firm manage the price risk inherent in a market economy. To the extent the technological developments increase volatility, derivatives and risk management products become that much more important.

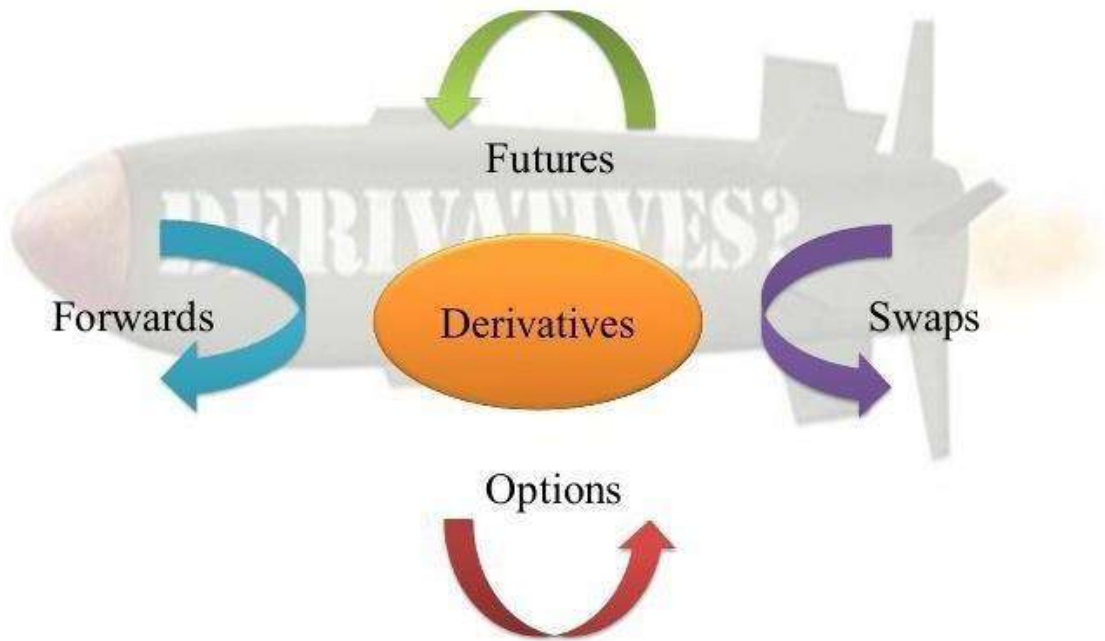


### **3.2.4 ADVANCES IN FINANCIAL THEORIES**

Advances in financial theories gave birth to derivatives. Initially forward contracts in its traditional form, was the only hedging tool available. Option pricing models developed by Black and Scholes in 1973 were used to determine prices of call and put options. In late 1970's, work of Lewis Edeington extended the early work of Johnson and started the hedging of financial price risks with financial futures. The work of economic theorists gave rise to new products for risk management which led to the growth of derivatives in financial markets. The above factors in combination of lot many factors led to growth of derivatives instruments.

### 3.3 - TYPES OF DERIVATIVES

## Types of Derivatives Contract



There are mainly four types of derivatives i.e. Forwards, Futures, Options and swaps.

#### 3.3.1 - FORWARDS

A forward contract is an agreement to buy or sell an asset on a specified date for a specified price. One of the parties to the contract assumes a long position and agrees to buy the underlying asset on a certain specified future date for a certain specified price. The other party assumes a short position and agrees to sell the asset on the same date for the same price. Other contract details like delivery date, price and quantity are negotiated bilaterally by the parties to the contract. The forward contracts are normally traded outside the exchanges.

The salient features of forward contracts are:

- They are bilateral contracts and hence exposed to counter-party risk.
  - Each contract is custom designed, and hence is unique in terms of contract size, expiration date and the asset type and quality.
- The contract price is generally not available in public domain.
- On the expiration date, the contract has to be settled by delivery of the asset.
  - If the party wishes to reverse the contract, it has to compulsorily go to the same counter-party, which often results in high prices being charged.

However forward contracts in certain markets have become very standardized, as in the case of foreign exchange, thereby reducing transaction costs and increasing transactions volume.

Forward contracts are very useful in hedging and speculation. The classic hedging application would be that of an exporter who expects to receive payment in dollars three months later. He is exposed to the risk of exchange rate fluctuations. By using the currency forward market to sell dollars forward, he can lock on to a rate today and reduce his uncertainty. Similarly, an importer who is required to make a payment in dollars two months hence can reduce his exposure to exchange rate fluctuations by buying dollars forward.

If a speculator has information or analysis, which forecasts an upturn in a price, then he can go long on the forward market instead of the cash market. The speculator would go long on the forward, wait for the price to rise, and then take a reversing transaction to book profits. Speculators may well be required to deposit a margin upfront. However, this is generally a relatively small proportion of the value of the assets underlying the forward contract. The use of forward markets here supplies leverage to the speculator

### **3.3.1.1 - LIMITATIONS OF FORWARD MARKETS**

Forward markets world-wide are afflicted by several problems:

- Lack of centralization of trading,
- Illiquidity, and
- Counterparty risk

In the first two of these, the basic problem is that of too much flexibility and generality. The forward market is like a real estate market in that any two consenting adults can form contracts against each other. This often makes them design terms of the deal which are very convenient in that specific situation but makes the contracts non-tradable.

Counterparty risk arises from the possibility of default by any one party to the transaction. When one of the two sides to the transaction declares bankruptcy, the other suffers. Even when forward markets trade standardized contracts, and hence avoid the problem of illiquidity, still the counterparty risk remains a very serious issue.

### 3.3.2 - FUTURES



Futures markets were designed to solve the problems that exist in forward markets. A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. But unlike forward contracts, the futures contracts are standardized and exchange traded. To facilitate liquidity in the futures contracts, the exchange specifies certain standard features of the contract. It is a standardized contract with standard underlying instrument, a standard quantity and quality of the underlying instrument that can be delivered, (or which can be used for reference purposes in settlement) and a standard timing of such settlement. A futures contract may be offset prior



to maturity by entering into an equal and opposite transaction. More than 99% of futures transactions are offset this way.

The standardized items in a futures contract are:

- Quantity of the underlying
- Quality of the underlying
- The date and the month of delivery
- The units of price quotation and minimum price change
- Location of settlement

### 3.3.2.1 - Distinction between

#### ❖ Futures & Forwards -

Futures	Forwards
Trade on an organized exchange	OTC in nature
Standardized contract terms	Customized contract terms
More liquid	Less Liquid
Requires margin payment	No margin payment
Follows daily settlement	Settlement happens at the end of period

### 3.3.2.2 - FUTURES TERMINOLOGY

- ❖ **Spot price:** The price at which an asset trades in the spot market
  
- ❖ **Futures price:** The price at which the futures contract trades in the futures market.
  
- ❖ **Contract cycle:** The period over which a contract trade. The index futures contracts on the NSE have one- month, two-months and three months expiry cycles which expire on the last Thursday of the month. Thus, a January expiration contract expires on the last Thursday of January and a February expiration contract ceases trading on the last Thursday of February. On the Friday following the last Thursday, a new contract having a three- month expiry is introduced for trading.
  
- ❖ **Expiry date:** It is the date specified in the futures contract. This is the last day on which the contract will be traded, at the end of which it will cease to exist.
  
- ❖ **Contract size:** The amount of asset that has to be delivered under one contract. Also called as lot size.
  
- ❖ **Basis:** In the context of financial futures, basis can be defined as the futures price minus the spot price. There will be a different basis for each delivery month for each contract. In a normal market, basis will be positive. This reflects that futures prices normally exceed spot prices.

- ❖ **Cost of carry:** The relationship between futures prices and spot prices can be summarized in terms of what is known as the cost of carry. This measures the storage cost plus the interest that is paid to finance the asset less the income earned on the asset.
  
- ❖ **Initial margin:** The amount that must be deposited in the margin account at the time a futures contract is first entered into is known as initial margin.
  
- ❖ **Marking-to-market:** In the futures market, at the end of each trading day, the margin account is adjusted to reflect the investor's gain or loss depending upon the futures closing price. This is called marking-to-market.
  
- ❖ **Maintenance margin:** This is somewhat lower than the initial margin. This is set to ensure that the balance in the margin account never becomes negative. If the balance in the margin account falls below the maintenance margin, the investor receives a margin call and is expected to top up the margin account to the initial margin level before trading commences on the next day.

### 3.3.3 - OPTIONS

Options are fundamentally different from forward and futures contracts. An option gives the holder of the option the right to do something. The holder does not have to exercise this right. In contrast, in a forward or futures contract, the two parties have committed themselves to doing something. Whereas it costs nothing (except margin requirements) to enter into a futures contract, the purchase of an option requires an up-front payment.

#### 3.3.3.1 - OPTION TERMINOLOGY

- ❖ **Index options:** These options have the index as the underlying. Some options are European while others are American. Like index futures contracts, index options contracts are also cash settled.



- ❖ **Stock options:** Stock options are options on individual stocks. Options currently trade on over 158 stocks in India. A contract gives the holder the right to buy or sell shares at the specified price.
  
- ❖ **Buyer of an option:** The buyer of an option is the one who by paying the option premium buys the right but not the obligation to exercise his option on the seller/writer. **Writer/Seller of an option:** The writer of a call/put option is the one who receives the option premium and is thereby obliged to sell/buy the asset if the buyer exercises on him. There are two basic types of options, call options and put options. **Call option:** A call option gives the holder the right but not the obligation to buy an asset by a certain date for a certain price.
  
- ❖ **Put option:** A put option gives the holder the right but not the obligation to sell an asset by a certain date for a certain price.
  
- ❖ **Option price/premium:** Option price is the price which the option buyer pays to the option seller. It is also referred to as the option premium.
  
- ❖ **Expiration date:** The date specified in the options contract is known as the expiration date, the exercise date, the strike date or the maturity.
  
- ❖ **Strike price:** The price specified in the options contract is known as the strike price or the exercise price.
  
- ❖ **American options:** American options are options that can be exercised at any time up to the expiration date. Most exchange-traded options are American.



- ❖ **European options:** European options are options that can be exercised only on the expiration date itself. European options are easier to analyze than American options, and properties of an American option are frequently deduced from those of its European counterpart.
  
- ❖ **In-the-money option:** An in-the-money (ITM) option is an option that would lead to a positive cashflow to the holder if it were exercised immediately. A call option on the index is said to be in-the-money when the current index stands at a level higher than the strike price (i.e. spot price  $>$  strike price). If the index is much higher than the strike price, the call is said to be deep ITM. In the case of a put, the put is ITM if the index is below the strike price.
  
- ❖ **At-the-money option:** An at-the-money (ATM) option is an option that would lead to zero cashflow if it were exercised immediately. An option on the index is at-the-money when the current index equals the strike price (i.e. spot price = strike price).
  
- ❖ **Out-of-the-money option:** An out-of-the-money (OTM) option is an option that would lead to a negative cashflow if it were exercised immediately. A call option on the index is out-of-the-money when the current index stands at a level which is less than the strike price (i.e. spot price  $<$  strike price). If the index is much lower than the strike price, the call is said to be deep OTM. In the case of a put, the put is OTM if the index is above the strike price.

❖ **Intrinsic value of an option:** The option premium can be broken down into two components - intrinsic value and time value. The intrinsic value of a call is the amount the option is ITM, if it is ITM. If the call is OTM, its intrinsic value is zero. Putting it another way, the intrinsic value of a call is  $\text{Max } [0, (S_t - K)]$  which means the intrinsic value of a call is the greater of 0 or  $(S_t - K)$ . Similarly, the intrinsic value of a put is  $\text{Max } [0, K - S_t]$ , i.e. the greater of 0 or  $(K - S_t)$ .  $K$  is the strike price and  $S_t$  are the spot price.

❖ **Time value of an option:** The time value of an option is the difference between its premium and its intrinsic value. Both calls and puts have time value. An option that is OTM or ATM has only time value. Usually, the maximum time value exists when the option is ATM. The longer the time to expiration, the greater is an option's time value, all else equal. At expiration, an option should have no time value

### **3.3.4 - Index Derivatives**

Index derivatives are derivative contracts which derive their value from an underlying index. The two most popular index derivatives are index futures and index options. Index derivatives have become very popular worldwide. Index derivatives offer various advantages and hence have become very popular. Institutional and large equity-holders need portfolio-hedging facility. Index-derivatives are more suited to them and more cost-effective than derivatives based on individual stocks. Pension funds in the US are known to use stock index futures for risk hedging purposes. Index derivatives offer ease of use for hedging any portfolio irrespective of its composition. Stock index is difficult to manipulate as compared to individual stock prices, more so in India, and the possibility of cornering is reduced. This is partly because an individual stock has a limited supply, which can be cornered. Stock index, being an average, is much less volatile than individual stock prices. This implies much lower capital adequacy and margin requirements. Index derivatives are cash settled, and hence do not suffer from settlement delays and problems related to bad delivery, forged/fake certificates.

### **3.3.5 - SWAPS**

Swaps are transactions which obligates the two parties to the contract to exchange a series of cash flows at specified intervals known as payment or settlement dates. They can be regarded as portfolios of forward's contracts. A contract whereby two parties agree to exchange (swap) payments, based on some notional principle amount is called as a 'SWAP'. In case of swap, only the payment flows are exchanged and not the principle amount. The two commonly used swaps are:

#### **3.3.5.1 - INTEREST RATE SWAPS**

Interest rate swaps is an arrangement by which one party agrees to exchange his series of fixed rate interest payments to a party in exchange for his variable rate interest payments.

The fixed rate payer takes a short position in the forward contract whereas, the floating rate payer takes a long position in the forward contract.

### **3.3.5.2 - CURRENCY SWAPS**

Currency swaps is an arrangement in which both the principle amount and the interest on loan in one currency are swapped for the principle and the interest payments on loan in another currency. The parties to the swap contract of currency generally hail from two different countries. This arrangement allows the counter parties to borrow easily and cheaply in their home currencies. Under a currency swap, cash flows to be exchanged are determined at the spot rate at a time when swap is done. Such cash flows are supposed to remain unaffected by subsequent changes in the exchange rates.

### **3.3.5.3 - FINANCIAL SWAP**

Financial swaps constitute a funding technique which permit a borrower to access one market and then exchange the liability for another type of liability. It also allows the investors to exchange one type of asset for another type of asset with a preferred income stream.

**The other kind of derivatives, which are not, much popular are as follows:**

### **3.3.6 - BASKETS**

Baskets options are option on portfolio of underlying asset. Equity Index Options are most popular form of baskets.

### **3.3.7 - LEAPS**

Normally option contracts are for a period of 1 to 12 months. However, exchange may introduce option contracts with a maturity period of 2-3 years. These long-term option contracts are popularly known as Leaps or Long-term Equity Anticipation Securities.

### **3.3.8 - WARRANTS**

Options generally have lives of up to one year, the majority of options traded on options exchanges having a maximum maturity of nine months. Longer-dated options are called warrants and are generally traded over-the-counter.

### **3.3.9 - SWAPTIONS**

Swaptions are options to buy or sell a swap that will become operative at the expiry of the options. Thus, a swaption is an option on a forward swap. Rather than have calls and puts, the swaptions market has receiver swaptions and payer swaptions. A receiver swaption is an option to receive fixed and pay floating. A payer swaption is an option to pay fixed and receive floating.



## **3.4 - APPLICATIONS OF FUTURES AND OPTIONS**

The phenomenal growth of financial derivatives across the world is attributed the fulfillment of needs of hedgers, speculators and arbitrageurs by these products. We first look at how trading futures differs from trading the underlying spot. We then look at the payoff of these contracts, and finally at how these contracts can be used by various entities in the economy.

A payoff is the likely profit/loss that would accrue to a market participant with change in the price of the underlying asset. This is generally depicted in the form of payoff diagrams which show the price of the underlying asset on the X-axis and the profits/losses on the Y-axis.

### **3.4.1 - Cash Market Vs Futures Market**

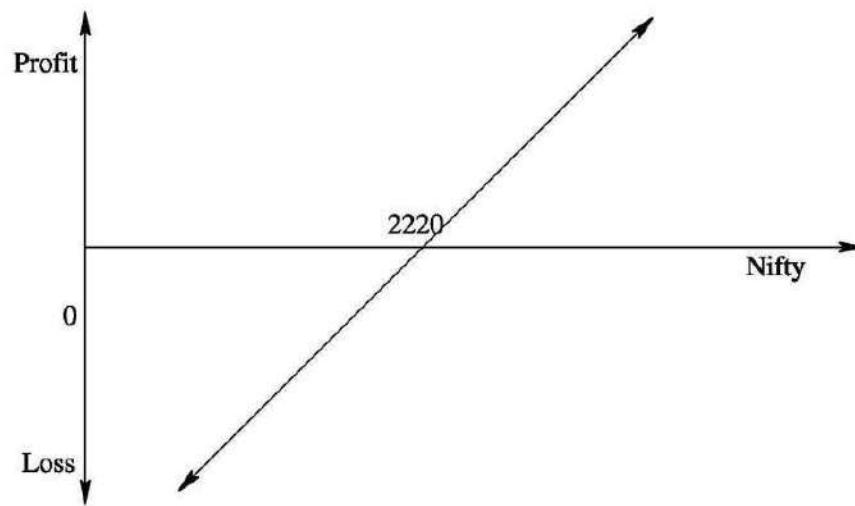
The single stock futures market in India has been a great success story across the world. NSE ranks first in the world in terms of number of contracts traded in single stock futures. One of the reasons for the success could be the ease of trading and settling these contracts.

To trade securities, a customer must open a security trading account with a securities broker and a demat account with a securities depository. Buying security involves putting up all the money upfront. With the purchase of shares of a company, the holder becomes a part owner of the company. The shareholder typically receives the rights and privileges associated with the security, which may include the receipt of dividends, invitation to the annual shareholders meeting and the power to vote. Selling securities involves buying the security before selling it. Even in cases where short selling is permitted, it is assumed that the securities broker owns the security and then "lends" it to the trader so that he can sell it. To trade futures, a customer must open a futures trading account with a derivatives broker. Buying futures simply involves putting in the margin money. They enable the futures traders to take a position in the underlying security without having to open an account with a securities broker.

## HOW TO BUY FUTURES CONTRACT



With the purchase of futures on a security, the holder essentially makes a legally binding promise or obligation to buy the underlying security at some point in the future (the expiration date of the contract). Security futures do not represent ownership in a corporation and the holder is therefore not regarded as a shareholder. A futures contract represents a promise to transact at some point in the future. In this light, a promise to sell security is just as easy to make as a promise to buy security. Selling security futures without previously owning them simply obligates the trader to selling a certain amount of the underlying security at some point in the future. It can be done just as easily as buying futures, which obligates the trader to buying a certain amount of the underlying security at some point in the future.



### 3.4.2 - FUTURES PAYOFFS

Futures contracts have linear payoffs. In simple words, it means that the losses as well as profits for the buyer and the seller of a futures contract are unlimited. These linear payoffs are fascinating as they can be combined with options and the underlying to generate various complex payoffs.

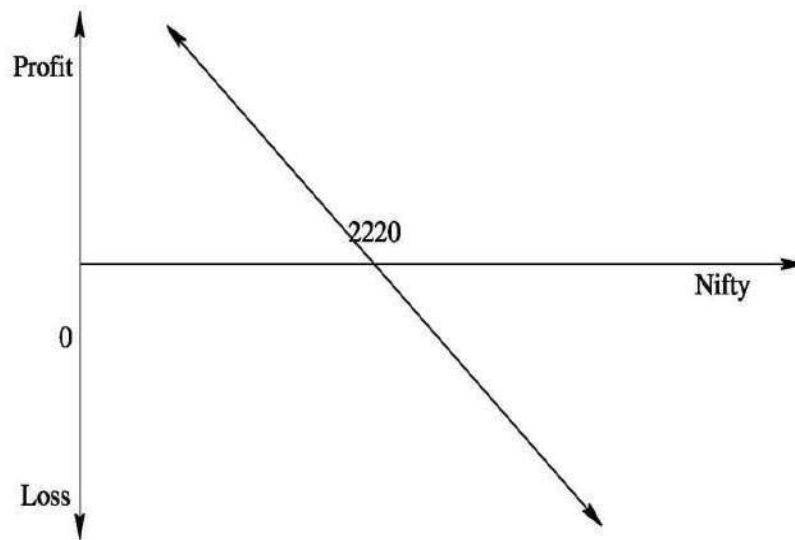
#### 3.4.2.1 - Payoff for buyer of futures: Long futures

The payoff for a person who buys a futures contract is similar to the payoff for a person who holds an asset. He has a potentially unlimited upside as well as a potentially unlimited downside. Take the case of a speculator who buys a two-month Nifty index futures contract when the Nifty stands at 2220. The underlying asset in this case is the Nifty portfolio. When the index moves up, the long futures position starts making profits, and when the index moves down it starts making losses.

Figure below shows the payoff diagram for the buyer of a futures contract

who shorts an asset. He has a potentially unlimited upside as well as a potentially unlimited downside. Take the case of a speculator who sells a two-months Nifty index futures

contract when the Nifty stands at 2220. The underlying asset in this case is the Nifty portfolio. When the index moves down, the short futures position starts making profits, and when the index moves up, it starts making losses. Figure on the next page shows the payoff diagram for the seller of a futures contract



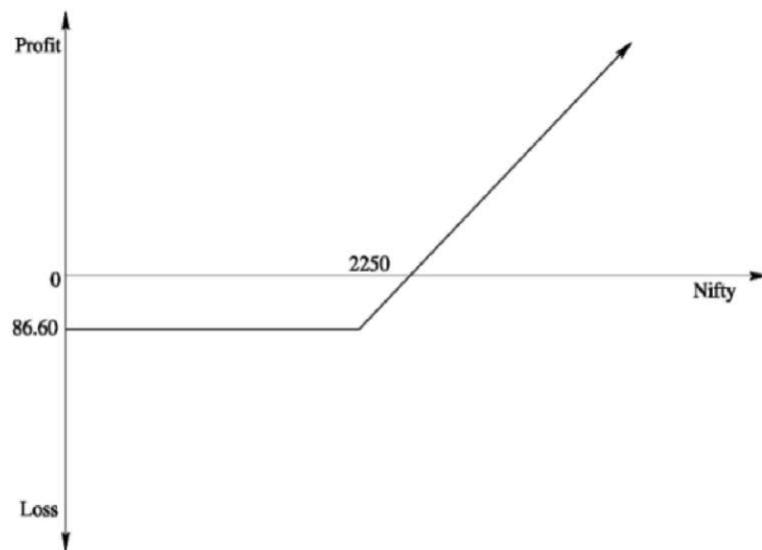
### 3.4.3 - OPTIONS PAYOFFS

The optionality characteristic of options results in a non-linear payoff for options. In simple words, it means that the losses for the buyer of an option are limited, however the profits are potentially unlimited. For a writer, the payoff is exactly the opposite. His profits are limited to the option premium; however, his losses are potentially unlimited. These non-linear payoffs are fascinating as they lend themselves to be used to generate various payoffs by using combinations of options and the underlying. We look here at the 4 basic payoffs.

#### 3.4.3.1 - Payoff profile for buyer of call options: Long call

A call option gives the buyer the right to buy the underlying asset at the strike price specified in the option. The profit/loss that the buyer makes on the option depends on the spot price of the underlying. If upon expiration, the spot price exceeds the strike price, he

makes a profit. Higher the spot price, more is the profit he makes. If the spot price of the underlying is less than the strike price, he lets his option expire un-exercised. His loss in this case is the premium he paid for buying the option. Figure below gives the payoff for the buyer of a three month call option (often referred to as long call) with a strike of 2250 bought at a premium of 86.60.



The figure shows the profits/losses for the buyer of a three-month Nifty 2250 call option. As can be seen, as the spot Nifty rises, the call option is in-the-money. If upon expiration, Nifty closes above the strike of 2250, the buyer would exercise his option and profit to the extent of the difference between the Nifty-close and the strike price.

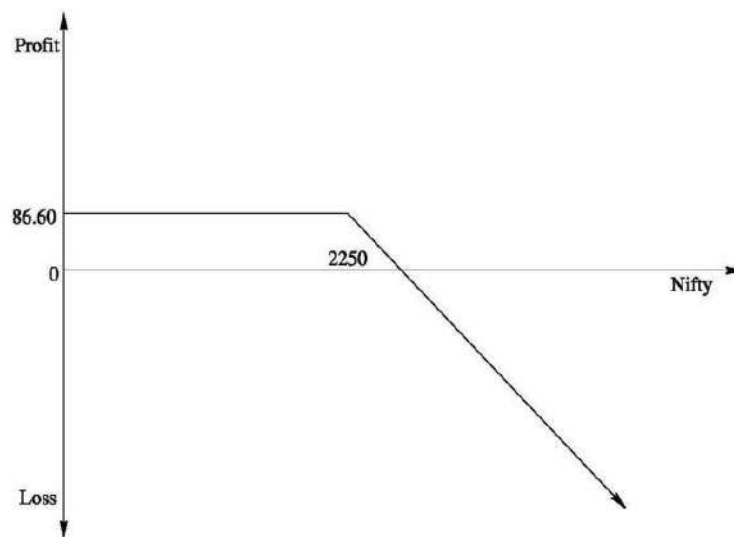
The profits possible on this option are potentially unlimited. However, if

Nifty falls below the strike of 2250, he lets the option expire. His losses are limited to the extent of the premium he paid for buying the option.



### 3.4.3.2 - Payoff profile for writer of call options: Short call

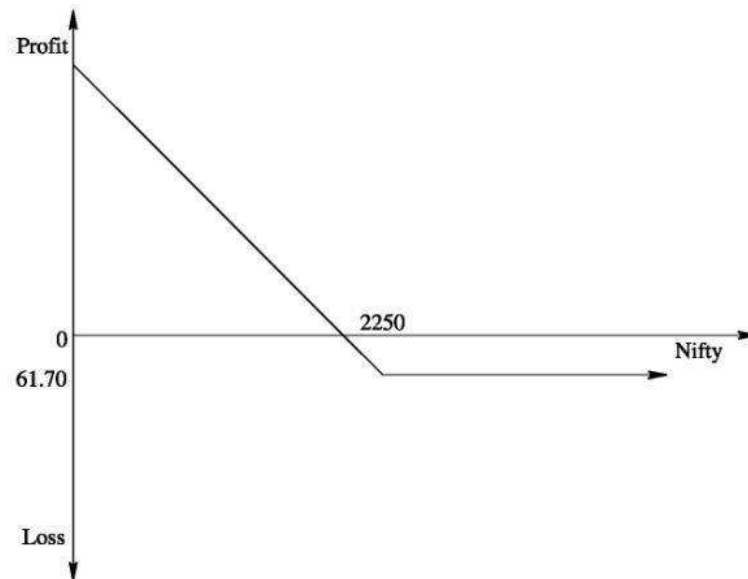
A call option gives the buyer the right to buy the underlying asset at the strike price specified in the option. For selling the option, the writer of the option charges a premium. The profit/loss that the buyer makes on the option depends on the spot price of the underlying. Whatever is the buyer's profit being the seller's loss. If upon expiration, the spot price exceeds the strike price, the buyer will exercise the option on the writer. Hence as the spot price increases the writer of the option starts making losses. Higher the spot price, more is the loss he makes. If upon expiration the spot price of the underlying is less than the strike price, the buyer lets his option expire un-exercised and the writer gets to keep the premium. Figure below gives the payoff for the writer of a three month call option (often referred to as short call) with a strike of 2250 sold at a premium of 86.60.



The figure shows the profits/losses for the seller of a three-month Nifty 2250 call option. As the spot Nifty rises, the call option is in-the-money and the writer starts making losses. If upon expiration, Nifty closes above the strike of 2250, the buyer would exercise his option on the writer who would suffer a loss to the extent of the difference between the Nifty -close and the strike price. The loss that can be incurred by the writer of the option is potentially unlimited, whereas the maximum profit is limited to the extent of the up-front option premium of Rs.86.60 charged by him.

### 3.4.3.3 - Payoff profile for buyer of put options: Long put

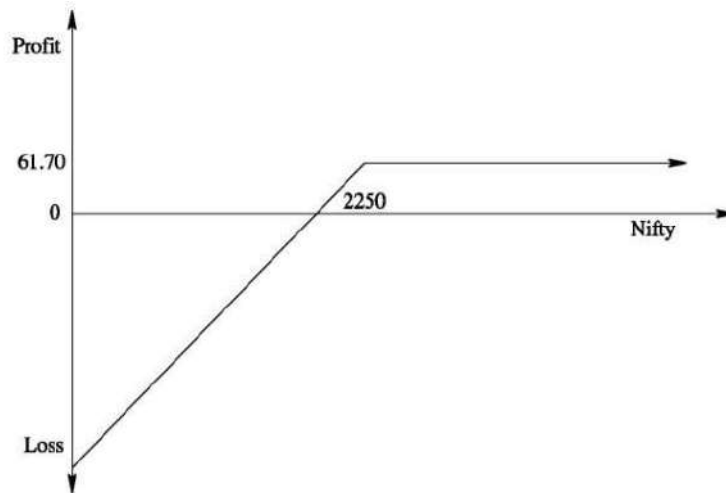
A put option gives the buyer the right to sell the underlying asset at the strike price specified in the option. The profit/loss that the buyer makes on the option depends on the spot price of the underlying. If upon expiration, the spot price is below the strike price, he makes a profit. Lower the spot price, more is the profit he makes. If the spot price of the underlying is higher than the strike price, he lets his option expire un-exercised. His loss in this case is the premium he paid for buying the option. Figure below gives the payoff for the buyer of a three-month put option (often referred to as long put) with a strike of 2250 bought at a premium of 61.70.



The figure shows the profits/losses for the buyer of a three-month Nifty 2250 put option. As can be seen, as the spot Nifty falls, the put option is in-the-money. If upon expiration, Nifty closes below the strike of 2250, the buyer would exercise his option and profit to the extent of the difference between the strike price and Nifty-close. The profits possible on this option can be as high as the strike price. However, if Nifty rises above the strike of 2250, he lets the option expire. His losses are limited to the extent of the premium he paid for buying the option.

### 3.4.3.4 - Payoff profile for writer of put options: Short Put

A put option gives the buyer the right to sell the underlying asset at the strike price specified in the option. For selling the option, the writer of the option charges a premium. The profit/loss that the buyer makes on the option depends on the spot price of the underlying. Whatever is the buyer's profit being the seller's loss. If upon expiration, the spot price happens to be below the strike price, the buyer will exercise the option on the writer. If upon expiration the spot price of the underlying is more than the strike price, the buyer lets his option unexercised and the writer gets to keep the premium. Figure below gives the payoff for the writer of a three-month put option (often referred to as short put) with a strike of 2250 sold at a premium of 61.70.



The figure shows the profits/losses for the seller of a three-month Nifty 2250 put option. As the spot Nifty falls, the put option is in-the-money and the writer starts making losses. If upon expiration, Nifty closes below the strike of 2250, the buyer would exercise his option on the writer who would suffer a loss to the extent of the difference between the strike price and Nifty-close. The loss that can be incurred by the writer of the option is a maximum extent of the strike price (Since the worst that can happen is that the asset price can fall to zero) whereas the maximum profit is limited to the extent of the up-front option premium of Rs.61.70 charged by him.

## **3.5 - PARTICIPANTS IN THE DERIVATIVES MARKET**

The participants in the derivatives market are as follows:

### **3.5.1 - TRADING PARTICIPANTS:**

#### **3.5.1.1 - HEDGERS**

The process of managing the risk or risk management is called as hedging. Hedgers are those individuals or firms who manage their risk with the help of derivative products. Hedging does not mean maximizing of return. The main purpose for hedging is to reduce the volatility of a portfolio by reducing the risk.

#### **3.5.1.2 - SPECULATORS**

Speculators do not have any position on which they enter into futures and options Market i.e., they take the positions in the futures market without having position in the underlying cash market. They only have a particular view about future price of a commodity, shares, stock index, interest rates or currency. They consider various factors like demand and supply, market positions, open interests, economic fundamentals, international events, etc. to make predictions. They take risk in turn from high returns. Speculators are essential in all markets – commodities, equity, interest rates and currency. They help in providing the market the much-desired volume and liquidity.

### **3.5.1.3 ARBITRAGEURS**

Arbitrage is the simultaneous purchase and sale of the same underlying in two different markets in an attempt to make profit from price discrepancies between the two markets. Arbitrage involves activity on several different instruments or assets simultaneously to take advantage of price distortions judged to be only temporary.

Arbitrage occupies a prominent position in the futures world. It is the mechanism that keeps prices of futures contracts aligned properly with prices of underlying assets. The objective is simply to make profits without risk, but the complexity of arbitrage activity is such that it is reserved to particularly well-informed and experienced professional traders, equipped with powerful calculating and data processing tools. Arbitrage may not be as easy and costless as presumed.



## **3.5.2 INTERMEDIARY PARTICIPANTS:**

### **3.5.2.1 - BROKERS**

For any purchase and sale, brokers perform an important function of bringing buyers and sellers together. As a member in any futures exchanges, may be any commodity or finance, one need not be a speculator, arbitrageur or hedger. By virtue of a member of a commodity or financial futures exchange one gets a right to transact with other members of the same exchange. This transaction can be in the pit of the trading hall or on online computer terminal. All persons hedging their transaction exposures or speculating on price movement, need not be and for that matter cannot be members of futures or options exchange. A non-member has to deal in futures exchange through member only. This provides a member the role of a broker. His existence as a broker takes the benefits of the futures and options exchange to the entire economy all transactions are done in the name of the member who is also responsible for final settlement and delivery. This activity of a member is price risk free because he is not taking any position in his account, but his other risk is clients default risk. He cannot default in his obligation to the clearing house, even if client defaults. So, this risk premium is also inbuilt in brokerage recharges. More and more involvement of non-members in hedging and speculation in futures and options market will increase brokerage business for member and more volume in turn reduces the brokerage. Thus, more and more participation of traders other than members gives liquidity and depth to the futures and options market. Members can attract involvement of other by providing efficient services at a reasonable cost. In the absence of well-functioning broking houses, the futures exchange can only function as a club.

### **3.5.2.2 - MARKET MAKERS AND JOBBERS**

Even in organized futures exchange, every deal cannot get the counter party immediately. It is here the jobber or market maker plays his role. They are the members of the exchange who takes the purchase or sale by other members in their books and then square off on the same day or the next day. They quote their bid-ask rate regularly. The difference between bid and ask is known as bid-ask spread. When volatility in price is more, the spread increases since jobber's price risk increases. In less volatile market, it is less. Generally, jobbers carry limited risk. Even by incurring loss, they square off their position as early as possible. Since they decide the market price considering the demand and supply of the commodity or asset, they are also known as market makers. Their role is more important in the exchange where outcry system of trading is present. A buyer or seller of a particular futures or option contract can approach that particular jobbing counter and quotes for executing deals. In automated screen-based trading best buy and sell rates are displayed on screen, so the role of jobber to some extent. In any case, jobbers provide liquidity and volume to any futures and option market.

### **3.5.3 - INSTITUTIONAL FRAMEWORK**

#### **3.5.3.1 - EXCHANGE**

Exchange provides buyers and sellers of futures and option contract necessary infrastructure to trade. In outcry system, exchange has trading pit where members and their representatives assemble during a fixed trading period and execute transactions. In online trading system, exchange provide access to members and make available real time information online and also allow them to execute their orders. For derivative market to be successful exchange plays a very important role, there may be separate exchange for financial instruments and commodities or common exchange for both commodities and financial assets.

#### **3.5.3.2 - CLEARING HOUSE**

A clearing house performs clearing of transactions executed in futures and option exchanges. Clearing house may be a separate company or it can be a division of exchange. It guarantees the performance of the contracts and for this purpose clearing house becomes counter party to each contract. Transactions are between members and clearing house. Clearing house ensures solvency of the members by putting various limits on him. Further, clearing house devises a good managing system to ensure performance of contract even in volatile market. This provides confidence of people in futures and option exchange. Therefore, it is an important institution for futures and option market.

#### **3.5.3.3 - CUSTODIAN / WARE HOUSE**

Futures and options contracts do not generally result into delivery but there has to be smooth and standard delivery mechanism to ensure proper functioning of market. In stock index futures and options which are cash settled contracts, the issue of delivery may not arise, but it would be there in stock futures or options, commodity futures and options and interest rates futures. In the absence of proper custodian or warehouse mechanism, delivery of financial assets and commodities will be a cumbersome task and futures prices

will not reflect the equilibrium price for convergence of cash price and futures price on maturity, custodian and warehouse are very relevant.

#### **3.5.3.4 - BANK FOR FUND MOVEMENTS**

Futures and options contracts are daily settled for which large fund

movement from members to clearing house and back is necessary. This can be smoothly handled if a bank works in association with a clearing house. Bank can make daily accounting entries in the accounts of members and facilitate daily settlement a routine affair. This also reduces a possibility of any fraud or misappropriation of fund by any market intermediary.

## **3.6 - ROLE OF DERIVATIVES**

Derivative markets help investors in many different ways:

### **3.6.1 - RISK MANAGEMENT**

Futures and options contract can be used for altering the risk of investing in spot market. For instance, consider an investor who owns an asset. He will always be worried that the price may fall before he can sell the asset. He can protect himself by selling a futures contract, or by buying a Put option. If the spot price falls, the short hedgers will gain in the futures market, as you will see later. This will help offset their losses in the spot market. Similarly, if the spot price falls below the exercise price, the put option can always be exercised.

Derivatives markets help to reallocate risk among investors. A person who wants to reduce risk, can transfer some of that risk to a person who wants to take more risk. Consider a risk-averse individual. He can obviously reduce risk by hedging. When he does so, the opposite position in the market may be taken by a speculator who wishes to take more risk. Since people can alter their risk exposure using futures and options, derivatives markets help in the raising of capital. As an investor, you can always invest in an asset and then change its risk to a level that is more acceptable to you by using derivatives.

### **3.6.2 - PRICE DISCOVERY**

Price discovery refers to the markets ability to determine true equilibrium prices. Futures prices are believed to contain information about future spot prices and help in disseminating such information. As we have seen, futures markets provide a low-cost trading mechanism. Thus, information pertaining to supply and demand easily percolates into such markets. Accurate prices are essential for ensuring the correct allocation of resources in a free market economy. Options markets provide information about the volatility or risk of the underlying asset.



### **3.6.3 - OPERATIONAL ADVANTAGES**

As opposed to spot markets, derivatives markets involve lower transaction costs. Secondly, they offer greater liquidity. Large spot transactions can often lead to significant price changes. However, futures markets tend to be more liquid than spot markets, because herein you can take large positions by depositing relatively small margins. Consequently, a large position in derivatives markets is relatively easier to take and has less of a price impact as opposed to a transaction of the same magnitude in the spot market. Finally, it is easier to take a short position in derivatives markets than it is to sell short in spot markets.

### **3.6.4 - MARKET EFFICIENCY**

The availability of derivatives makes markets more efficient; spot, futures and options markets are inextricably linked. Since it is easier and cheaper to trade in derivatives, it is possible to exploit arbitrage opportunities quickly and to keep prices in alignment. Hence these markets help to ensure that prices reflect true values.

### **3.6.5 - EASE OF SPECULATION**

Derivative markets provide speculators with a cheaper alternative to engaging in spot transactions. Also, the amount of capital required to take a comparable position is less in this case. This is important because facilitation of speculation is critical for ensuring free and fair markets. Speculators always take calculated risks. A speculator will accept a level of risk only if he is convinced that the associated expected return, is commensurate with the risk that he is taking.

## **3.7 - FUTURES AND OPTIONS TRADING SYSTEM**

The futures & options trading system of NSE, called NEAT-F&O trading system, provides a fully automated screen-based trading for Index futures & options and Stock futures & options on a nationwide basis as well as an online monitoring and surveillance mechanism. It supports an order driven market and provides complete transparency of trading operations. It is similar to that of trading of equities in the cash market segment.

The software for the F&O market has been developed to facilitate efficient and transparent trading in futures and options instruments. Keeping in view the familiarity of trading members with the current capital market trading system, modifications have been performed in the existing capital market trading system so as to make it suitable for trading futures and options.

### **3.7.1 - Order types and conditions**

The system allows the trading members to enter orders with various conditions attached to them as per their requirements. These conditions are broadly divided into the following categories:

1. Time conditions
2. Price conditions
3. Other conditions

Several combinations of the above are allowed thereby providing enormous flexibility to the users. The order types and conditions are summarized below.

#### **3.7.1.1 - Time conditions**

Day order: A day order, as the name suggests is an order which is valid for the day on which it is entered. If the order is not executed during the day, the system cancels the order automatically at the end of the day.

Immediate or Cancel (IOC): An IOC order allows the user to buy or sell a contract as soon as the order is released into the system, failing which the order is cancelled from the system. Partial match is possible for the order, and the unmatched portion of the order is cancelled immediately.

### **3.7.1.2 - Price condition**

- Stop-loss: This facility allows the user to release an order into the system, after the market price of the security reaches or crosses a threshold price e.g. if for stop-loss buy order, the trigger is 1027.00, the limit price is 1030.00 and the market (last traded) price is 1023.00, then this order is released into the system once the market price reaches or exceeds 1027.00. This order is added to the regular lot book with time of triggering as the time stamp, as a limit order of 1030.00. For the stop-loss sell order, the trigger price has to be greater than the limit price.

### **3.7.1.3 - Other conditions**

Market price: Market orders are orders for which no price is specified at the time the order is entered (i.e. price is market price). For such orders, the system determines the price.

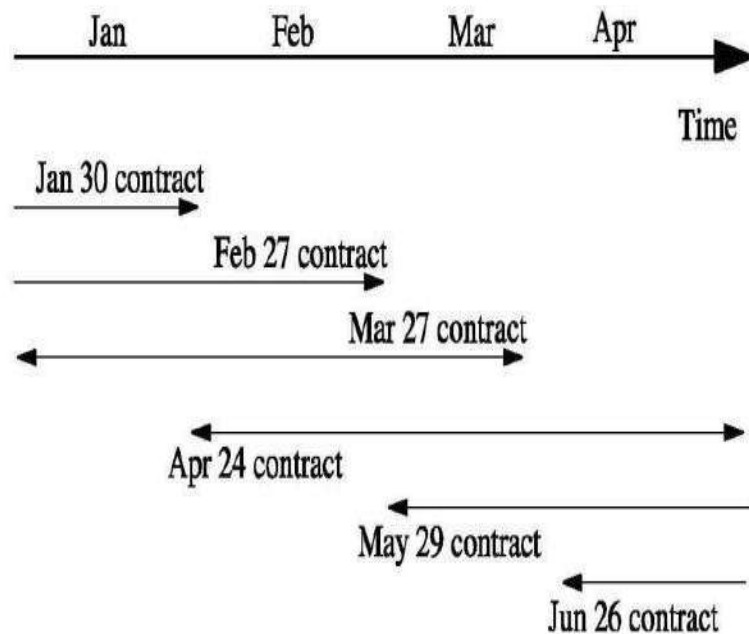
Trigger price: Price at which an order gets triggered from the stop-loss book.

Limit price: Price of the orders after triggering from stop-loss book.

### 3.8 - Contract cycle & Specifications

#### 3.8.1 - Contract Cycle

The figure shows the contract cycle for futures contracts on NSE's derivatives market. As can be seen, at any given point of time, three contracts are available for trading - a near-month, a middle-month and a far-month. As the January contract expires on the last Thursday of the month, a new three-month contract starts trading from the following day, once more making available three index futures contracts for trading.



### 3.8.2 - Contract Specifications of CNX Nifty Futures

Underlying Index	CNX Nifty
Exchange of Trading	National Stock Exchange of India Ltd.
Security Descriptor	FUTIDX
Contract Size	Current Lot size is 25(Minimum Value of Rs.2lakh)
Price Steps	Re.0.05
Price Bands	Operating Range of 10% of the base Price
Trading Cycle	The futures contracts will have a maximum of 3 months trading cycle-the near month(one), the next month(two) and the far month(three). New contract will be introduced on the next trading day following the expiry of near month contract.
Expiry Day	The last Thursday of the expiry month or the previous trading day if the last Thursday is a trading holiday.
Settlement Basis	Mark to market and final settlement will be cash settled on T+1 basis
Settlement Price	Daily settlement price will be the closing price of the futures contracts for the trading day and the final settlement price shall be the closing value of the underlying index on the last trading day of such futures contract.



### 3.8.3 - Contract Specifications of CNX Nifty Options

Underlying Index	CNX Nifty
Exchange of Trading	National Stock Exchange of India Ltd.
Security Descriptor	OPTIDX
Contract Size	Current Lot size is 25(Minimum Value of Rs.2lakh)
Price Steps	Re.0.05
Price Bands	A contract specific price range based on its delta value and is computed and updated on a daily basis.
Trading Cycle	The options contracts will have a maximum of 3 months trading cycle-the near month(one), the next month(two) and the far month(three). New contract will be introduced on the next trading day following the expiry of near month contract. Also, long term options have 3 quarterly and 5 yearly expiries.
Expiry Day	The last Thursday of the expiry month or the previous trading day if the last Thursday is a trading holiday.
Settlement Basis	Cash Settlement on T+1 basis
Style of Option	European
Strike Price Interval	Depending on the index level
Daily Settlement Price	Not Applicable

Final Settlement Price	Closing value of the index on the last trading day.
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### **3.8.4 - New Products in the F&O Segment:**

The Year 2008 witnessed the launch of new products in the F&O Segment of NSE. The Mini derivative (Futures and Options) contracts on S&P CNX Nifty were introduced for trading on January 1, 2008. The mini contracts have smaller contract size than the normal Nifty contract and extend greater affordability to individual investors and helps the individual investor to hedge risks of a smaller portfolio. The Long-Term Options Contracts on S&P CNX Nifty were launched on March 3, 2008. The long-term options have a life cycle of maximum 5 years duration and offer long term investors to take a view on prolonged price changes over a longer duration, without needing to use a combination of shorter term option contracts.

## **3.9 - CLEARING AND SETTLEMENT**

National Securities Clearing Corporation Limited (NSCCL) undertakes clearing and settlement of all trades executed on the futures and options (F&O) segment of the NSE. It also acts as legal counterparty to all trades on the F&O segment and guarantees their financial settlement.

### **3.9.1 - CLEARING ENTITIES**

Clearing and settlement activities in the F&O segment are undertaken by NSCCL with the help of the following entities:

#### **3.9.1.1 - Clearing members**

In the F&O segment, some members, called self-clearing members, clear and settle their trades executed by them only either on their own account or on account of their clients. Some others, called trading member-cum-clearing member, clear and settle their own trades as well as trades of other trading members (TMs). Besides, there is a special category of members, called professional clearing members (PCM) who clear and settle trades executed by TMs. The members clearing their own trades and trades of others, and the PCMs are required to bring in additional security deposits in respect of every TM whose trades they undertake to clear and settle.

#### **3.9.1.2 - Clearing Banks**

Funds settlement takes place through clearing banks. For the purpose of settlement all clearing members are required to open a separate bank account with NSCCL designated clearing bank for F&O segment.

### **3.9.1.3 - Settlement of futures contracts**

Futures contracts have two types of settlements, the MTM settlement which happens on a continuous basis at the end of each day, and the final settlement which happens on the last trading day of the futures contract.

### **3.9.1.4 - MTM settlement**

All futures contracts for each member are marked-to-market (MTM) to the daily settlement price of the relevant futures contract at the end of each day. The profits/losses are computed as the difference between:

1. The trade price and the day's settlement price for contracts executed during the day but not squared up.
2. The previous day's settlement price and the current day's settlement price for brought forward contracts.
3. The buy price and the sell price for contracts executed during the day and squared up.

The CMs who have a loss are required to pay the mark-to-market (MTM) loss amount in cash which is in turn passed on to the CMs who have made an MTM profit. This is known as daily mark-to-market settlement. CMs are responsible to collect and settle the daily MTM profits/losses incurred by the TMs and their clients clearing and settling through them. Similarly, TMs are responsible to collect/pay losses/profits from/to their clients by the next day. The pay-in and pay-out of the mark-to-market settlement are affected on the day following the trade day

After completion of daily settlement computation, all the open positions are reset to the daily settlement price. Such positions become the open positions for the next day.

### 3.9.2 - Computation of MTM at the end of the day

Trade Details	Qty bought/Sold	Settlement Price	MTM
Brought forward from previous day	100@100	105	500
Traded during the day Bought Sold	200@100 100@102	102	200
Open position (not squared up)	100 @100	105	500
Total			1200

The table gives the MTM charged on various positions. The margin charged on the brought forward contract is the difference between the previous day's settlement price of Rs.100 and today's settlement price of Rs.105. Hence on account of the position brought forward, the MTM shows a profit of Rs.500. For contracts executed during the day, the difference between the buy price and the sell price determines the MTM. In this example, 200 units are bought @ Rs. 100 and 100 units sold @ Rs. 102 during the day. Hence the MTM for the position closed during the day shows a profit of Rs.200. Finally, the open position of contracts traded during the day, is margined at the day's settlement price and the profit of Rs.500 credited to the MTM account. So, the MTM account shows a profit of Rs. 1200.



### **3.9.3 - Final settlement for futures**

On the expiry day of the futures contracts, after the close of trading hours, NSCCL marks all positions of a CM to the final settlement price and the resulting profit/loss is settled in cash. Final settlement loss/profit amount is debited/ credited to the relevant CM's clearing bank account on the day following expiry day of the contract.

#### **3.9.3.1 - Settlement prices for futures**

Daily settlement price on a trading day is the closing price of the respective futures contracts on such day. The closing price for a futures contract is currently calculated as the last half an hour weighted average price of the contract in the F&O Segment of NSE. Final settlement price is the closing price of the relevant underlying index/security in the capital market segment of NSE, on the last trading day of the contract. The closing price of the underlying Index/security is currently its last half an hour weighted average value in the capital market

### **3.9.4 - Settlement of options contracts**

Options contracts have three types of settlements, daily premium settlement, exercise settlement, interim exercise settlement in the case of option contracts on securities and final settlement.

#### **3.9.4.1 - Daily premium settlement**

Buyer of an option is obligated to pay the premium towards the options purchased by him. Similarly, the seller of an option is entitled to receive the premium for the option sold by him. The premium payable amount and the premium receivable amount are netted to compute the net premium payable or receivable amount for each client for each option contract.

### **3.9.4.2 - Exercise settlement**

Although most option buyers and sellers close out their options positions by an offsetting closing transaction, an understanding of exercise can help an option buyer determine whether exercise might be more advantageous than an offsetting sale of the option. There is always a possibility of the option seller being assigned an exercise. Once an exercise of an option has been assigned to an option seller, the option seller is bound to fulfill his obligation (meaning, pay the cash settlement amount in the case of a cash-settled option) even though he may not yet have been notified of the assignment

### **3.9.4.3 - Final exercise settlement**

Final exercise settlement is affected for all open long in-the-money strike price options existing at the close of trading hours, on the expiration day of 100 an option contract. All such long positions are exercised and automatically assigned to short positions in option contracts with the same series, on a random basis. The investor who has long in-the-money options on the expiry date will receive the exercise settlement value per unit of the option from the investor who has been assigned the option contract.

The exercise settlement value for each unit of the exercised contract is computed as follows:

Call options = Closing price of the security on the day of exercise — Strike price

Put options = Strike price — Closing price of the security on the day of exercise for final exercise the closing price of the underlying security is taken on the expiration day. The exercise settlement value is debited / credited to the relevant CMs clearing bank account on T + 1 day (T = exercise date).

## CHAPTER 4 – CONCLUSION

- Aditya Birla Capital offers a complete range of protection solutions to help secure your family's future and provide financial support for your child's education, wealth with protection solutions, health and wellness solutions, retirement solutions and savings with protection solutions to help you stay financially secure in the future with small disciplined savings at regular intervals
- Investing solutions enable individuals to realize their aspirations by making their money work for them.
- Aditya Birla Capital wants every individual to live the life they desire by enabling them to protect what they value; invest so they can live a life they aspire to live; and finance their dreams, needs and desires.
- Aditya Birla Capital puts people's need first and aims to protect what is dear to the customer, with assurance.
- If an individual is looking for more than just money so, equity is probably for you. Equity will give you access to an investor's knowledge, contacts and expertise.
- Debt helps build capital over a longer period of time. Moreover, it provides regular income and preserves capital.
- When interest rates are high, investing in debt instruments allow locking into these high interest rates, thereby giving high returns.
- Entrepreneurs must approach equity financing cautiously in order to remain the main beneficiaries of their own hard work and long-term business growth.

And apart from this I adopted some basic things:

- To develop communication skills with internal as well as external environment of the organization.
- I found that to be good sales personnel you should maintain good relation with the clients or customers.
- Also, I Got exposure to work and also learned about organizational behavior, Morals, Ethics and Code of Conduct of the organization.

- To develop communication skills with internal as well as external environment of the organization.
- Also, I Got to learn about Human Resource and Recruitment Process and also Got a chance to skill up on my Leadership Skills Being a Co-Ordinator at Aditya Birla Capital.

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**EQUITY RESEARCH OF FAST MOVING CONSUMER GOODS  
(FMCG) SECTOR  
(A PROJECT WITH BIRLA SUNLIFE INSURANCE LTD.)  
SUBMITTED TO  
THE UNIVERSITY OF MUMBAI  
IN PARTIAL FULFILMENT FOR THE AWARD OF DEGREE OF  
BACHELOR OF MANAGEMENT STUDIES**



**SEMESTER VI 2018-2019  
SUBMITTED BY  
SALMAN SHAIKH  
SEAT NO. MF16046  
UNDER THE GUIDENCE OF  
PROF. KIRAN SHAW  
THE S.I.A COLLEGE OF HIGHER EDUCATION  
DOMBIVLI (EAST)**



# **DECLARATION**

I **SALMAN SHAIKH** declare that the report of the project work entitled “**EQUITY RESEARCH OF FAST MOVING CONSUMER GOODS FMCG**” is based on my own work carried out during the course of my study under the supervision of **PROF. KIRAN SHAW**

I asset that the statement made and conclusion drawn are an outcome of my project work. I further declare that to be best of my knowledge and belief that the project report does not contain any part of any work which has been submitted for the award of any other degree certificate in this university or any other university.

Signature of student

**(salman shaikh)**

The S.I.A College of higher education

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# CERTIFICATE

This is to certify that MR. SALMAN SHAIKH student of Bachelor of management studies semester VI 2018-2019 Seat no.MF16046 has successfully completed his project work on “EQUITY RESEARCH ON FAST MOVING CONSUMER GOODS (FMCG)” under the guidance of PROF. KIRSN SHAW as per the Mumbai university syllabus.

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COURSE CORDINATOR

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PROJECT GIDE

---

EXTERNAL EXAMINAR

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PRINCIPAL

# **ACKNOWLEDGEMENT**

I would like to acknowledge the following as being idealistic channel and fresh dimensions in the completion of the project.

I take this opportunity to thank my **University of Mumbai** for giving me chance to do this project.

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I would also like to express my sincere gratitude towards my project guide

**PROF. KIRAN SHAW** whose guidance and care made the project successful.

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## **Chapter 1**

### **Executive Summary**

The Project is associated with Birla Sun life Insurance Pvt Ltd., it's an insurance firm. This Project is a study of stock market. The stock market is a lucrative option of investment which is usually ignored by the investors due to fear of high risk. Equity research plays a very critical role that fills the information gap between the buyers and sellers of shares. Since the individual or Institution may not have the resources to analyse each work.

This project aims to analyse the FMCG sector and to identify the stocks from large cap and mid cap companies. For this purpose, an analysis of 8 FMCG companies namely VST Industries Ltd., Colgate-Palmolive (India) Ltd., ITC Ltd., KRBL Ltd., Britannia Industries Ltd., P&G Hygiene & Health Care Ltd., Hatsun Agro Products Ltd., and Gillette India Ltd. has been carried out with the help of various tools like fundamental and technical analysis.

The study also reveals the performance of the company over the years there by helping the investors to take his/her investment decisions.

This project helps to identify the best stock that an individual can invest in FMCG sector.

## Chapter 2

### Introduction

#### 2.1 Introduction to Subject

##### What is Equity?



In accounting and finance, equity is the difference between the value of the assets and the cost of the liabilities of something owned. For example, if someone owns a car worth \$15,000 but owes \$5,000 on a loan against that car, the car represents \$10,000 equity. Equity can be negative if liability exceeds assets.

Equity is the Ownership interest or claim of a holder of common stock (ordinary shares) and some types of preferred stock (preference shares) of a company. On a balance sheet, equity represents funds contributed by the owners (stockholders) plus retained earnings or minus the accumulated losses. In other words, Net worth of a person or company computed by subtracting total liabilities from the total assets. In case of cooperatives, equity represents members' investment plus retained earnings or minus losses.

Equity is important because it represents the real value of one's stake in an investment. Investors who hold stock in a company are usually interested in their own personal equity in the company, represented by their shares. Yet, this kind of personal equity is a function of the total equity of the company itself, so a shareholder concerned for their



own earnings will necessarily be concerned for the company itself. Owning stock in a company over time will ideally yield capital gains for the shareholder, and potentially dividends as well. It also often bestows upon the shareholder, the right to vote in Board of Directors elections, and all of these benefits further promote a shareholder's concern for the company, both through continued involvement and through personal gain.

### **What is Equity Research?**



Equity research is the study of equities or stocks for the purpose of investments. Equity research is what an equity research analyst does. In simpler terms, equity research is the act of gathering information:

- information that helps investors to decide where to put in their money;
- information that traders require to understand whether to enter or exit a market position;
- information that financiers (bankers and firms) need to evaluate companies.

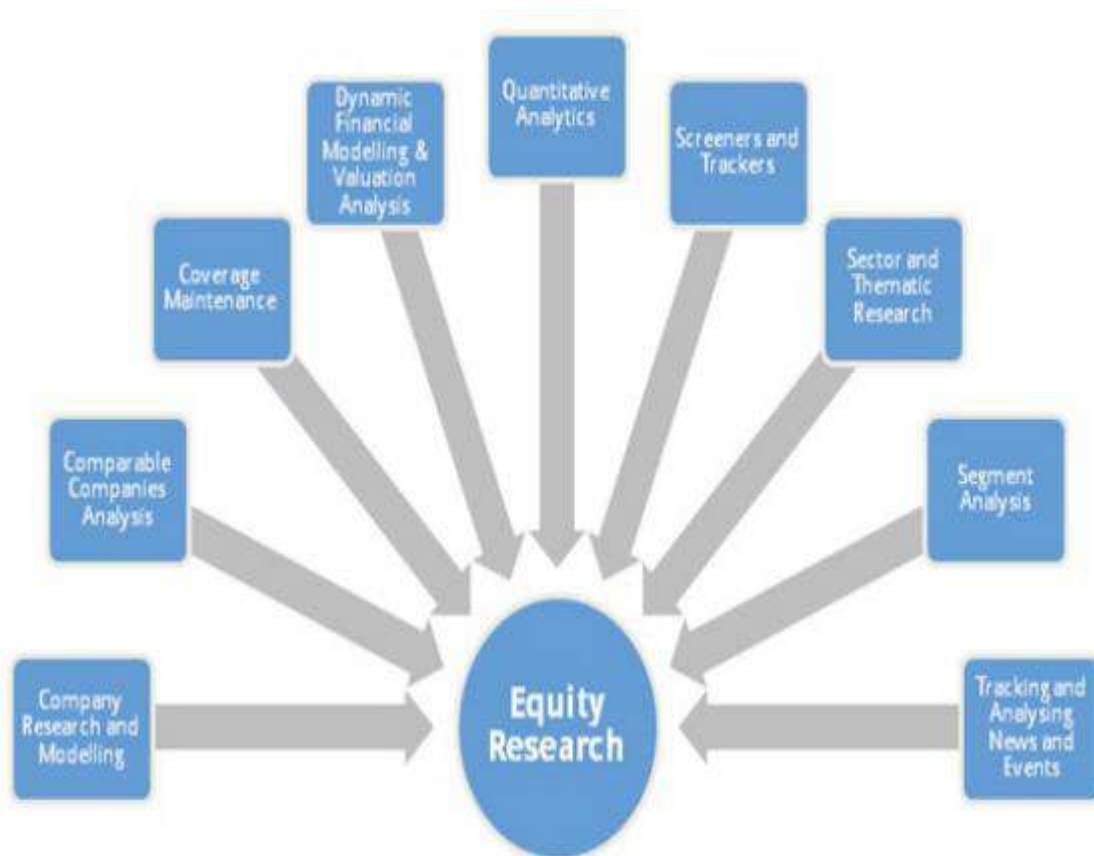
Equities or common stock comprises a big chunk in any company's capital and shareholders need to know whether to stay invested in the company or sell the shares and

come out. Both the buy-side and the sell-side companies invest in maintaining an equity research division. This research may also include bonds and commodities.

The function of the equity researcher is to present a detailed analysis of a company, enabling investors to make an informed decision.

The research report is used by investment banks and private equity firms to evaluate the company for IPO, LBO, mergers and others.

For an investment bank, the equity research segment produces revenue as buy-side firms pay the equity research team to delve into its records and analyse information.



As an individual, it is time-consuming to do equity research, that is, to study the company, its financial statements, products, management and take a decision about investment. Exactly for the same reason, there are people working in research companies whose job is to do equity research and recommend companies for investment.

The application of equity research varies. Primarily, equity research is used in the mutual funds industry, investment evaluation, merger and acquisition deals, financial publications and charitable endowments.

### **Purpose of Equity Research**

As stated before, the purpose of equity research is to study companies, analyse financials and look at quantitative and qualitative aspects, helping investors of varying degrees to make an informed decision. As the name suggests, 'research' plays the most important role here. Over the years, research methods have changed but the sole intention of research remains the same.

The number of investors is booming and so is the need for exploring the nature of investments. Investors wish to take calculated and informed decisions, and this is where the role of equity research begins. The purpose of equity research and the researcher is manifold. To begin with, one gathers and analyses industry data and financial models of a specific company or an industry.

It also involves understanding current market trends, both from the perspectives of macro economy and micro economy, and report findings. Since the equity research targets a specific audience, it is necessary to tailor the findings to the audience demand.

Further, adequate stress is laid on the accuracy of information. If investors take actions based on any kind of misinformation or misrepresentation, losses are tremendous and harmful to both the investor and the company. Therefore, equity analysts spend a considerable amount of time analyzing stocks and valuating estimates.

### **Role of Equity Research**

- Equity Research plays a very critical role that fills the information gap between the buyers and sellers of shares.
- Reason is that at all levels (individual or institutional) may not have the resources or the capabilities to analyse every stocks.
- Additionally, full information is not provided by the management due to which further in-efficiencies are created and stocks trade below or above the fair value.
- Equity Research analyst spend lot of time, energy and expertise to analyse stocks, follow news, talking to the management and provide an estimate of stock valuations.
- Also, equity research tries to identify the value stocks out of the massive ocean of stocks and help the buyers to generate profits.

### **Fundamental Analysis**

Fundamental analysis is the cornerstone of investing. In fact, some would say that you aren't really investing if you aren't performing fundamental analysis. Because the subject is so broad, however, it's tough to know where to start. There are an endless number of investment strategies that are very different from each other, yet almost all use the fundamentals.

The goal of this tutorial is to provide a foundation for understanding fundamental analysis. It's geared primarily at new investors who don't know a balance sheet from an income statement. While you may not be a "stock-picker extraordinaire".

The biggest part of fundamental analysis involves delving into the financial statements. Also known as quantitative analysis, this involves looking at revenue, expenses, assets, liabilities and all the other financial aspects of a company. Fundamental analysts look at this information to gain insight on a company's future performance. But there is more than just number crunching when it comes to analysing a company. This is where qualitative analysis comes in - the breakdown of all the intangible, difficult-to-measure aspects of a company.

Fundamental analysis is performed on historical and present data, but with the goal of making financial forecasts. There are several possible objectives:

- To conduct a company stock valuation and predict its probable price evolution.
- To make a projection on its business performance,
- To evaluate its management and make internal business decisions,
- To calculate its credit risk.

Fundamental analysis includes:

- 1) Economic analysis
- 2) Industry analysis
- 3) Company analysis

On the basis of this three analysis the intrinsic value of the shares are determined. This is considered as the true value of the share. If the intrinsic value is higher than the market price it is recommended to buy the share but if it is equal to market price hold the share and if it is less than the market price sell the shares.

## **Technical Analysis**

Technical analysis is the examination of past price movements to forecast future price

movements. Technical analysts are sometimes referred to as chartists (technician) because they rely almost exclusively on charts for their analysis. Technical analysis is a security analysis methodology for forecasting the direction of prices through the study of past market data, primarily price and volume.

Technical analysis is the study of market action, primarily through the use of charts, for the purpose of forecasting future price trends. Technical analysis considers only the actual price behaviour of the market or instrument, based on the premise that price reflects all relevant factors before an investor becomes aware of them through other channels.

Despite all the fancy and exotic tools it employs, technical analysis really just studies supply and demand in a market in an attempt to determine what direction, or trend, will continue in the future. In other words, technical analysis attempts to understand the emotions in the market by studying the market itself, as opposed to its components. If you understand the benefits and limitations of technical analysis, it can give you a new set of tools or skills that will enable you to be a better trader or investor.

The Psychology of Technical Analysis, Tony Plummer paraphrases Oscar Wilde by stating, “A technical analyst knows the price of everything, but the value of nothing”. Technicians, as technical analysts are called, are only concerned with two things:

1. **What is the current price?**
2. **What is the history of the price movement?**

The price is the end result of the battle between the forces of supply and demand for the company's stock. The objective of analysis is to forecast the direction of the future price. By focusing on price and only price, technical analysis represents a direct approach. Fundamentalists are concerned with why the price is what it is. For technicians, the why portion of the equation is too broad and many times the fundamental reasons given are highly suspect. Technicians believe it is best to concentrate on what and never mind why. Why did the price go up? It is simple, more buyers (demand) than sellers (supply). After all, the value of any asset is only what someone is willing to pay for it.



## **2.2 Introduction to Project**

### **Equity Research on FMCG Sector**

The main aim of the project is to study the listed stocks of FMCG Sector. This objective can be attained through fundamental and technical analysis. Each investment has its own pros and cons. Some options give higher returns corresponding with higher risks.

In order to achieve this objective an in depth analysis has to be performed by understanding and comparing the financial statements of the leading FMCG companies.

For this purpose, analysis of 8 FMCG companies namely VST Industries Ltd., Colgate-Palmolive (India) Ltd., ITC Ltd., KRBL Ltd., Britannia Industries Ltd., P&G Hygiene & Health Care Ltd., Hatsun Agro Products Ltd., Gillette India Ltd. have done. This shall help the prospective investors in making a fair judgment with regards to his/her investment decision.

### 2.3 Introduction to Sector / Industry



**Fast Moving Consumer Goods (FMCG)** goods are popularly named as Consumer Packaged Goods (CPG). *This* industry primarily deals with the production, distribution and marketing of consumer packaged goods. The Fast Moving Consumer Goods (FMCG) are those consumables which are normally consumed by the consumers at a regular interval. Some of the prime activities of FMCG industry are selling, marketing, financing, purchasing, etc. The industry also engaged in operations, supply chain, production and general management.

FMCG have a short shelf life, either as a result of high consumer demand or because the product deteriorates rapidly. Some FMCGs, such as meat, fruits and vegetables, dairy products, and baked goods, are highly perishable. Other goods, such as alcohol, toiletries, pre-packaged foods, soft drinks, chocolate, candies, and cleaning products, have high turnover rates. The sales are sometimes influenced by some holidays and season.

Though the profit margin made on FMCG products is relatively small (more so for retailers than the producers/suppliers), they are generally sold in large quantities; thus, the cumulative profit on such products can be substantial. FMCG is a classic case of low margin and high volume business.

### **Rural – set to rise**

Rural areas expected to be major driver for FMCG, as growth continues to be in high in these regions. Rural areas saw a 16 per cent, as against 12 per cent rise in urban areas. Most companies rushed to capitalise on this, as they quickly went about increasing direct contribution and providing better infrastructure. Companies are also working towards creating specific products specially targeted for the rural market.

The Government of India has been supporting the rural population with higher minimum support prices (MSPs), loan waivers, and disbursement through the National Rural Employment Guarantee Act (NREGA) programme. These measures have helped in reducing poverty in rural India and given a boost to rural purchasing power.

Hence rural demand is set to rise with rising incomes and greater awareness of brands.

### **Urban trends**

With rise in disposable incomes, mid and high income consumers in urban areas have shifted their purchasing trends from essential to premium products. In response firms have started enhancing their premium product portfolio. Indian and multinational FMCG players are leveraging India as a strategic sourcing hub for cost competitive product development and manufacturing to cater to international markets.

### **FMCG industry economy**

FMCG industry provides a wide range of consumables and accordingly the amount of money circulated against FMCG products is also very high. The competition among FMCG

manufacturers is growing and as a result of this, investment in FMCG industry is also increasing. FMCG industry is regarded as the largest sector in New Zealand which accounts for 5% of Gross Domestic Product (GDP).

The Indian FMCG sector with a market size of US\$14.8 billion is the fourth largest sector in the economy. The FMCG market is set to double from USD 14.7 billion in 2008-09 to USD 30 billion in 2012. FMCG sector will witness more than 60 per cent growth in rural and semi-urban India by 2010. Indian consumer goods market is expected to reach \$400 billion by 2010. Hair care, household care, male grooming, female hygiene, and the chocolates and confectionery categories are estimated to be the fastest growing segments. At present, urban India accounts for 66% of total FMCG consumption, with rural India accounting for the remaining 34%. However, rural India accounts for more than 40% consumption in major FMCG categories such as personal care, fabric care, and hot beverages. In urban areas, home and personal care category, including skin care, household care and feminine hygiene, will keep growing at relatively attractive rates. Within the foods segment, it is estimated that processed foods, bakery, and dairy are long-term growth categories in both rural and urban areas. The growing incline of rural and semi-urban folks for FMCG products will be mainly responsible for the growth in this sector, as manufacturers will have to deepen their concentration for higher sales volumes.

### **Leading FMCG companies**

The top ten India FMCG brands are:

1. Hindustan Unilever Ltd.
2. ITC (Indian Tobacco Company)
3. Nestle India
4. GCMMF (AMUL)
5. Dabur India
6. Asian Paints (India)

7. Cadbury India
8. Britannia Industries
9. Procter & Gamble Hygiene and Health Care
10. Marico Industries

As per the analysis by ASSOCHAM, Hindustan Unilever Ltd & Dabur India originates half of their sales from rural India. While Colgate Palmolive India and Marico constitutes nearly 37% respectively, however Nestle India Ltd and GSK Consumer drive 25 per cent of sales from rural India.

### **Economic Contribution**

#### **Employment**

Direct employment is estimated at approximately 6% of turnover, i.e. US\$ 1.5 billion<sup>4</sup> (Rs. 7,000 crores)

Approximately 12-13 million retail stores in India, out of which 9 million are FMCG kirana stores. Thus the sector is responsible for the livelihood almost 13 million people

#### **Fiscal Contribution**

Cascading Multiple Taxes by the FMCG sector (Import duty, service tax, CST and income tax). 30% revenue of the sector goes into both direct indirect taxes. Estimated size of \$25 billion (Rs. 120,000 crores), that would constitute to a contribution to the exchequer of approximately US\$ 6.5 billion (Rs. 31,000 crores).

#### **Social Contribution**

Create employment with people with lower educational qualifications. FMCG firms have also undertaken some specific projects to integrate with upcountry and rural areas for both inputs and for distribution as well as to fulfil CSR.

### **Some examples:**

**ITC eChoupal and ChoupalSagar:** - Sells both agricultural inputs and daily needs products. ITC's rural e-network enables farmer connectivity and provides an easy way for farmers to get better profitability and control through access to timely information.

**HUL's Shakti Amma network:** - HUL pioneered a rural entrepreneurship model amongst who became HUL distributors.

**Dabur India:** - Regularly conducts rural and adult education programmes and provides training in rural areas to facilitate employability.

### **SWOT Analysis of FMCG Sector**

#### **Strengths**

- Low operational costs
- High turnover rate
- Presence of well-known brands in FMCG sector
- Worldwide distribution both in urban and rural areas

#### **Weakness**

- No entry barriers, therefore, number of products are entering the market
- Low scope of investing in technology and achieving economies of scale, especially in small sectors.

#### **Opportunities**

- Untapped rural market
- Large domestic market – a population of over one billion
- Export potential

#### **Threats**

- Intense competition amongst FMCG companies



- Removal of import restrictions resulting in replacing of domestic brands
- Slowdown in rural demand

### **Market potentiality of FMCG industry**

Some of the merits of FMCG industry, which made this industry as a potential one are low operational cost, strong distribution networks and presence of renowned FMCG companies. Population growth is another factor which is responsible behind the success of this industry.

### **Job opportunities in FMCG industry**

FMCG industry creates a wide range of job opportunities. This industry is a stable, diverse, challenging and high profile industry providing a wide range of job categories like sales, supply chain, finance, marketing, operations, purchasing, human resources, product development and general management.

### **Road Ahead**

FMCG brands would need to focus on R&D and innovation as a means of growth. Companies that continue to do well would be the ones that have a culture that promotes using customer insights to create either the next generation of products or in some cases, new product categories.

One area that we see global and local FMCG brands investing more in is health and wellness. Health and wellness is a mega trend shaping consumer preferences and shopping habits and FMCG brands are listening. Leading global and Indian food and beverage brands have embraced this trend and are focused on creating new emerging brands in health and wellness.

According to the PwC-FICCI report Winds of change, 2013: the wellness consumer, nutrition foods, beverages and supplements comprise a INR 145 billion to 150 billion market in India, is growing at a CAGR of 10 to 12%.

#### **2.4 Introduction to Company**



Established in 2000, Birla Sun Life Insurance Company Limited (BSLI) is a joint venture between the Aditya Birla Group, a well-known and trusted name globally amongst Indian conglomerates and Sun Life Financial Inc., leading international financial services organization from Canada. The local knowledge of the Aditya Birla Group combined with the domain expertise of Sun Life Financial Inc., offers a formidable protection for its customers' future.

With an experience of over 10 years, BSLI has contributed significantly to the growth and development of the life insurance industry in India and currently ranks amongst the top 5 private life insurance companies in the country.

Known for its innovation and creating industry benchmarks, BSLI has several firsts to its credit. It was the first Indian Insurance Company to introduce "Free Look Period" and the same was made mandatory by IRDA for all other life insurance companies. Additionally, BSLI pioneered the launch of Unit Linked Life Insurance plans amongst the private players in India. To establish credibility and further transparency, BSLI also enjoys the prestige to be the originator of practice to disclose portfolio on monthly basis. These category development initiatives have helped BSLI be closer to its policy holders' expectations, which gets further accentuated by the complete bouquet of insurance products (viz. pure term plan, life stage products, health plan and retirement plan) that the company offers.

Birla Sun Life Insurance Company Limited (BSLI) is a joint venture between the Aditya Birla Group, a well-known Indian conglomerate and Sun Life Financial Inc., one of the leading international financial services organizations from Canada. With an experience of over a decade, BSLI has contributed to the growth and development of the Indian life insurance industry and is currently one of the leading life insurance companies in the country. BSLI has a customer base of over two million policy holders. The Company offers a complete range of offerings comprising protection solutions, children' future solutions, wealth with protection solutions, health and wellness solutions, retirement solutions and savings with protection solutions. It has an extensive distribution reach in over 500 cities through its network of over 560 branches, 85,000 empanelled advisors and over 140 partnerships with corporate agents, brokers and banks. Birla Sun Life Insurance has total

assets under management of Rs.26813 Crores and a robust capital base of over Rs.2170 Crores, as on 30th Jun, 2014.

## **VISION**

To be a leader and role model in a broad based and integrated financial services business. Its vision is - "To actively contribute to the social and economic development of the communities in which we operate. In so doing build a better, sustainable way of life for the weaker and marginalized sections of society and raise the country's human development index."

## **MISSION**

To help people mitigate risks of life, accident, health, and money at all stages and under all circumstances. Enhance the financial future of our customers including enterprises. They believe in the trusteeship concept. This entails transcending business interests and grappling with the "quality of life" challenges that underserved communities face, and working towards making a meaningful difference to them.

## **VALUES**

- Integrity
- Commitment
- Passion
- Seamlessness
- Speed

Aditya Birla Financial Services Group (ABFSG) ranks among the top 5 fund managers in India (excluding LIC) with an AUM of USD 20.4 billion. Having a strong presence across the life insurance, asset management, NBFC, private equity, retail broking,

distribution & wealth management, and general insurance broking businesses, ABFSG is committed to serve the end-to-end financial services needs of its retail and corporate customers. The seven companies representing ABFSG are: Birla Sun Life Insurance Company Ltd., Birla Sun Life Asset Management Company Ltd., Aditya Birla Finance Ltd., Aditya Birla Capital Advisors Pvt. Ltd., Aditya Birla Money Ltd., Aditya Birla Money Mart Ltd. and Aditya Birla Insurance Brokers Ltd. In FY 2013-14, ABFSG reported consolidated revenue from these businesses at Rs. 6,640 Crore (USD 1.1 billion) and earnings before tax at Rs. 745 Crore. Anchored by about 13,000 employees and trusted by over 5.3 million customers, ABFSG has a nationwide reach through 1,500 points of presence and about 130,000 agents / channel partners.

Celebrating 150 years in 2015, Sun Life Financial is a leading international financial services organization providing a diverse range of protection and wealth products and services to individuals and corporate customers. Sun Life Financial and its partners have operations in a number of markets worldwide, including Canada, the United States, the United Kingdom, Ireland, Hong Kong, the Philippines, Japan, Indonesia, India, China, Australia, Singapore, Vietnam, Malaysia and Bermuda. As of September 30, 2015, the Sun Life Financial group of companies had total assets under management of \$846 billion.

Sun Life Financial Inc. trades on the Toronto (TSX), New York (NYSE) and Philippine (PSE) stock exchanges under the ticker symbol SLF.

## **Future**

### **BUSINESS CONTINUITY PLAN**

Birla Sun Life Insurance is one of the few Indian companies to have a fully operational Business Continuity Plan (BCP) to ensure minimal impact to the organisation, its people, and most importantly, its customers. Our Business Continuity Planning (BCP) Program is a response plan which would ensure that in the event of a disaster we would be able to restore and recover operations for critical processes within a predetermined time after the disaster.

## **BSLI'S BUSINESS CONTINUITY MANAGEMENT POLICY**

To have a planned response in the event of any contingency ensuring recovery of critical activities at agreed levels within agreed timeframe thereby complying with various regulatory requirements and minimizing the potential business impact to BSLI. Additionally, to create a system that fosters continuous improvement of business continuity management.

## **BUSINESS CONTINUITY MANAGEMENT SYSTEM (BCMS) OBJECTIVES:**

The objectives of BSLI's BCMS are as follows:

- Ensuring a Proactive response to any contingency
- Ensuring recovery of identified critical activities within agreed timeframe.
- Ensuring that we adhere to our clients, contractual, legal & regulatory requirements.

## **PROGRAMME OVERVIEW**

As part of our Business Continuity Plan, we have a documented crisis response and recovery procedure for quick response and stabilization of the situation, and a business continuity procedure to ensure recovery.

## **HIGHLIGHTS OF PLAN DOCUMENT:**

- Alternate recovery sites if primary location is unavailable
- Assurance to customers that they will continue to receive optimum customer services at all times
- Communication with customers, employees and other stakeholders
- Crisis Management & incident response



- Data back-up, data and system recovery
- Recovery of all mission-critical business functions and supporting systems

### **Chapter 3**

#### **Project Details**

#### **3.1 Objective of the Study**

- To identify the undervalued stocks in FMCG sector.
- To create a portfolio in order to choose the best performing stocks and thereafter analyse the trend of stock growth or performance.

### **3.2 Limitations of the study**

- The study is restricted only to FMCG sector.
- The performance of the stock is particular as on that date.
- The trend change is based on assumptions.
- Limited knowledge of Technical Analysis in short span of time.

**Chapter 4**  
**Review of Literature**

**SUPPLIER LED NEW PRODUCT DEVELOPMENT PROCESS IMPROVEMENT IN  
THE UK FAST MOVING CONSUMER GOODS INDUSTRY**

A number of research reviews and evaluations have been written to summarize and characterize the very extensive literature that exists on organizational innovation. Among these, Wolf (1994) identifies a distinct stream of research he calls [NPD] process theory that aims to establish the processes that organizations adopt and factors they consider when

implementing innovations. This stream contains a large technical component that is characterized by its focus on the product development phase of the wider innovation process, along with the applied nature of the underlying research (Francis, 2006). The quantification of new product success rates and isolation of the key factors or determinants that are associated with the probability of launching a successful new product (“separating the winners from the losers”) forms an established research topic within this body of technical NPD literature (Chroner, 2006). Authors such as Barclay *et al.* (2000) in the UK have adopted such an approach. However, it is the cadre of academics associated with the US-based Product Development Management Association (PDMA) that have been particularly influential on this topic, with notable contributions by Cooper (1988), Cooper and Edgett (2005), Cooper and Kleinschmidt (1993, 1995), Griffin (1997), Griffin and Page (1996) and Rosenau *et al.* (1996). This PDMA-school agree on the importance of a strong market orientation to all development projects, which need to be market driven and customer focused; the most important success factor being the need to commercialize a “unique and superior product” developed in response to the “voice of the customer” in order to achieve widespread market acceptance. Clearly, categorization of the newness (novelty) and definition of relative success or failure of developed products forms an important adjunct to such work. Within the innovation literature, newness is typically expressed as ranging between incremental to radical or transformational (Tidd *et al.*, 2001) and has been used as a basis of typologies for classifying individual NPD project types. The most influential such typology within the technical NPD literature is that proposed by Booz Allen and Hamilton (1982). This considers the perceived newness of the product to both the market and innovating company and has been used repeatedly as a framework for research design (Griffin and Page, 1996). Using this in their influential study of measures of new product success and failure, Griffin and Page (*opcit.*) conclude that determining the level of success of an individual NPD project is a multi-faceted exercise that must consider them measurement of three independent dimensions. Their first two dimensions of NPD performance are based respectively on consumer performance (was it a marketplace success in terms of demand and longevity?) and financial performance (was it profitable?) and amount to that project’s commercial success. The third dimension is technical or process-based. This involves measuring intrinsic, operational performance criteria such as time-to-market and development cost. PDMA-school research is premised upon the existence of an underlying stage gate process model (Cooper, 1988) whereby “go” (proceed downstream) and “kill” (drop the project) decisions are made at formal review points throughout the

process. Two particular performance measures have been emphasized. The first is the success and failure rate as a percentage of all products launched. The second is the percentage of all development projects that are killed per process stage, along with the ratio of developed projects per resultant commercial success. These measures reveal the influence of the BoozAllen and Hamilton, whereby an attempt is made to screen-out the new product ideas and concepts that are likely to result in commercial failure (“losers”) at the earliest possible process stage, and hence influence the profile of the mortality curve. The underlying logic of this conventional approach is that the most expensive NPD mistake is the selection of an imperfect opportunity, and this is best avoided by adding more review points to the fuzzyfront *end* (opportunity identification through concept development) portion of the process

### **The Impact of Marketing Variables on Business Performance: An Analysis of FMCG, Consumer Durables and Textile Industries-Shweta Singh**

Sales of any brand are influenced by many factors, of which brand’s advertising expenditure is the most significant one. Other than brand’s advertising expenditure, there are other marketing variables such as pricing, product quality, new variety introductions, distribution, and dealer activities which also affect the sales of the company. Industry factors such as the product’s primary demand and competitors’ activities also play an important role in influencing the sales of any brand. The first two categories consist of variables that are controllable to a great extent by the firm, whereas the third category represents factors that are not. The interaction of marketing mix variables has been studied extensively in marketing literature. The focus has been on how marketing variables affect competition, and central to this issue is the impact of advertising on price elasticity (Omstein, 1977; and Coma nor *et al.*, 1979). Several studies have been done by researchers to find the relationship between the firm level variable and sales. Stewart (1996) examined a model on the data taken from the Canadian automobile market, which used three explanatory variables to explain variation in the ratio of promotional expenditure to sales. These are market share, market growth and the interaction between both. They concluded that the expenditure on promotional activity is clearly an important element in the total marketing costs incurred by many organizations. Dekimpe and Hanssens (1995) found that marketing efforts do affect the long-term trends in sales of a firm. They had introduced persistence modelling to derive long-term marketing

effectiveness from time series observations on sales and marketing expenditures taking the example of sales and media spending for a chain of home-improvement store. A similar study was done by Bawa and Shoemaker (1987) where they analysed the impact of sales promotion activities on customers' brand choice behaviour. Their analysis showed the positive long-term and short term effects on the brand choice behaviour of customers. Later on, Jones (1989) also conducted a similar study to identify the impact of both long-term and short-term promotion activities on sales by multivariate techniques. The results showed that the impact is greater in the short term than the long term. Butters (1977) discussed the effect of advertising expenses on sales. He used the sales density model that clearly demonstrated the effect of advertising expenses and distribution expenses on sales. Farris *et al.* (1989), using the push-pull model of distribution and market share, studied the relationship between distribution and market share. They developed an aggregate level model of distribution and market share for frequently purchased branded consumer goods. The model makes a key distinction between uncompromised and compromised demand as sources of market share. Using a variety of model assumptions, their results are consistent with longitudinal and cross-sectional evidence which prove that market share is a convex function of distribution, increasing at a rate up to 100% distribution. Ogbonna and Wilkinson (1996) conducted a survey to analyse the relationships between food manufacturers and retailers. The results showed that the relationship between the food manufacturers and retailers are more complex than the general belief of partnerships. According to Kuvykaite *et al.* (2009), packaging performs an important role in marketing communications, especially in the point of sale and could be treated as one of the most important factors influencing consumer's purchase decision thereby affecting the sales of the product. The increased interest in packaging as a tool of sales promotion and stimulator of impulsive buying behaviour is mainly due to changing lifestyles. Oppong-Adade (2010) conducted a study on Ghana Telecommunication Company for examining the relationship between marketing expenditure and sales. Regression analysis was carried out to measure the relationship between the dependent variable (sales) and the independent variables (customer care expenditure, product development expenditures, distribution expenditure and marketing communication expenditure). The result revealed that there is a positive relationship between marketing expenditure and sales.



**- Hitesh J Shukla**

The present study aims at examining the governance practices prevailing in the prominent companies of the Indian Fast Moving Consumer Goods (FMCG) sector within the Indian regulatory framework. The study also aims at assessing the substance and quality of reporting of the corporate governance practices in annual reports. The study includes four renowned companies in the FMCG sector—Hindustan Unilever Ltd., ITC Ltd., Nestle (India) Ltd. and Tata Tea Ltd. For this purpose, parameters include the statutory and non-mandatory requirements stipulated by the revised Clause 49 of the listing agreement, as prescribed by the Securities and Exchange Board of India (SEBI) and relative amendments in the Companies Act, 1956. It has been observed that among the four renowned FMCG companies, ITC scored the highest points, followed by Tata Tea, HUL and Nestle. ITC, Tata Tea and HUL figured in the criteria of Very Good and Nestle figured in the criteria of Good. Globalization, to become successful, has to be preceded by good governance. The key principle for success is to ensure that growth is sustained and shared. Sustained, in that, it is robust and can withstand shock and shared, in that, it brings prosperity to many, rather than the few. There are many players involved in good (corporate) governance—owners, shareholders, board of directors, managers and employees. They are the internal architecture. The external architecture comprises the legal and statutory requirements, regulatory standards, stock markets, government policies, media, reputation, and agents such as standards and accounting bodies, all of which affect the corporation's credibility and stock value. The present study aims at examining the governance practices prevailing in the corporate sector within the Indian regulatory framework using the case study method. The study was conducted to assess governance practices and processes followed by Indian corporate houses. The study also aims at quantitatively assessing the substance and quality of reporting of corporate governance practices in annual reports. The study was conducted on four renowned companies in the FMCG sector—Hindustan Unilever Ltd. (HUL), ITC Ltd. (ITC), Nestle (India) Ltd. and Tata Tea Ltd. The broader objective of the study was to evaluate the state of compliance of the various governance parameters in these companies. The parameters include the statutory and non-mandatory requirements stipulated by the revised Clause 49 (which specifies the corporate governance practices to be followed by the listed companies) of the listing agreement, as prescribed by Securities and Exchange Board of India (SEBI) and relative amendments in the Companies Act, 1956.

## **Chapter 5**

### **Methodology**

#### **Market Capitalization**

Market Capitalization is the aggregate valuation of the company based on its current share price and the total number of outstanding stocks. It is calculated by multiplying the number of shares outstanding by the share price of the company's stock. The number of shares outstanding is reported on a quarterly basis, but the price of the stock can change from minute to minute. The value of market capitalization is as fluid as the market price.

For example, a company with 10 billion shares outstanding trading at a price of \$10 per share has a market capitalization of \$100 billion. Likewise, a company with 100 billion shares outstanding, and trading at a price of \$1, also has a market capitalization of \$100 billion.

#### **Market Capitalization Categories**

In general, stocks are lumped into three categories of capitalization: large cap, mid cap and small cap. A large-cap company has a market capitalization over \$5 billion. A mid-cap company has a market capitalization between \$1 billion and \$5 billion, and a small-cap company has less than \$1 billion in market capitalization. In general, small caps also have

lower trading liquidity, less access to the capital markets and less experience, and there's less information available about small caps than large caps.

Due to their size, large-cap stocks are generally believed to be safer, but they may not offer the same opportunities for growth as small-cap and mid-cap stocks. Financial advisors suggest diversifying an investment portfolio by including small-cap, mid-cap and large-cap stocks, especially for investors with long-term investment horizons.

For study of this project Large-cap and mid-cap companies are taken into consideration. List of selected companies are as follows:

- 1) Britannia Industries Ltd.
- 2) Colgate-Palmolive (India) Ltd.
- 3) ITC Ltd.
- 4) KRBL Ltd.
- 5) Procter & Gamble Hygiene & Health Care Ltd.
- 6) VST Industries Ltd.
- 7) Gillette India Ltd.
- 8) Hatsun Agro Products Ltd.

## **5.1 Data Collection Method**

### **Secondary**

This research includes the information collected widely through the secondary data. In order to analyse the performance of the selected companies (i.e. Britannia Industries Ltd., Colgate-Palmolive (India) Ltd. ITC Ltd., KRBL Ltd., Procter & Gamble Hygiene and Health Care Ltd., VST Industries Ltd., Gillette India Ltd., Hatsun Agro Products Ltd.) the details of the company are obtained from the websites of the respective company. These companies were selected after evaluating the overvalued and undervalued stocks in the FMCG Sector as on 24<sup>th</sup> June 2016.

This report includes tools like Fundamental and Technical Analysis that has been used in order to evaluate the best performing stock among the portfolio created. The analysis

includes use of ratios, candlestick chart and graphs to identify the stocks trend over a period of time.

## **5.2 Research Tools**

- Annual Report of the companies
- Company Corporate Presentations
- Industry Reports
- Live Market Report
- Statistical data

The purpose is to predict future performance of companies and accordingly inform prospective investors.

For this purpose, fundamental analysis has been done to see analyses companies' future performance based on current trends and future predictions. Fundamental Analysis is done to see how the companies' assets are valued and have an opportunity to grow. An industry analysis is also done to understand the working of the industry.

## **Introduction to research companies**

### **Britannia**

A Britannia industry Limited is an Indian company based in Kolkata that is famous for its Britannia and tiger brands of biscuits, which is highly recognized throughout the country. Britannia is India's largest biscuit firm, with an estimated 38% market share.

The company's principal activity is the manufacture and sale of biscuits, bread, Rusk, cakes and dairy products like cheese, butter and milk.

The Britannia's fame is largely acknowledged through the colourful Britannia logos that Indian cricketers such as VirenderSehwag and Rahul Dravid wear on their bats.

The company is a growing and profitable one. Between 1998 and 2001, the company's sales grew at a compound annual rate of 16% against the market, and operating profit reached 18%. More recently, the company has been growing at 27% a year, compared to the industry growth rate of 20%. At Present, 90% of Britannia's annual revenue of `2,200 Cr comes from biscuits.

### **Colgate**

Colgate is an oral hygiene product line of toothpaste, toothbrushes, mouthwashes and dental floss. Colgate toothpaste was first sold by the company in 1873, sixteen years after the death of the founder William Colgate.

Three fundamental values of this company – Caring, Global Teamwork and Continuous Improvement – are integrated to everything that they do.

From a modest start in 1937 when handcarts were used to distribute Colgate dental cream toothpaste. Colgate Palmolive (India) today has one of the widest distribution networks in India - logistical marvel that makes Colgate available in almost 5.0 million plus rental outlets across the country. The company has growth to a \* 4132 Cr organizations with an outstanding record of enhancing value for its strong shareholders base. The company leads the 5735 Cr. Indian toothpaste by holding 54.7% of the value market share.

### **ITC Limited**

ITC limited or ITC is an Indian conglomerate headquartered in Kolkata, West Bengal. Its diversified business includes 5 segments: FMCG, Hotels, Paperboards & Packaging, Agri Business & Information Technology.

ITC is today the only company in world to be carbon positive, water positive and solid waste recycling positive. Almost 40% of the energy consumed in the ITC is from renewable sources.

ITC owned “Chambal Agritech Ltd.”, an Australian “Technico PTY” subsidiary in May, 2008, diversifying its business portal & to develop synergy between Seed Potato Production and Chip stock supply. Later the name changed to “TechnicoAgri Sciences Ltd.” wholly owned subsidiary of ITC Ltd.

ITC’s equity shares are listed on Bombay Stock Exchange, National Stock Exchange of India and Calcutta Stock Exchange. The company’s Global Depository Receipts (GDRs) are listed on the Luxembourg Stock Exchange.

ITC’s production facilities and hotels have won numerous national and international awards for quality, productivity, safety and environment management systems. ITC was the first company in India to voluntarily seek a corporate governance rating.

### **KRBL**

With a 120 year heritage and an extended and an existence since 1889, KRBL Ltd. is India first integrated Rice Company with a company product chain.

At KRBL we have spent three generations perfecting the basmati grain. Its relationship with basmati farmers goes back in time-across generations actually. A farmer’s awareness of traditional knowledge and skills, experience in modern-day crop management practices, commitment to excellence and access to top grade inputs determines the quality of company harvest.

KRBL today stands at the top slot of the Indian rice industry, unmatched and unparalleled in every aspect. This company is equally committed to enhancing its capacity and introducing the latest milling techniques to the basmati industry. The result has been equally rewarding - having the largest installed capacity in the industry with quality certifications to ensure satisfactions to both the buyers and the eventual consumers.

Today, its flagship brand India gate is recognized both in India and abroad with strong presence and impressive market share. It has earned respect and patronage amongst consumers and retailers over the years and today it’s a matter of pride to be the preferred brand amongst global households.

### **Procter & Gamble Hygiene and Health Care Limited**



Procter & Gamble Hygiene and Health Care Limited is an India-based company engaged in the manufacturing and selling of branded packaged fast moving consumer goods in the femcare and healthcare businesses. The company is involved in manufacturing, trading and marketing of health and hygiene products.

The company's brand include AmbiPur, Ariel, Duracell, Gillette, Head & Shoulders, Olay, Oral-B, Pampers, Pantene, Tide, Vicks, Wella and Whisper. The company's products include ointments and creams, cough drops, tablets, personal products and toilet preparations, among others.

The company's products are sold through retail operations, including mass merchandisers, grocery stores, membership club stores, drug stores, department stores and high frequency stores. The company has its manufacturing locations at Goa and Baddi in Himachal Pradesh, apart from third-party manufacturing locations spread across India.

### **VST Industries Ltd.**

VST Industries Ltd. is a public conglomerate company headquartered in Hyderabad, India. The company manufactures and distributes cigarettes. Its Market Capitalization is 844.49, PE Value: 15.70 and Dividend: 5.49. The company has its registered office in Hyderabad. It started off as the formerly Vazir Sultan Tobacco Company, commonly known as VST and shares collaboration with British American Tobacco Company group of the United Kingdom. It is fully independent and registered as VST Industries Ltd in the year 1983.

### **Gillette**

Gillette India Ltd. is one of the well-known FMCG Company of India. The company's principal activity is to manufacture and market consumer products. The company has world's leading brands, namely Gillette Mach 3 turbo, oral – B and Duracell in their portfolio. The company operates three segments, namely personal grooming, oral care and portable power. Personal grooming segments include blades, razors and toiletries. An oral

care segment includes toothbrushes and oral care products. A portable power segment includes batteries, torches and lamps.

In 1999, Gillette, as a company, was worth US \$43 billion, and it was estimated that the brand value of Gillette was worth US \$16 billion. This equated to 37% of the company's value, which was the same as DaimlerChrysler, one of the world's largest car manufacturers at the time.

### **Hatsun Agro Product Limited**

Hatsun agro product Limited operates in the dairy sector. The company produces and sells milk, milk products, ice creams, beverages and dairy ingredients. Hatsun Agro products also offer milk under Arokya, HatsunSantosa and Hatsunkomatha brands. The company's milk products include cooking butter, cow ghee, butter milk, curd and paneer, which it offers under Arun brand name.

The company has tripled its total turnover over the past 3 years and is set to become the fastest growing dairy company in the world, with a record growth rate of 116% over the past 3 successive quarters.

During the Financial year 2011-12, the company grew at a rate of 23.6%. Future expansion plans in the Middle East and North Amerce has pushed the company towards capitalizing on these regions.

## **Chapter 6**

### **Analysis and Findings**

#### **6.1 Fundamental Analysis**

### **VALUATION OF STOCKS**

Valuation is the first step toward intelligent investing. When an investor attempts to determine the worth of her shares based on the fundamentals, it helps her make informed decisions about what stocks to buy or sell.

We have considered Large cap and Mid cap stocks from FMCG Sector for investment purpose (companies having market capitalization more than 5000 crore rupees are large cap companies and companies having market capitalization between 500-5000 crore rupees are mid cap companies). Then we decide whether stock is undervalued or overvalued based on sectorial P/E ratio. If P/E ratio of company is less than sectorial P/E then stock is considered as undervalued else it is overvalued.

<b>Companies</b>	<b>Market Price</b>	<b>EPS (FY15-16)</b>	<b>P/ERatio</b>	<b>Valuation</b>
<b>Britannia Industries Ltd.</b>	<b>2771.4</b>	<b>51.89</b>	<b>44.38</b>	<b>Undervalued</b>
<b>Colgate-Palmolive (India) Ltd.</b>	<b>908.7</b>	<b>41.1</b>	<b>42.89</b>	<b>Undervalued</b>
<b>Emami Ltd.</b>	<b>1087.25</b>	<b>20.78</b>	<b>75.56</b>	<b>Overvalued</b>
<b>Gillette India Ltd.</b>	<b>4528.85</b>	<b>48.52</b>	<b>61.61</b>	<b>Overvalued</b>
<b>Godrej Consumer Products Ltd.</b>	<b>1556.85</b>	<b>19.23</b>	<b>71.5</b>	<b>Overvalued</b>
<b>ITC Ltd.</b>	<b>366.3</b>	<b>12.23</b>	<b>28.69</b>	<b>Undervalued</b>
<b>KRBL Ltd.</b>	<b>286.25</b>	<b>11.93</b>	<b>20.36</b>	<b>Undervalued</b>
<b>Hatsun Agro Products Ltd.</b>	<b>443.5</b>	<b>7.59</b>	<b>80.02</b>	<b>Overvalued</b>
<b>Procter &amp; Gamble Hygiene &amp; Health Care Ltd.</b>	<b>6183.1</b>	<b>106.64</b>	<b>47.75</b>	<b>Undervalued</b>
<b>VST Industries Ltd.</b>	<b>1689.85</b>	<b>98.57</b>	<b>17.09</b>	<b>Undervalued</b>
<b>Sector P/E</b>			<b>48.985</b>	

**EPS:** Earnings per share (EPS) is the portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serves as an indicator of a company's

profitability. Earnings per share is generally considered to be the single most important variable in determining a share's price. It is also a major component used to calculate the price-to-earnings valuation ratio.

**P/E Ratio:**PR Ratio is one of the most widely used tools for stock selection. It is calculated by dividing the current market price of the stock by its earning per share (EPS). It shows the sum of money you are ready to pay for each rupee worth of the earnings of the company.

PE = Market Price / EPS.

### **VALUE PICK**

After valuation of stocks and bifurcating them into undervalued and overvalued stocks, to pick value stocks we consider undervalued stocks only. Then we check whether EPS of these stocks is increased or not compared to last year performance. If EPS is increased then we consider it as value pick for portfolio.

<b>Companies</b>	<b>EPS (FY14-15)</b>	<b>EPS (FY15-16)</b>	<b>Value Picks</b>
<b>Britannia Industries Ltd.</b>	30.83	51.89	√
<b>Colgate-Palmolive (India) Ltd.</b>	39.7	41.1	√
<b>ITC Ltd.</b>	11.99	12.23	√
<b>KRBL Ltd.</b>	11.25	11.93	√
<b>Procter &amp; Gamble Hygiene &amp; Health Care Ltd.</b>	93.04	106.64	√
<b>VST Industries Ltd.</b>	97.24	98.57	√

In the above table we can see that there is EPS growth of stock in all 6 companies, hence, we selected them all as value stocks.

### Growth Picks

For selecting growth picks we consider overvalued stocks only. Then we calculate PEG ratio for each stock. If PEG ratio is below 1 then we take it as growth stock in our portfolio.

Companies	P/E	EPS (FY14-15)	EPS (FY15-16)	Growth in EPS (%)	PEG Values	Growth Picks
Emami Ltd.	75.56	17.85	20.78	16.41456583	4.603228669	
Gillette India Ltd.	61.61	15.78	48.52	207.47782	0.296947404	√
Godrej Consumer Products Ltd.	71.5	16.59	19.23	15.91320072	4.493125	
Hatsun Agro Products Ltd.	80.02	4.15	7.59	82.89156627	0.965357558	√

In the above table we can see that PEG Values for Emami Ltd. & Godrej Consumer Products Ltd. are more than 1, hence, we do not consider them in our growth pick. On the other hand,

PEG Values for Gillette India Ltd. & Hatsun Agro Products Ltd. are less than 1, hence, they are considered in our growth portfolio.

### **RANKING OF STOCKS IN PORTFOLIO**

After selecting value picks and growth picks we rank them based on their dividend yield ratio, as FMCG companies distribute good amount of dividend to their investors.

<b>Companies</b>	<b>Dividend Yield Ratio</b>	<b>Ranking</b>
<b>Britannia Industries Ltd.</b>	1%	5
<b>Colgate-Palmolive (India) Ltd.</b>	2.64%	2
<b>ITC Ltd.</b>	1.70%	3
<b>KRBL Ltd.</b>	1.10%	4
<b>Procter &amp; Gamble Hygiene &amp; Health Care Ltd.</b>	0.49%	6
<b>VST Industries Ltd.</b>	4.13%	1
<b>Gillette India Ltd.</b>	0.33%	8
<b>Hatsun Agro Products Ltd.</b>	0.40%	7

## **6.2 TECHNICAL ANALYSIS**

### **1) Rounding bottom**

A chart pattern used in technical analysis, which is identified by a series of price movements that, when graphed, form the shape of a "U". Rounding bottoms are found at the end of extended downward trends and signify a reversal in long-term price movements. This



pattern's time frame can vary from several weeks to several months and is deemed by many traders as a rare occurrence.

### **BREAKING DOWN 'Rounding Bottom'**

A rounding bottom looks similar to the cup and handle pattern, but does not experience the temporary downward trend of the "handle" portion. The initial declining slope of a rounding bottom indicates an excess of supply, which forces the stock price down. The transfer to an upward trend occurs when buyers enter the market at a low price, which increases demand for the stock. Once the rounding bottom is complete, the stock breaks out and will continue in its new upward trend.

### **2) Cup with handle**

A pattern on a bar chart resembling a cup with a handle. The cup is in the shape of a "U" and the handle has a slight downward drift. The right-hand side of the pattern has low trading volume.

### **BREAKING DOWN 'Cup and Handle'**

A couple points on trying to detect cup and handles: Length - Generally, cups with longer and more "U" shaped bottoms, the stronger the signal. Avoid cups with a sharp "V" bottoms. Depth - Ideally, the cup should not be too deep. Also, avoid handles which are too deep since the handles should form in the top half of the cup pattern. Volume - Volume should dry up on the decline and remain lower than average in the base of the bowl. It should then increase when the stock finally starts to make its move back up to test the old high. Retest (of old high) - doesn't have to touch or come within a few ticks of old high. However, the further the top of the handle is away from the highs, the more significant the breakout needs to be.

### **3) Head and Shoulder Top**

In technical analysis, a head and shoulders pattern describes a specific chart formation that predicts a bullish-to-bearish trend reversal. The head and shoulders pattern is believed to be one of the most reliable trend reversal patterns. It is one of several top patterns that signal, with varying degrees of accuracy, that an upward trend is nearing its end.

#### **BREAKING DOWN 'Head and Shoulders Pattern'**

This pattern is comprised of three component parts:

1. After a long bullish trends, the price rises to a peak and subsequently declines to form a trough.
2. The price rises again to form a second high substantially above the initial peak and declines again.
3. The price rises a third time, but only to the level of the first peak, before declining once more.

The first and third peaks are shoulders, and the second peak forms the head. The line connecting the first and second troughs is called the neckline.

Head and shoulders patterns can also signal that a downward trend is about to reverse into an upward trend. In this case, the stock price reaches three consecutive lows, separated by temporary rallies. Of these, the second trough is the lowest (the head) and the first and third are slightly shallower (the shoulders). The final rally after the third dip signals that the bearish trend has reversed and prices are likely to keep moving up.

### **4) Head and shoulder Bottom**

An inverse head and shoulders is a chart pattern used in technical analysis to predict the reversal of a current downtrend. This pattern is identified when the price action of a security meets the following characteristics:

1. The price falls to a trough and then rises.
2. The price falls below the former trough and then rises again.
3. Finally, the price falls again, but not as far as the second trough.

Once the final trough is made, the price heads upward toward the resistance found near the top of the previous troughs. Investors typically enter into a long position when the price rises above the resistance of the neckline. The first and third troughs are considered shoulders, and the second peak forms the head.

### **BREAKING DOWN 'Inverse Head and Shoulders'**

As you can see from the chart above, a move above the resistance, also known as the neckline, is used as a signal of a sharp move higher. Many traders will watch for a large spike in volume to confirm the validity of the breakout. This pattern is the opposite of the popular head and shoulders pattern, but is used to predict shifts in a downtrend rather than an uptrend.

### **5) Double Top Pattern**

A double top is a term used in technical analysis to describe the rise of a stock, a drop, another rise to the same level as the original rise, and finally another drop. The double top looks like the letter "M". The twice touched high is considered a resistance level.

**Technical Analysis using Candlestick pattern in our portfolio.**

**1) Britannia Industries Ltd.**

## CHARTS ADVANCED CHARTS <sup>NEW</sup>



- The above chart shows Britannia Industries price movement over 5 years.
- In the chart the pattern observed was Double Top, which forms an “M” pattern.
- In this the top two high prices are marked and then the low points are connected.
- The high point connected are at around 3250 price and once the upper line is crossed the price of share will rise.

## 2) Colgate-Palmolive (India) Ltd.



- The above chart indicates the price movement of Colgate-Palmolive (India) Ltd.
- The pattern observed under this period is triple top made up of three equal highs followed by a break below support.
- Three highs are formed at around 750 and support break is at approx. 600.
- Triple tops usually form over a shorter time frame and typically arrange from 3 to 6 months; and a price target is less likely to be effective.

### 3) ITC Ltd.



## CHARTS ADVANCED CHARTS <sup>NEW</sup>



- The above chart is of ITC Ltd. Showing past price movement over 5 years.
- The pattern observed was Head and Shoulder top pattern. The neckline was formed at 200 connecting two low points. The head is pointed at price 250 and right shoulder is at 240 and the left shoulder is formed at around 230.
- After formation of head and shoulder there are possibilities that the price trend may move upward and downward. In the above chart the movement is downward which is an indication that sellers need to hold their shares up till the trend changes upward.

#### 4) KRBL Ltd.

CHARTS **ADVANCED CHARTS**<sup>NEW</sup>



- The above chart shows the price movements of KRBL Ltd. Over 5 years. It gives an overview of how the stocks have performed during this.
- The pattern observed in this chart was rounding bottom. The price movements are due to supply and demand of shares in the market. In the pattern the rounding bottom starts when there is a down trend on the left hand side and further decreases and the stock price moves up. The upper line act as a neckline when that line is crossed then it indicates to sell as the price will go up once it breakout.
- In the chart the above neckline is at around 175 and the price went up to 250.
- The formation of rounding bottom is clearly an indication that once it is completed the price of stock will definitely rise.

## 5 Procter & Gamble Hygiene & Health Care Ltd.



- The above chart is of P&G Ltd. Expressing the price movements over 5 years.
- The pattern observed in the above chart is Bump and Run Reversal, that forms after expressive speculation drives prices up too far, too fast.
- The point at which the pattern of Bump and Run Reversal cuts the trend line is considered as selling point as the stocks are declining which could lead into a loss making investment.
- In the above chart the selling point is at price 6500. After that the price of the stocks.

## 6) VST Industries Ltd.



- The above chart of VST Ltd. Expressing the price movements over 5 years.
- The pattern observed in the chart is Double Top which forms an “M” pattern.
- Top two high prices are marked and low points are connected in this pattern.
- The high point in the above chart are marked at 2000 price and low point is marked at approx. 1400 price.

## 7)Gillette India Ltd.



- The above chart of Gillette India Ltd. Showing the price movements of past years.
- The pattern observed is head and shoulder top. In this the left hand side becomes one shoulder the low point and the highest point after that becomes the head and then the price dips forming and again goes up but less as compared to head. This is on the right side forming a right hand shoulder.
- Left shoulder is formed at around 4800 and the right shoulder is at 5200 and the head is at price 5600. The neckline formed in the above chart is at approx. 4000.

## 8) Hatsun Agro Products Ltd.



- The above chart indicates the price movements of Hatsun Agro Products Ltd. Over a period of 5 years.
- The pattern observed is Double Top. It is made up of two consecutive peaks that are roughly equal and low points.



- Double Top formation may seem straight forward, one must take proper steps to avoid deceptive double tops.
- In this the two consecutive peaks are marked at 345 price and low point is marked at 260 price.

## **Chapter 7**

### **Conclusion**

- Technical analysts consider the market to be 80% psychological and 20% logical. Fundamental analysts consider the market to be 20% psychological and 80% logical. Psychological or logical may be open for debate, but there is no questioning on the current price security.
- Even though there are some universal principles and rules that can be applied, it must be remembered that technical analysis is more an art form than a science. As an art form, it is subject to interpretation.
- After analysing the financial statements, statistical data and graphs of companies under FMCG sector, 8 companies are recommended or investment to earn higher returns on the basis of Fundamental and Technical Analysis.
- The stocks are ranked on the basis of Dividend Yield Ratio; namely. VST Industries Ltd., ITC Ltd., KRBL Ltd., Britannia Industries Ltd., P&G Hygiene & Health Care Ltd., Hatsun Agro Products Ltd., Gillette India Ltd. (highest to lowest).

### **RECOMMENDATION**

- Every investor must study the current trend of the stock market properly before investing. Investors have to see the details of the companies in which they are going to invest.
- As per the analysis one should invest in VST Ltd. As it provides higher dividend to its investors as compared to other companies. Hence, it is advisable to invest in the stocks of VST Industries Ltd.
- The second preferable stock is Colgate followed by ITC Ltd. as they rank at second and third place based on dividend yield ratio.
- Long term investment in FMCG sector is a good option for investors rather than short term.

## **Chapter 8**

### **Annexures**

Virtual fund allocation of Rs. 14.29 crores in the selected companies

<b>Companies</b>	<b>Dividend Yield Ratio</b>	<b>Ranking</b>	<b>Fund Allocation</b>	<b>CMP</b>	<b>NO of Shares</b>
<b>VST Industries Ltd.</b>	4.13%	1	3,17,46,031.75	1700.15	18,672.49
<b>Colgate-Palmolive (India) Ltd.</b>	2.64%	2	2,77,77,777.78	918.5	30,242.55
<b>ITC Ltd.</b>	1.70%	3	2,38,09,523.81	368.4	64,629.54
<b>KRBL Ltd.</b>	1.10%	4	1,98,41,269.84	290.1	68,394.59
<b>Britannia Industries Ltd.</b>	1%	5	1,58,73,015.87	2758.95	5,753.28

<b>Procter &amp; Gamble Hygiene &amp; Health Care Ltd.</b>	0.49%	6	1,19,04,761.90	6263.15	1,900.76
<b>Hatsun Agro Products Ltd.</b>	0.40%	7	79,36,507.94	443.1	17,911.32
<b>Gillette India Ltd.</b>	0.33%	8	39,68,253.97	4582.8	865.90
			14,28,57,142.86		2,08,370.44

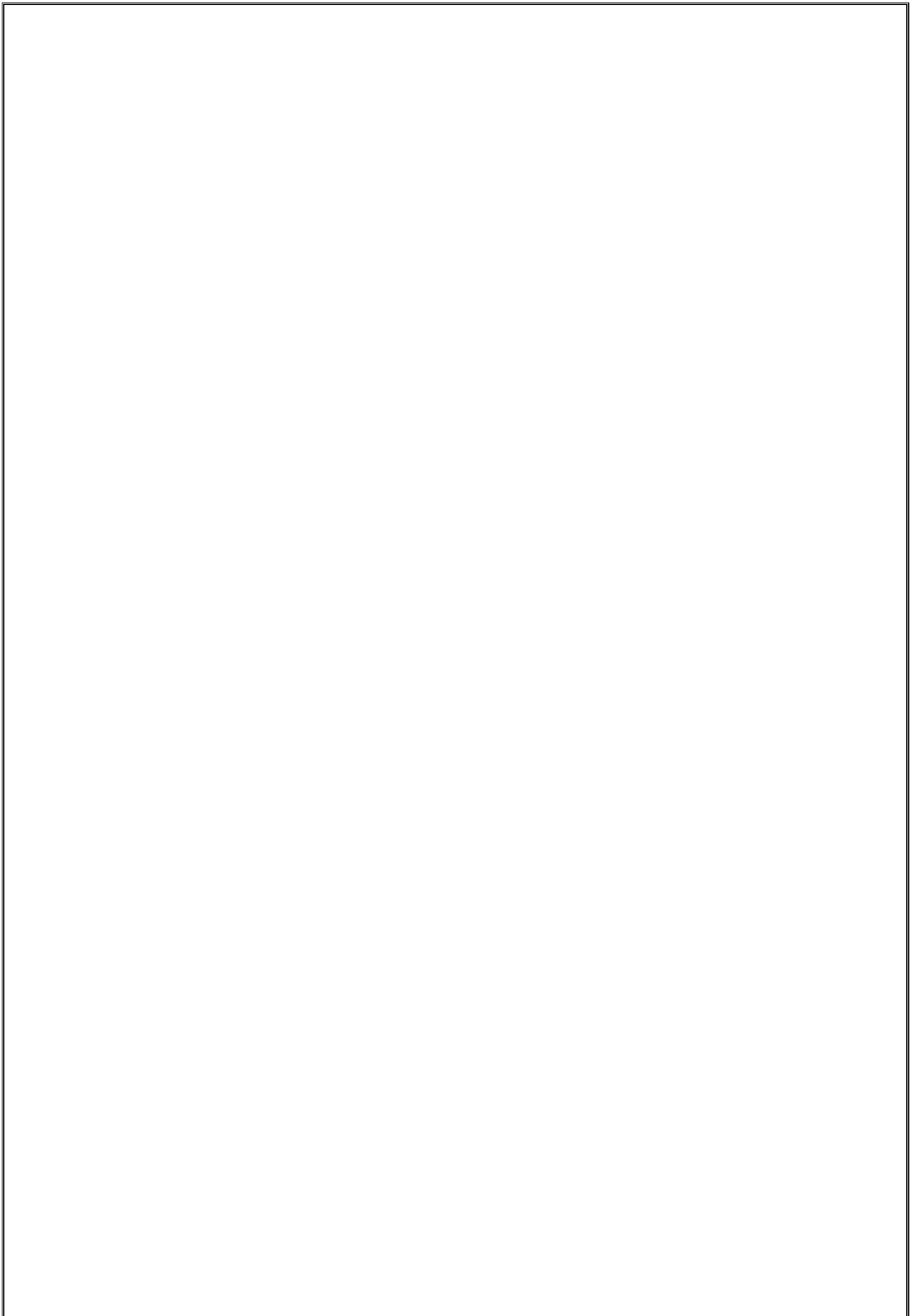
**Chapter 9**  
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- [www.equitymaster.com](http://www.equitymaster.com)
- Websites of Britannia Industries Ltd., Colgate-Palmolive (India) Ltd., ITC Ltd., KRBL Ltd., Procter & Gamble Hygiene & Health Care Ltd., VST Industries Ltd., Gillette India Ltd., Hatsun Agro Products Ltd.
- J gate
- [www.icharts.in](http://www.icharts.in)
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**Thank**

**You!**





**GROUP NO. :- 5**

**ROLL NO. :- FF2005,FF20012,FF20019,  
FF20026,FF20033,FF20040,FF20047**

**SUBJECT :- FOUNDATIO COURSE**

**PROJECT ON :- WILDLIFE DURING COVID-19**

# INTRODUCTION

OUTBREAK OF COVID-19 LEADS TO EMERGENCE OF GLOBAL PANDEMIC.

MANY COMPANIES ARE STRUGGLING AGAINST COVID-19.

BEHAVIOURAL CHANGES IN WILDLIFE.





**RESEARCH ON ANIMALS**

**IMPACT OF WILDLIFE DURING COVID-19**

**ADVANTAGES OF WILDLIFE DURING COVID-19**

**WILDLIFE DURING COVID-19**

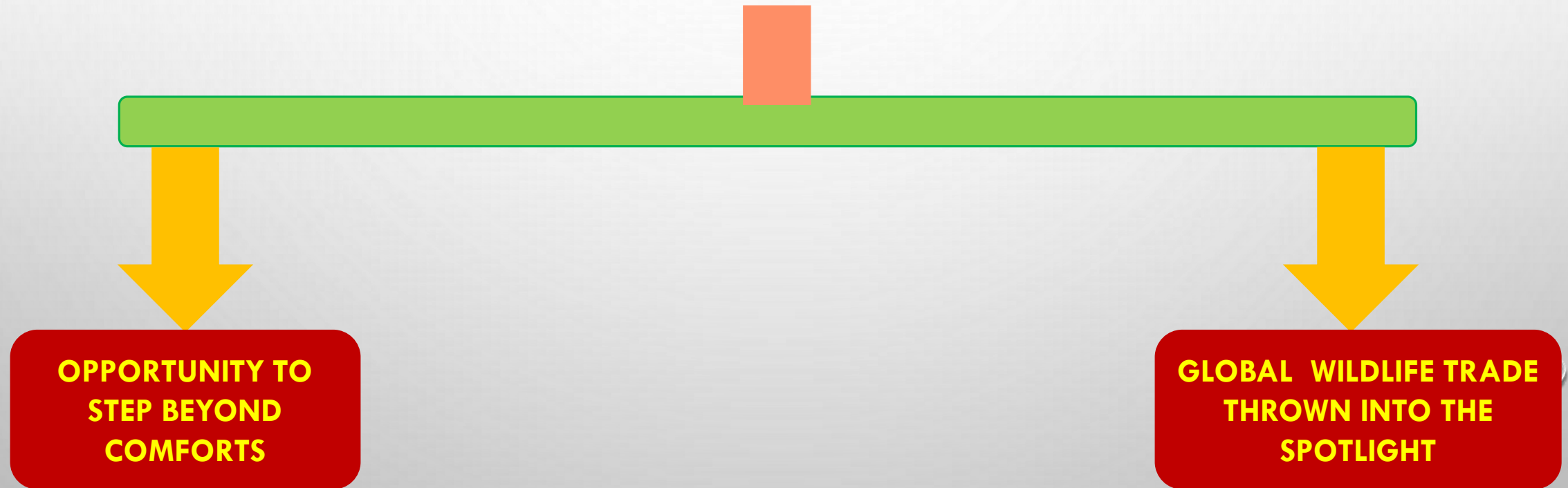
**DISADVANTAGES OF WILDLIFE DURING COVID-19**

**GOVERNMENT ROLE FOR WILDLIFE DURING COVID-19**

**COVID-19 AND STRAY ANIMALS**

# IMPACT OF COVID-19 ON WILDLIFE

## WHAT IMPACTS OF COVID-19 ON WILDLIFE



# **ADVANTAGES OF WILDLIFE DURING COVID-19**

- **ANIMALS REJOICING FREEDOM.**
- **REDUCTION OF ROAD KILLING.**
- **LESS HUMAN INTERFERENCE GIVE SPACE TO WILDLIFE.**
- **BENEFITS TO AQUATIC ANIMALS.**
- **FEEDING STRAY ANIMALS AND BIRDS.**
- **REDUCTION OF ILLEGAL KILLING OF WILD ANIMALS.**
- **BANNED ILLEGAL TRADE.**



**ADVANTAGES OF WILDLIFE DURING COVID-19**





# **DISADVANTAGES OF WILDLIFE DURING COVID-19**

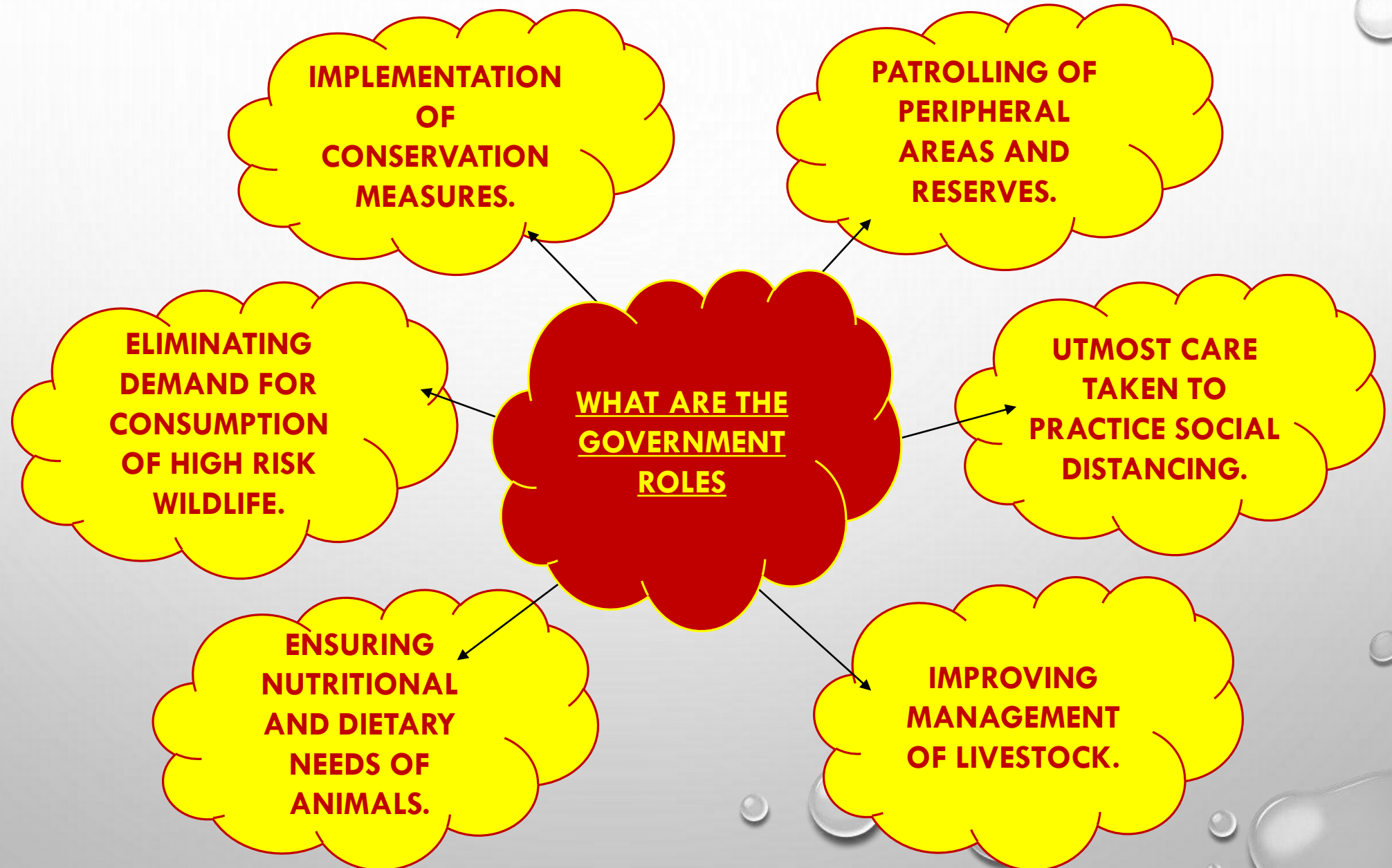
- **LOCKDOWN IS THREAT.**
- **GREAT DANGER VULNERABLE SPECIES.**
- **ILLEGALLY POACHING (HUNTING) OF WILD ANIMALS.**
- **NEW DISEASES CAN COME FROM WILD ANIMALS.**

**DISADVANTAGES OF WILDLIFE DURING COVID-19**





# GOVERNMENT ROLE FOR WILDLIFE DURING COVID-19

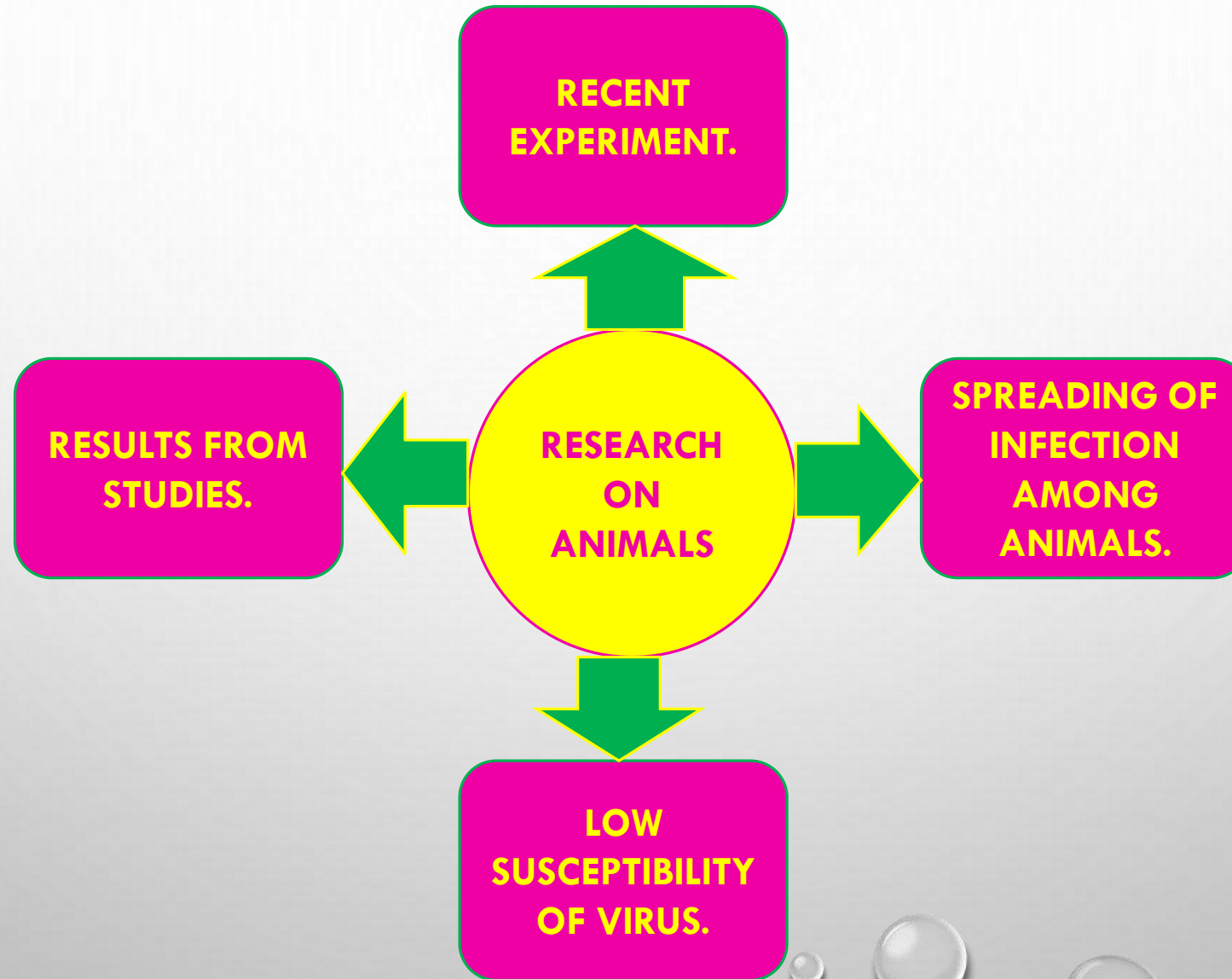


- **COVID-19 AND STRAY ANIMALS**

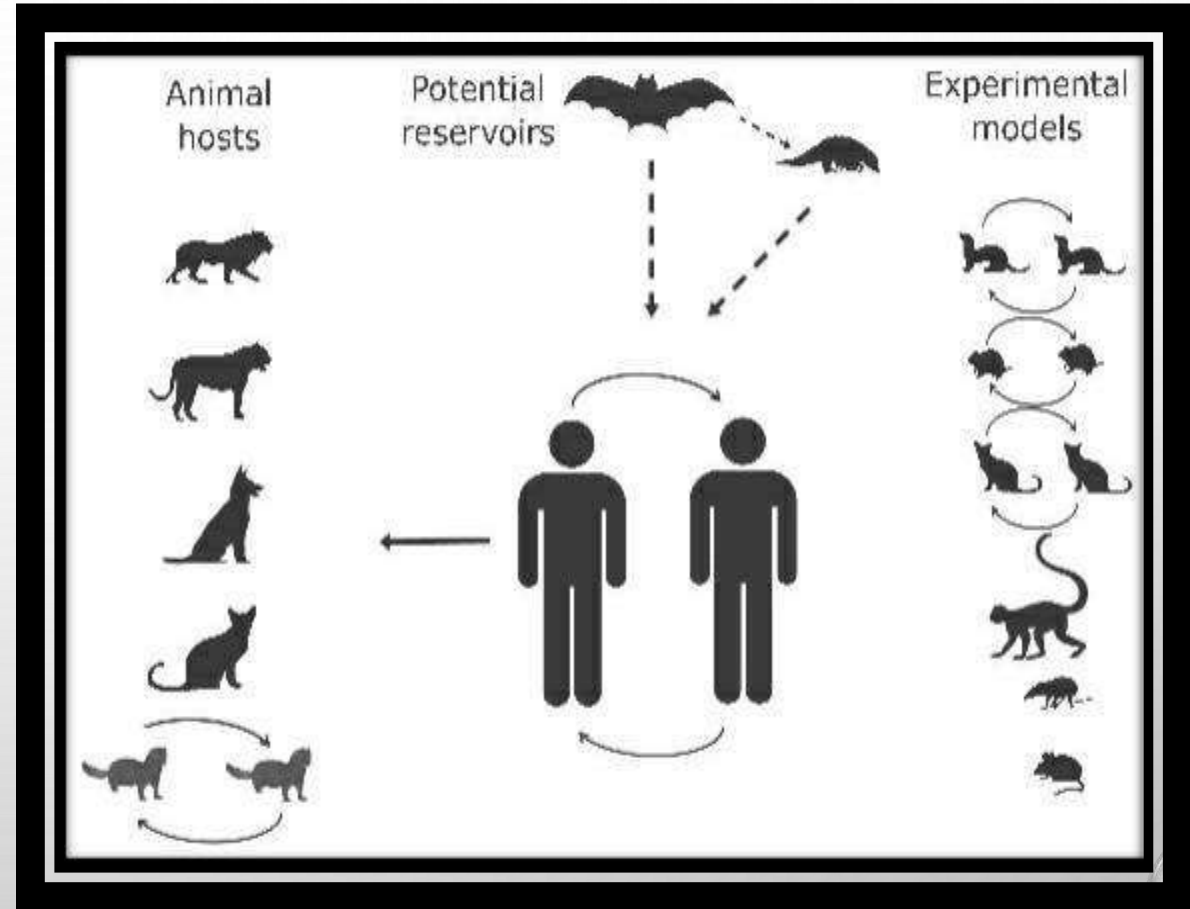
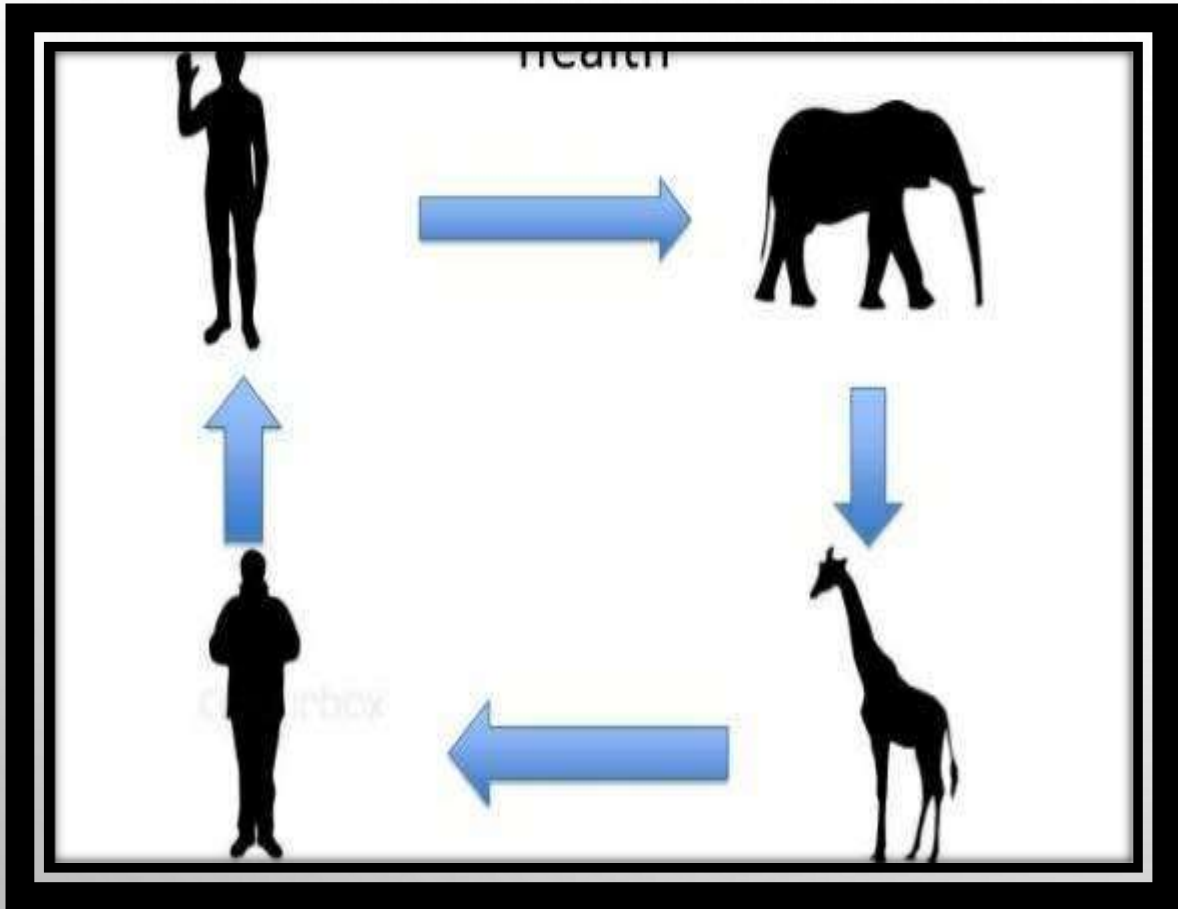


- **WHAT PANDEMIC MEANS TO STRAY DOGS ?**

# RESEARCH ON ANIMALS



## RESEARCH ON ANIMALS





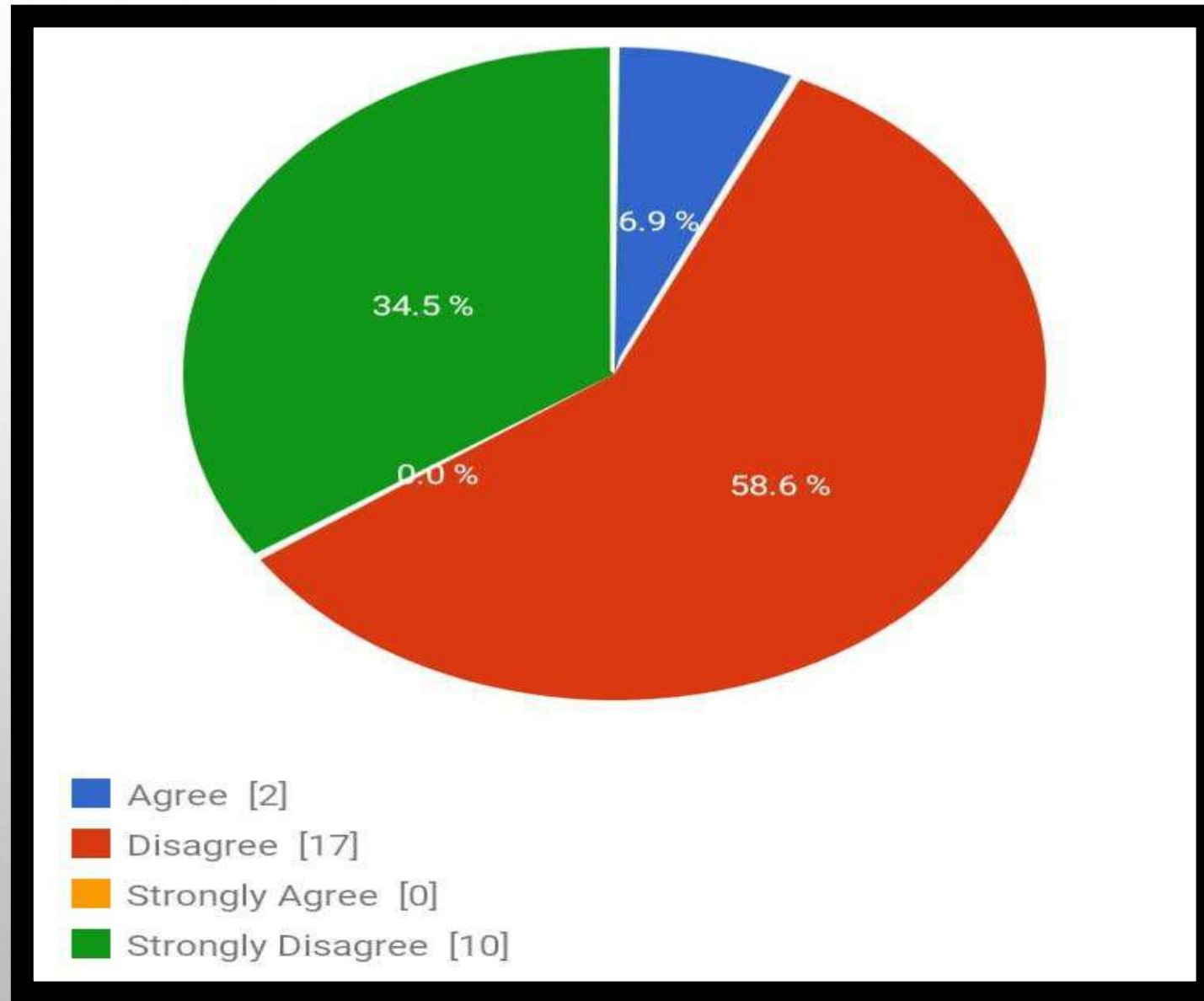
# **CONCLUSION**

**THE BEHAVIOURAL CHANGES OF WILD ANIMALS, BIRDS, BUTTERFLY, PETS AND STREET ANIMALS INDICATE THE INTERFERENCE OF HUMAN ACTIVITIES ON LIVES OF NATURAL CREATURES.**

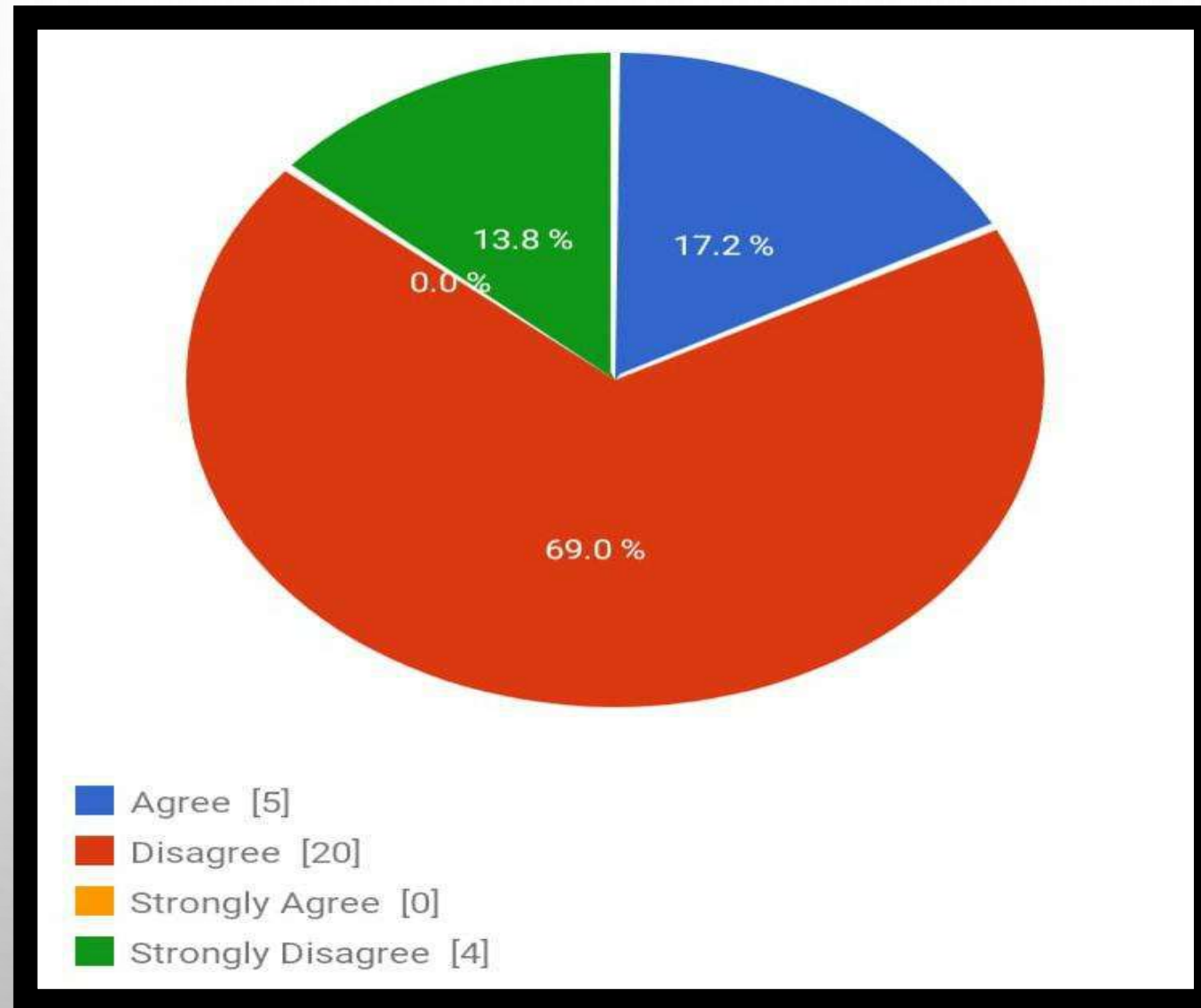
**THERE IS CERTAIN CORRELATION BETWEEN ATMOSPHERIC CHANGES WITH THE BEHAVIOURAL CHANGES OF NATURAL CREATURE DURING LOCKDOWN PERIOD.**

**IT OFFERS A SCOPE TO ASSESS THE DEGREE OF DEVASTATION OF ENVIRONMENT WE DO IN THE PROCESS OF NORMAL CIVILIZATION.**

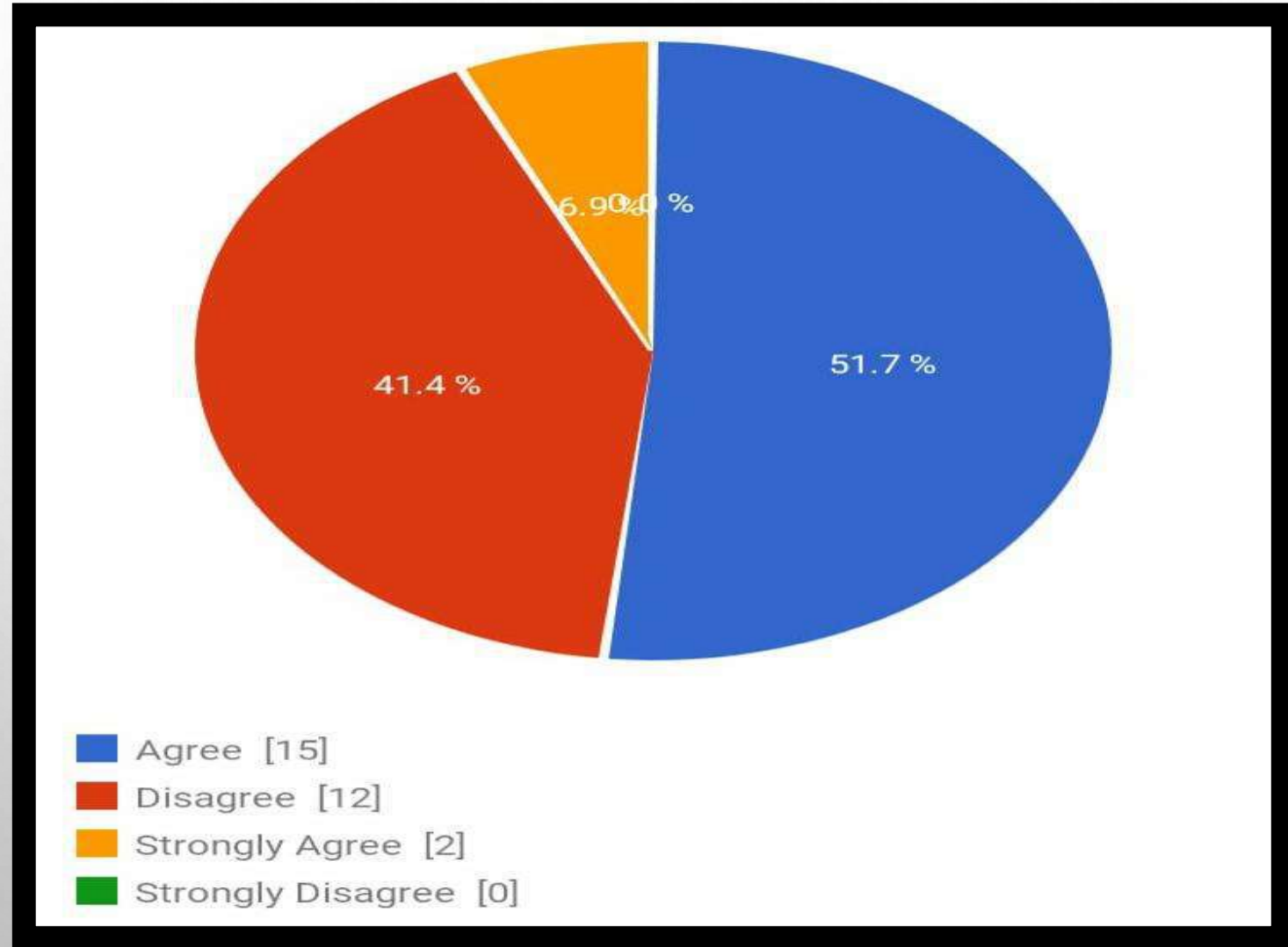
• **ARE ANIMALS ARE RESPONSIBLE TO COVID-19 ?**



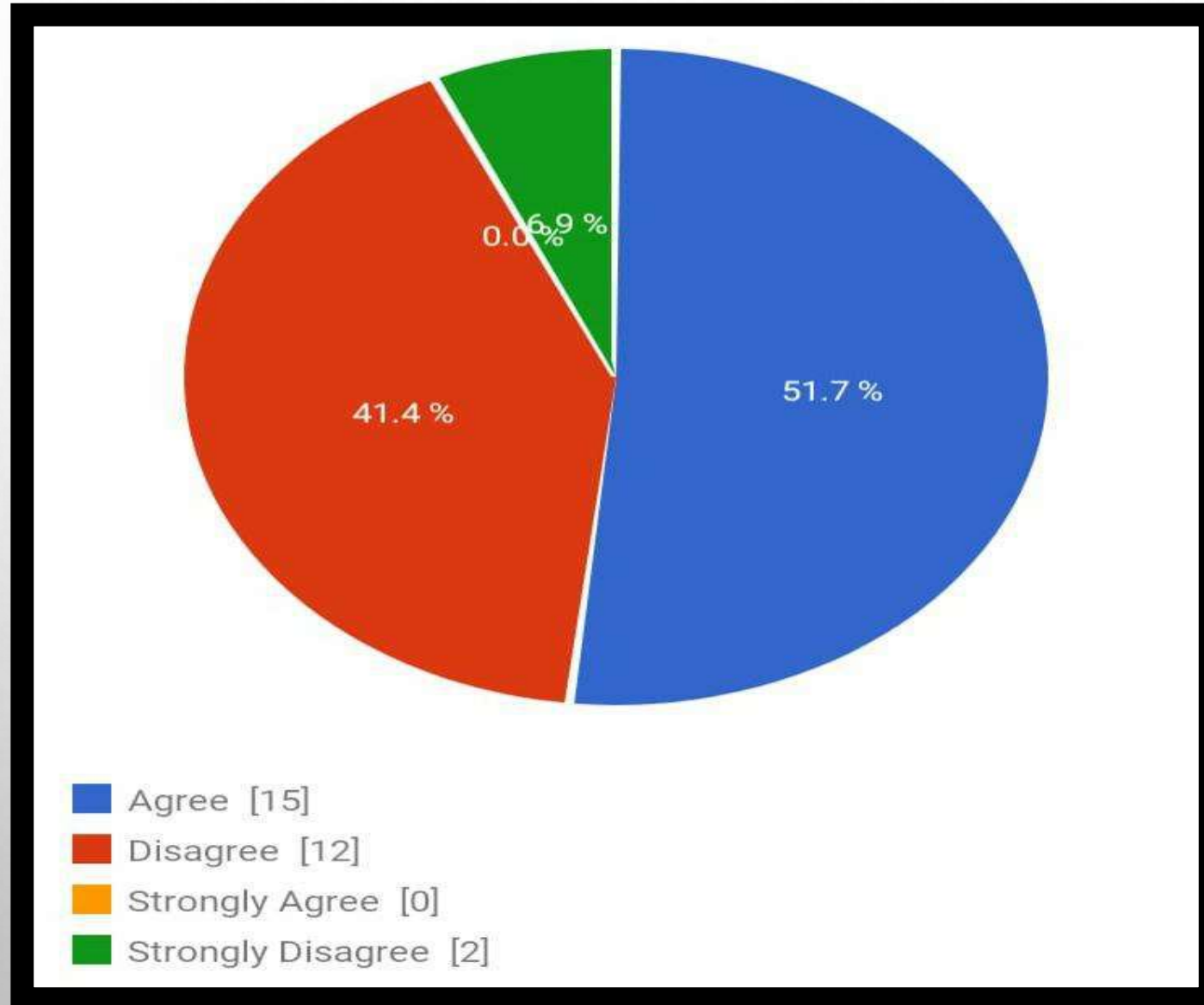
• **DID COVID-19 EMERGE AND SPREAD TO HUMANS FROM WILDLIFE ?**



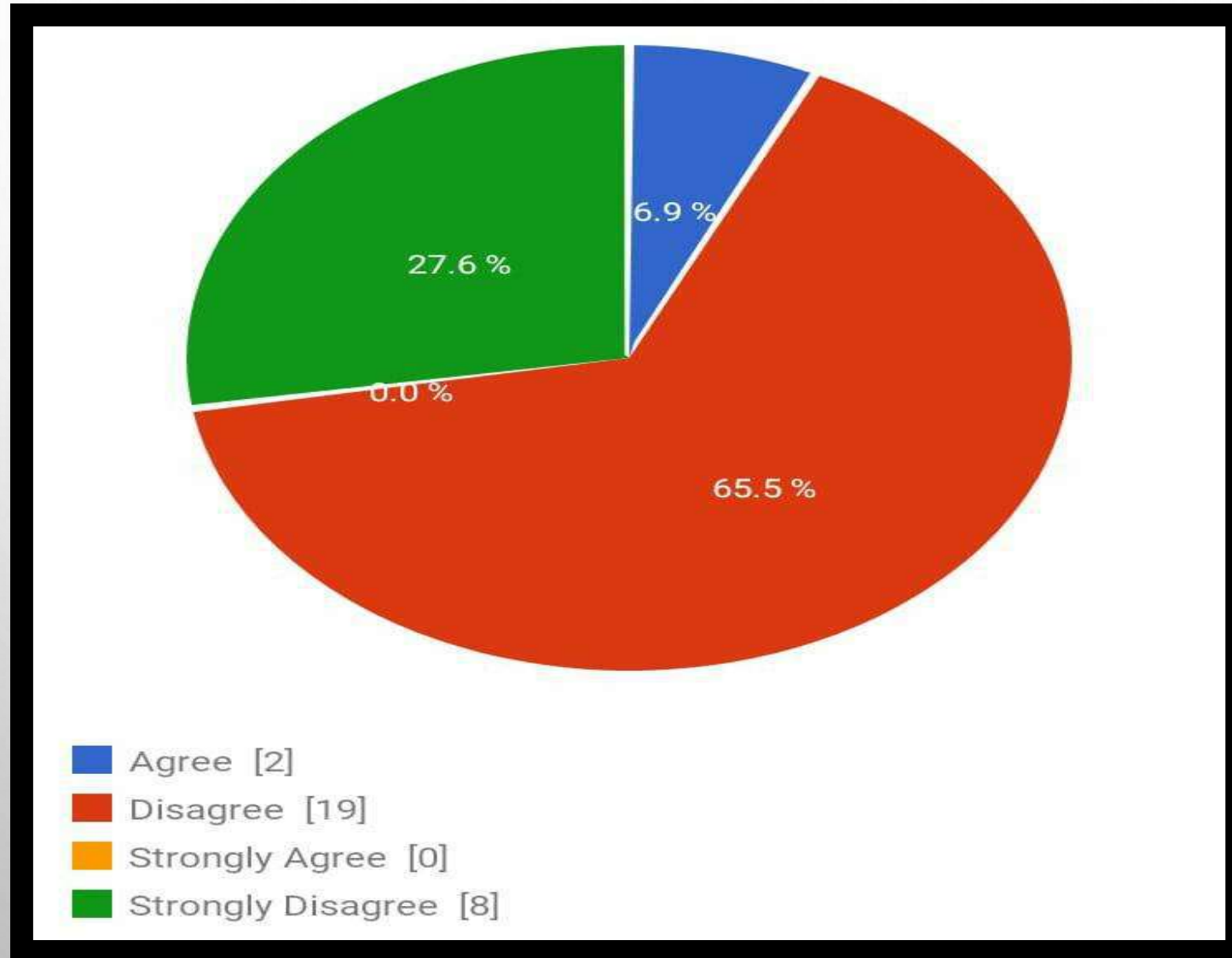
• **DOES GOVERNMENT MADE IMPLEMENTS FOR THE WILDLIFE ?**



- **WILDLIFE WAS SAFE DURING COVID-19 ?**

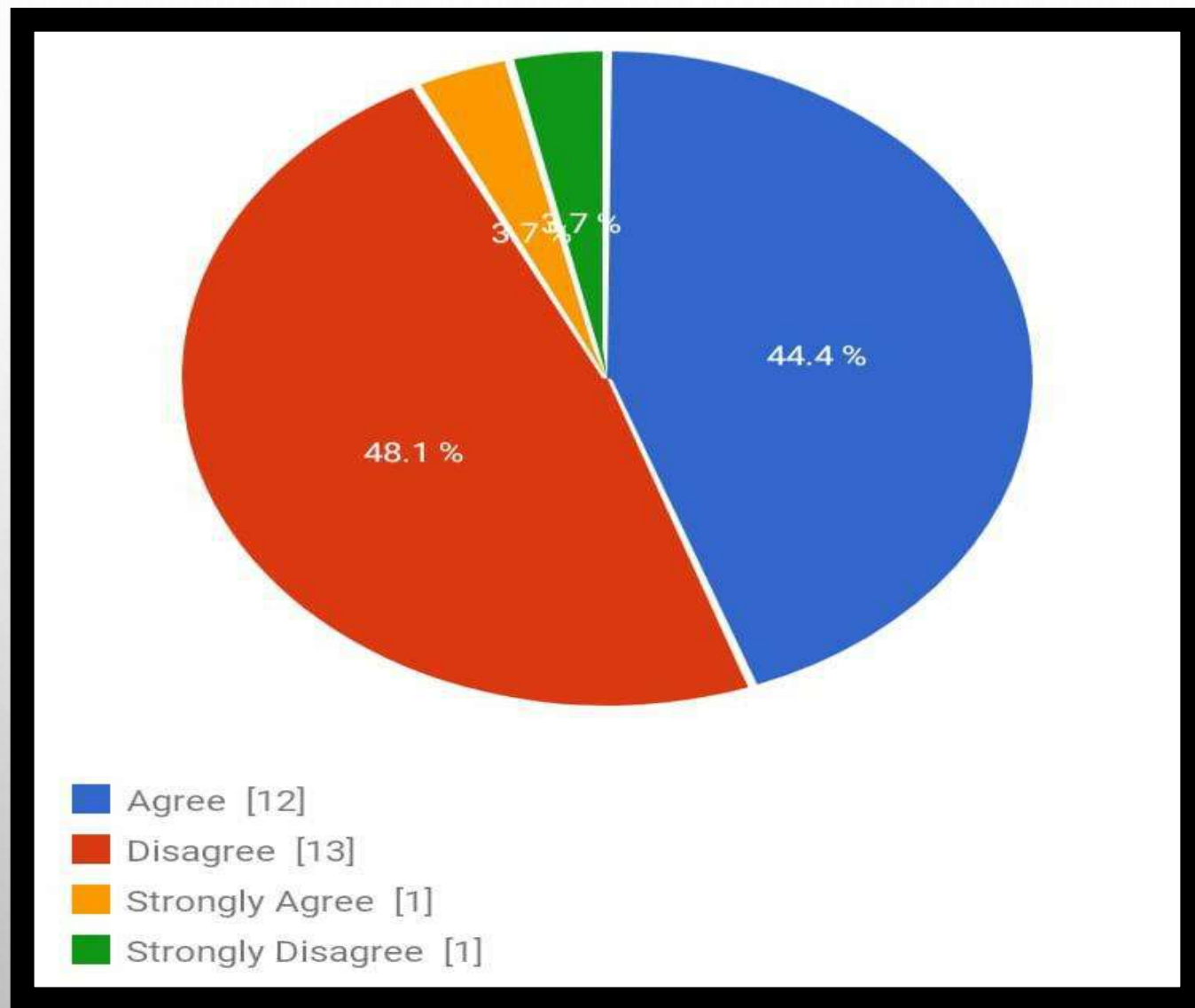


- CORONAVIRUS PREVAILED MORE IN ANIMALS AS COMPARED TO HUMANS ?**

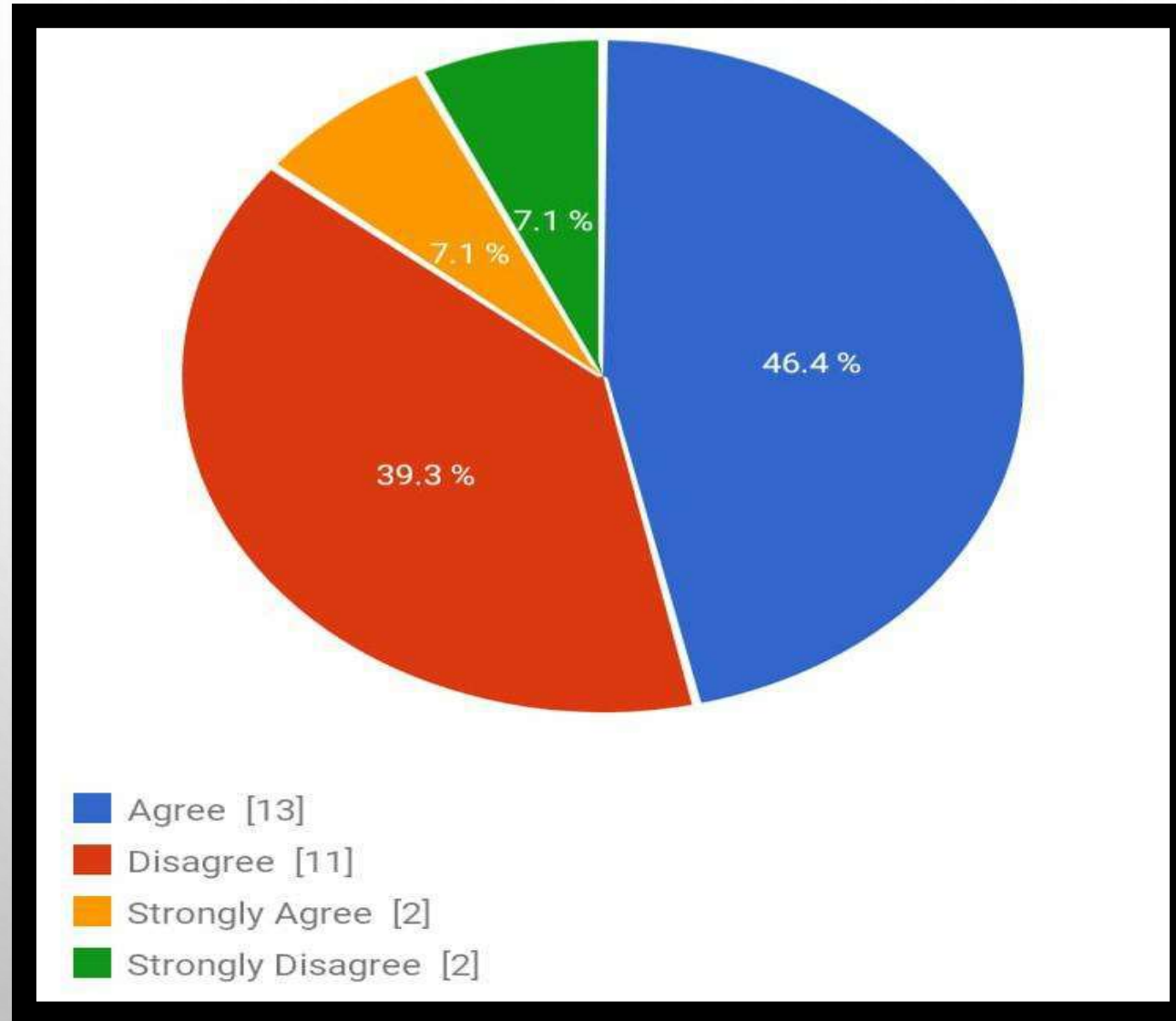




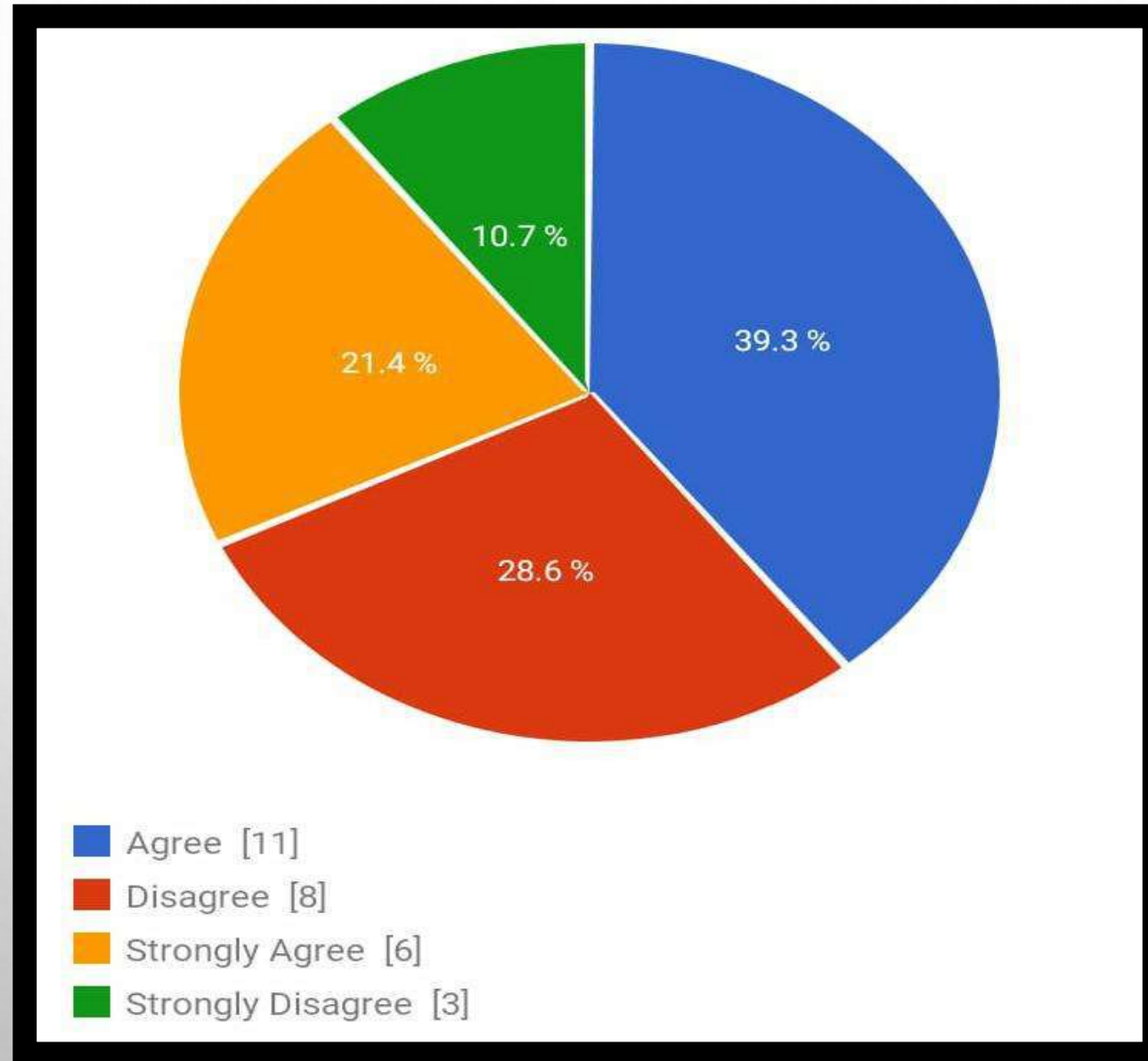
- HAS THERE BEEN AN INCREASE IN WILDLIFE POACHING DUE TO GLOBAL LOCKDOWN ?**



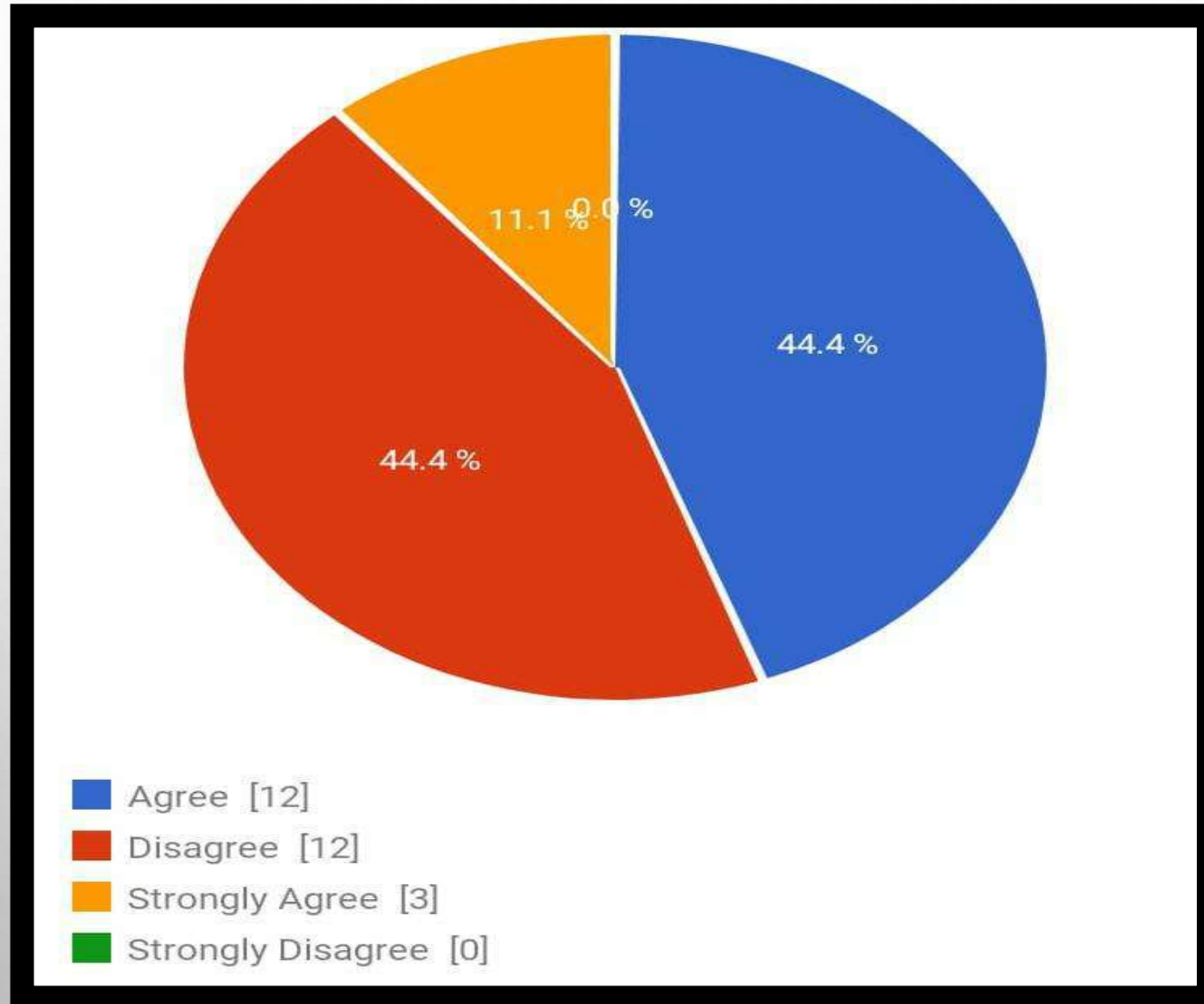
• **DO YOU OBSERVE PEOPLE MAINTAINING DISTANCING FROM ANIMALS DURING COVID-19 ?**



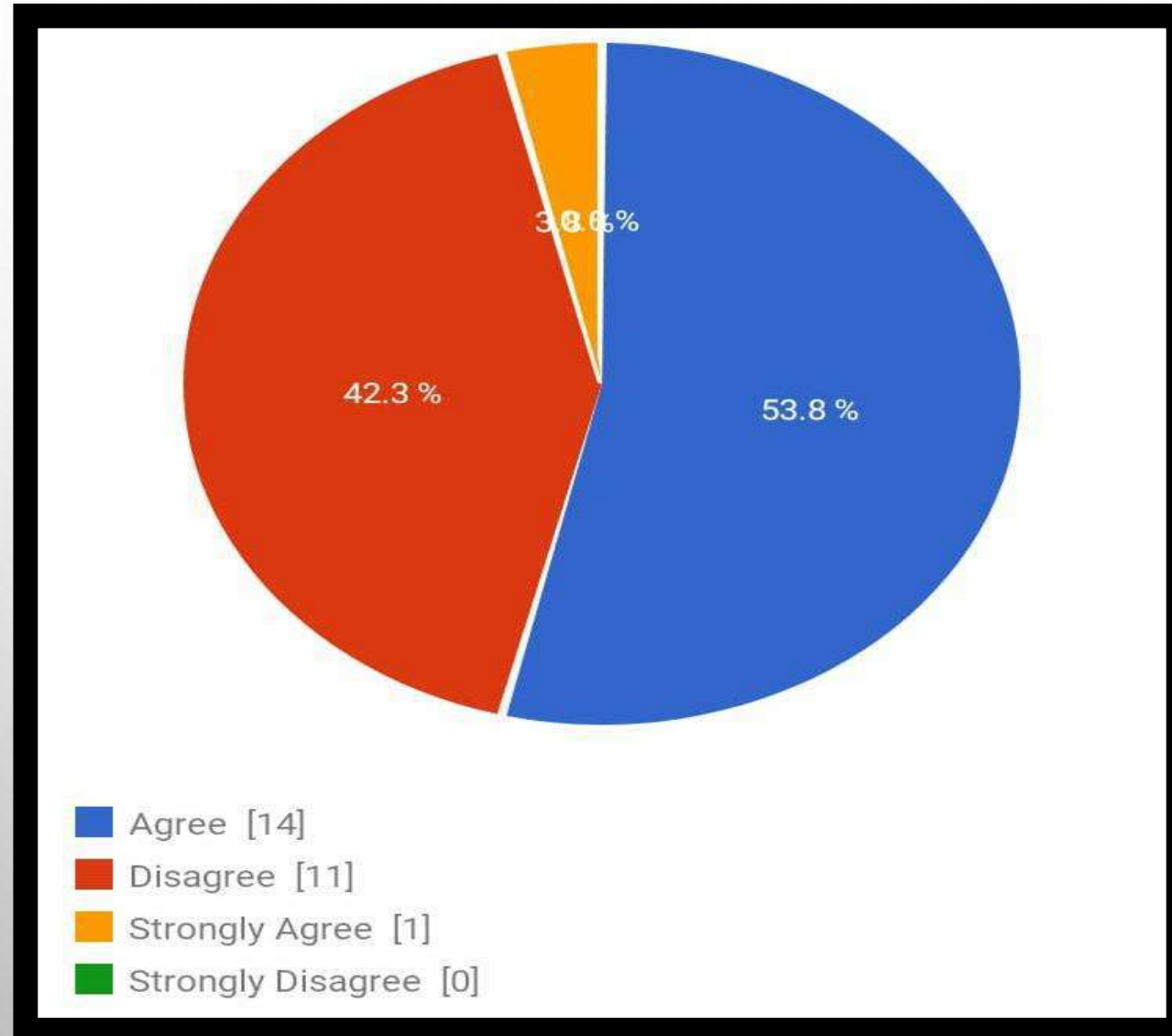
# • WAS COVID-19 A BLESSING TO WILDLIFE ?



• **ARE POACHERS ARE TAKING ADVANTAGE OF  
QUITE NATURE RESERVES ?**

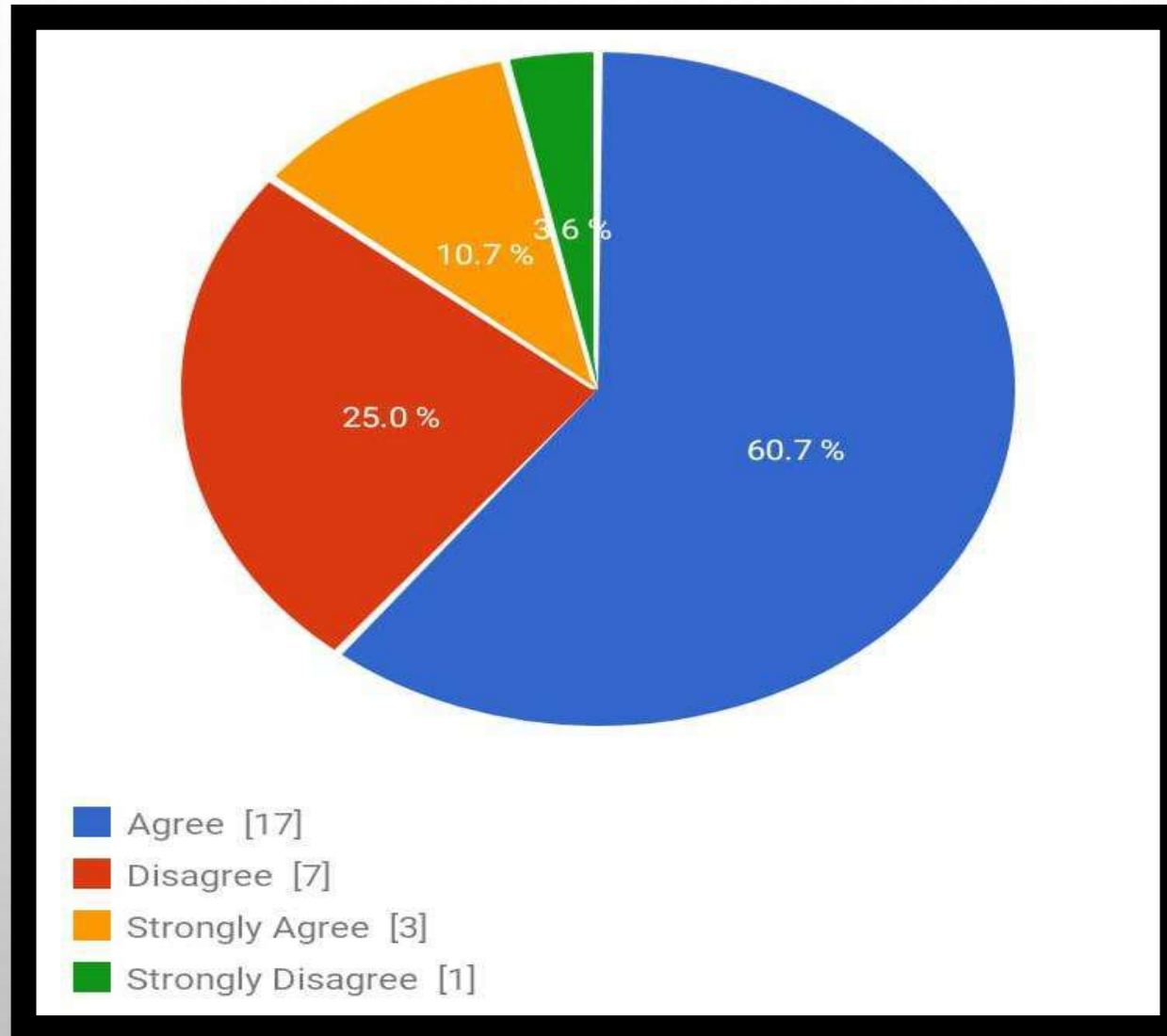


• **WILD ANIMALS APPEARING THRIVE DURING PANDEMIC ?**



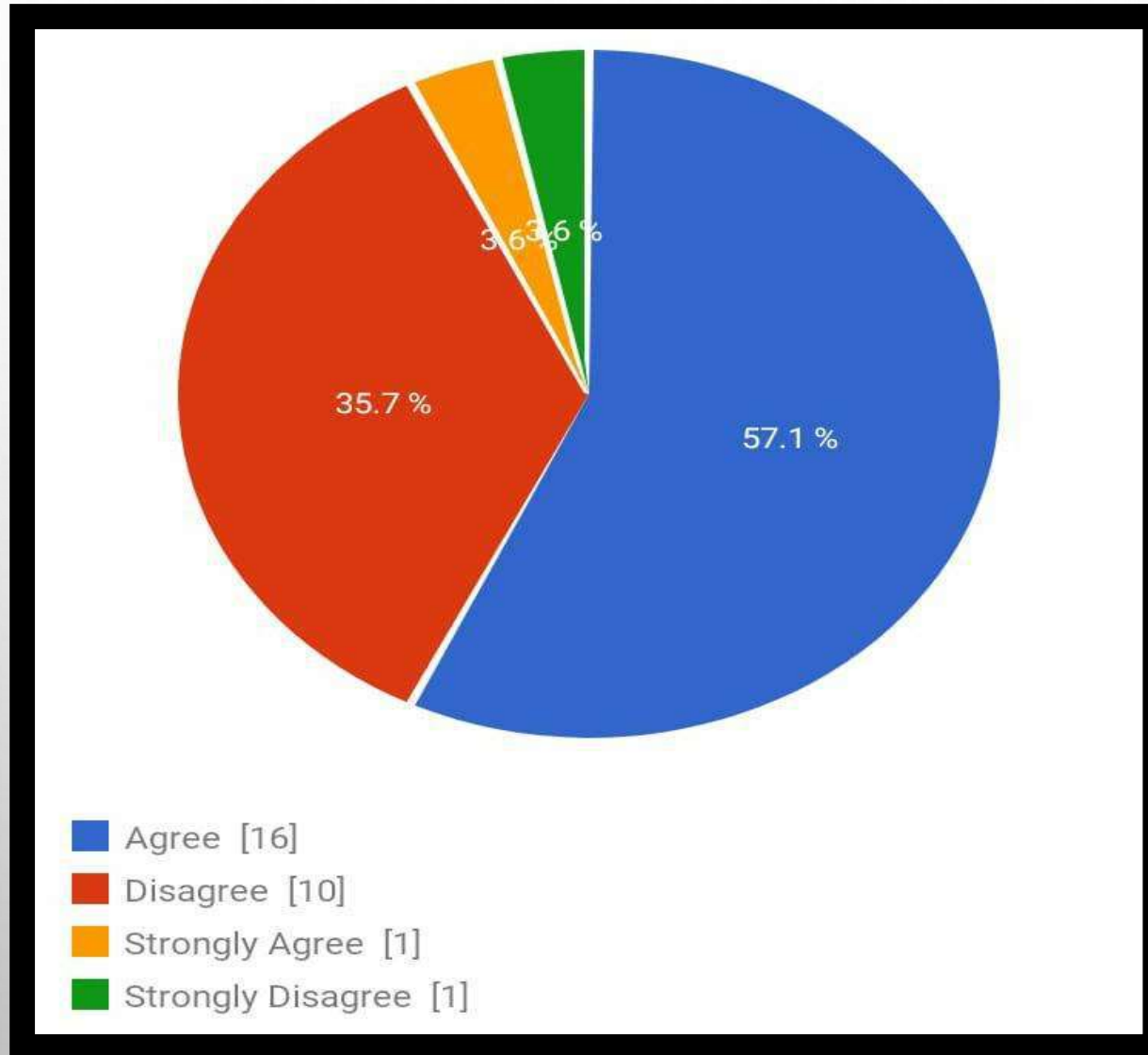


• **DOES PEOPLE CONTINUED TO FEED STRAY ANIMALS  
EVEN DURING COVID-19 ?**

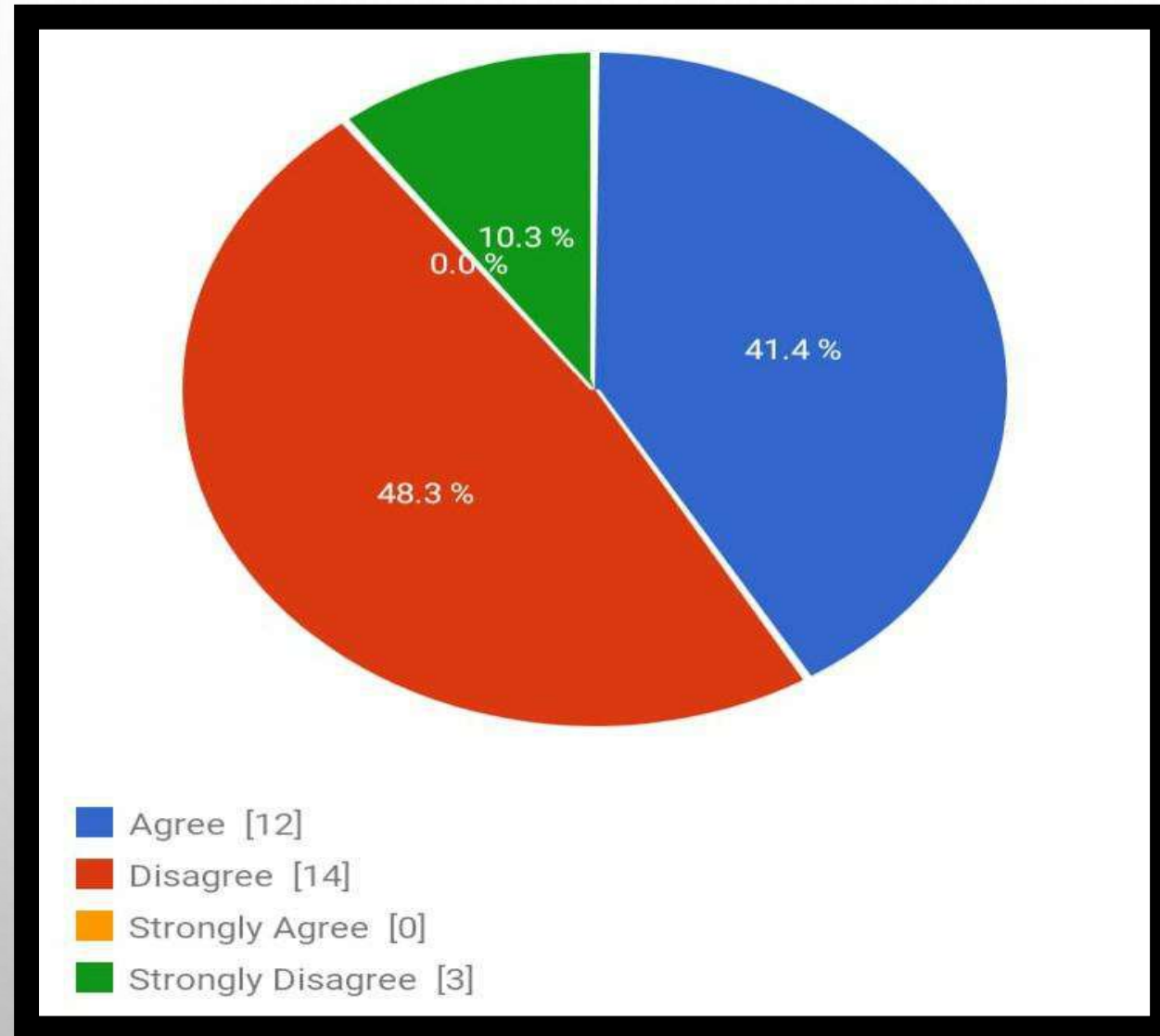




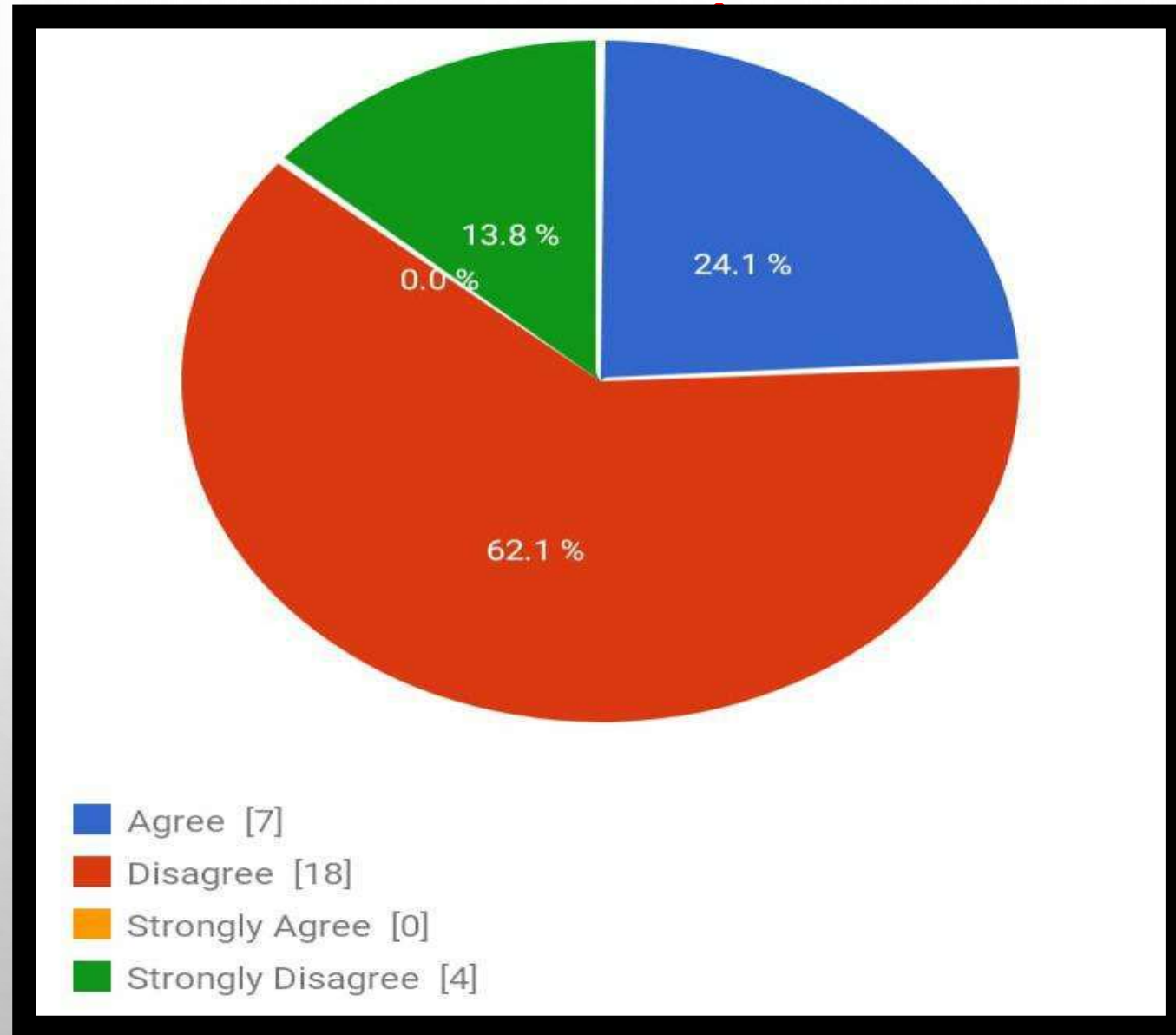
- **IS ZOO ANIMALS ARE GETTING SICK AND MISSING HUMAN ATTENTION ?**



• **DOES ANIMALS WAS GETTING FOOD DURING COVID-19 ?**



• **IS THERE ANY VACCINATION AVAILABLE FOR ANIMALS ?**



- WAS ZOOKEEPERS WAS TAKING CARE AND FEEDING FOOD DURING COVID-19 ?**

