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Name of the Book/Chapter & its Details:

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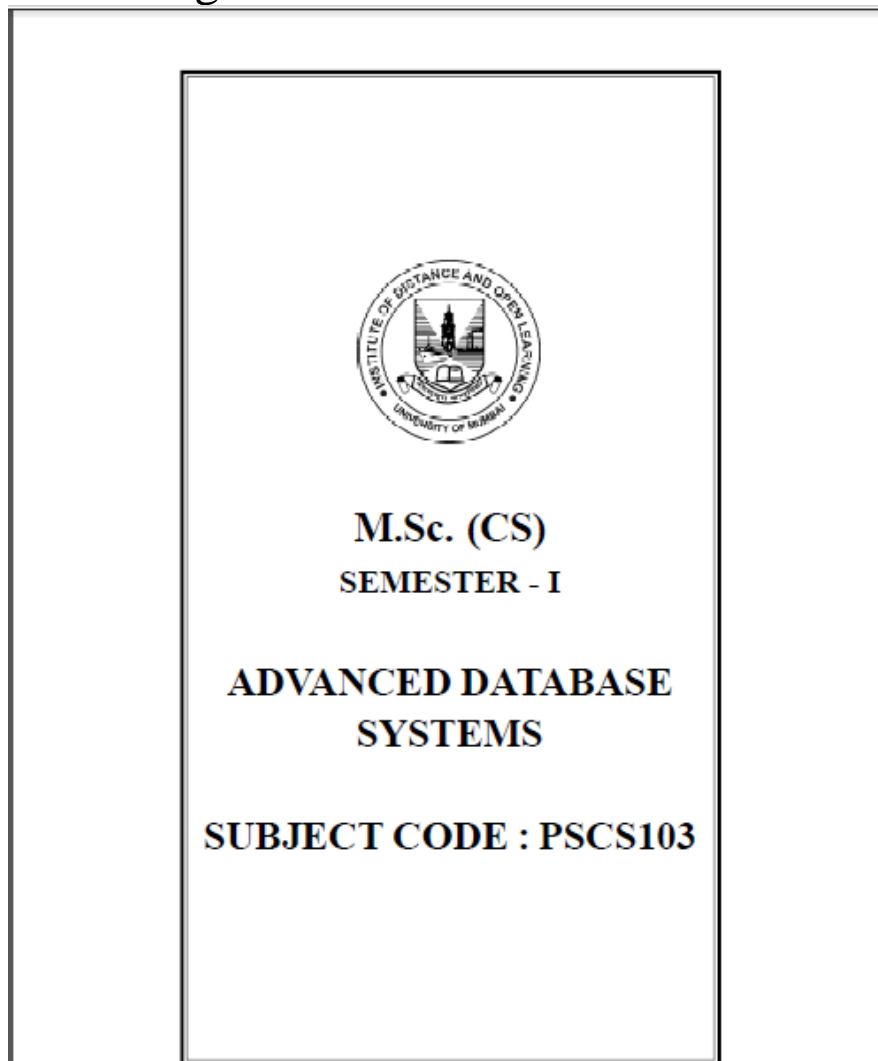
Subject : Advanced Database Systems

Subject Code : PSCS103

Stream : M.Sc. Computer Science

Semester : I

Cover Page :



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| 6. | Deductive, Active, Multimedia and XML Databases | 141 |



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DISTRIBUTED DATABASE CONCEPTS

Unit Structure

- 1.0 Objectives
- 1.1 Introduction
- 1.2 Distributed Database Concept
 - 1.2.1 Definition of Distributed Databases and Distributed Database Management System (DDBMS)
 - 1.2.1.1 Features of Distributed Database Management System
 - 1.2.1.2 Advantages of Distributed Database Management System
 - 1.2.1.3 Disadvantages of Distributed Database Management System
 - 1.2.2 Reasons to boosting DDBMS
 - 1.2.3 Databases Types
- 1.3 Distributed Transparent System
 - 1.3.1 Levels of Distributed Transparent System
 - 1.3.1.1 Fragmentation Transparency
 - 1.3.1.2 Location Transparency
 - 1.3.1.3 Replication Transparency
- 1.4 Summary
- 1.5 List of References and Bibliography and further Reading
- 1.6 Model Questions

1.0 OBJECTIVE:

After going through this unit, you will be able to:

- understand what Distributed database is.
- define what is Distributed Database Management System
- describe features of DDBMS its advantages and disadvantages
- Illustrate Distributed transparent system
- Classify Distributed transparent System.

1.1 INTRODUCTION:

For appropriate working of any business/organisation, there's a requirement for a well-organised database management system. In the past databases used to centralize in nature. But, with the growth of globalization, organisations lean towards expanded crosswise the world.

Link of the chapter published on website :

<https://mu.ac.in/wp-content/uploads/2021/10/Advanced-Database-System.pdf>

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M.Sc. (CS)
SEMESTER - I

**ADVANCED DATABASE
SYSTEMS**

SUBJECT CODE : PSCS103

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DDBMS ARCHITECTURE

Unit Structure

- 2.0 Objective
- 2.1 Introduction
- 2.2 DBMS standardization
- 2.3 DDBMS Architecture
 - 2.3.1 Factors for DDBMS Architecture
 - 2.3.1.1. Distribution
 - 2.3.1.2. Autonomy
 - 2.3.1.3. Heterogeneity
- 2.4 Architectural models of Distributed DBMS
 - 2.4.1 Client-Server Architecture
 - 2.4.2 Peer- to-Peer Architecture
 - 2.4.2.1 Global, Local, External, and Internal Schemas
 - 2.4.3 Multi - DBMS Architectures
- 2.5 Summary
- 2.6 List of References and Bibliography and further Reading
- 2.7 Model Questions

2.0 OBJECTIVES

After going through this Chapter, you will be able to:

- understand Distributed database management system architecture
- define what is Global, Local, External, and Internal Schemas
- describe different architectural model for DDBM

2.1 INTRODUCTION

In any system architecture defines its structure. This means that the components of the system are identified, the purpose of each element is specified, and the interrelationships and interactions among these components are defined. The specification of the architecture of a system requires identification of the various units, with their connections and relationships, in terms of the data and control flow over the system.

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Cover Page :



M.Sc. (CS)
SEMESTER - I

**ADVANCED DATABASE
SYSTEMS**

SUBJECT CODE : PSCS103

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DISTRIBUTED DATABASE DESIGN**Unit Structure**

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Design problem of distributed systems
- 3.3 Design, strategies (top-down, bottom-up)
- 3.4 Fragmentation
- 3.5 Allocation and replication of fragments
- 3.6 Query Processing Overview
- 3.7 Query Optimization
- 3.5 Summary
- 3.6 List of References and Bibliography and further Reading
- 3.7 Model Questions

3.0 OBJECTIVES

After going through this Chapter, you will be able to:

- understand Design of Distributed System
- Know Top-down and Bottom-up Strategies of Database Design
- describe Fragmentation and Allocation and replication of fragments
- gain knowledge about Query processing and Query Optimization

3.1 INTRODUCTION

The design of a distributed computer system contains making conclusions on the placement of data and programs through the sites of a computer network, as well as probably designing the network itself. In Distributed DBMS, the distribution of applications includes two things:

- Distribution of the distributed DBMS software
- Distribution of the application programs that run on it.

3.2 DESIGN PROBLEM OF DISTRIBUTED SYSTEMS

The distributed information system is defined as "*a number of interdependent computers linked by a network for sharing information among them*". A distributed information system comprises of multiple independent computers that transfer or exchange information via a computer network.

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Subject : Statistical Methods of Testing and Hypothesis

Subject Code : USCS206

Stream : B.Sc. Computer Science

Semester : I

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**F.Y.B.Sc. COMPUTER SCIENCE
SEMESTER - II (CBCS)**

**PAPER VI
STATISTICAL METHODS AND
TESTING OF HYPOTHESIS**

SUBJECT CODE : USCS206

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UNIT I

1

STANDARD DISTRIBUTIONS CONTENTS OF MODULE

Unit Structure

- 1.0 Objective
- 1.1 Introduction
- 1.2 Study Guidance
- 1.3 Standard Distributions
 - 1.3.1 Random, Discrete and continuous variable
 - 1.3.2 Probability Mass Function
 - 1.3.3 Probability Density Function
 - 1.3.4 Expectation
 - 1.3.5 Variance
 - 1.3.6 Cumulative Distribution Function
 - 1.3.7 Reliability
- 1.4 Introduction and properties of following distributions
- 1.5 Binomial Distribution
- 1.6 Normal Distribution
- 1.7 Chi-square test
- 1.8 T-test
- 1.9 F-test
- 1.10 Summary
- 1.11 Unit End Questions
- 1.12 References
- 1.13 Further Readings

1.0 OBJECTIVES

Students will be able to:

- Identify the types of random variables.
- Understand the concept of Probability distribution.
- Enable students to understand various types of distributions.

1.1 INTRODUCTION

The science of statistics deals with assessing the uncertainty of inferences drawn from random samples of data. This chapter focuses on random variables its types and their probability distribution. To assess the outcome

Link of the chapter published on website”

<https://mu.ac.in/wp-content/uploads/2022/05/Statistical-Methods-and-Testing-of-Hypothesis.pdf>

