

S.K.R. & S.K.R. Govt. College for Women (A), Kadapa
NAAC Reaccredited – B Level
II B.A, III SEMESTER
DATABASE MANAGEMENT SYSTEMS

UNIT I

Introduction:

Data and Information, Characteristics of the Database Approach, Self-Describing Nature of the Database System, Insulation between Programs and Data, Data Abstraction, Support of Multiple Views of the data, Sharing of Data and multiuser Transaction Processing, Advantages of DBMS, Data Models, Schemas and Instances: Categories of Data Models, Schemas, Instances, and Database State, DBMS Architecture and Data Independence: The Three-Schema Architecture, Data Independence.

UNIT II

Entity Relationship Model:

Introduction, Entity types, Entity sets, Attributes and Keys, Entities and Attributes, Entity Types, Entity Sets, Keys and Value Sets, Relationships, Relationship types, Roles, and Structural Constraints, Relationship Types, Sets and Instances, Relationship Degree, Attributes of Relationship Types, Weak Entity Types, ER Diagrams.

Enhanced Entity-Relationship:

Subclasses, Super classes, and inheritance, Specialization and Generalization, Constraints and characteristics of Specialization and Generalization.

UNIT III

The Relational Data model, Relational Constraints:

Introduction, Relational Model Concepts, Domains, Attributes, Tuples and Relations, Characteristics of Relations, Relational Model Notation Relational Constraints and Relational.

Database Schemas: Domain Constraints, Key Constraints and Constraints on Null, Relational Domain Constraints, Key Constraints and Constraints on Null, Relational Databases and Relational Database Schemas, Entity Integrity, Referential Integrity and Foreign Keys

Functional Dependencies and normalization for Relational Databases:

Functional Dependencies, Definition of Functional Dependency, Inference Rules for Functional Dependencies, Equivalence of sets of Functional Dependencies, Minimal Sets of Functional Dependencies.

Normal forms based on primary keys:

Introduction to Normalization, First Normal Form, Second Normal Form, Third Normal Form

UNIT IV**The Relational Algebra:**

Basic Relational Algebra Operation, The SELECT Operation, The PROJECT operation, Sequences of Operations and the, RENAME Operation, Set Theoretic Operations, The JOIN Operation, A Complete Set of Relational Algebra Operations, The DIVISION Operation

Additional Relational Operations: Aggregate Functions

UNIT V**SQL (Structured query language):**

Data Definition, Constraints and Schema changes in SQL, The CREATE TABLE Command and SQL Data Types and Constraints, The DROP SCHEMA and DROP TABLE Command, The ALTER TABLE Command, The SELECT-FROM-WHERE Structure of SQL Queries WHERE- Clause, Aggregate Functions and Grouping, Insert, Delete, and Update Statements in SQL, The INSERT Command, The DELETE Command.

Prescribed Books:

1. "Fundamentals of Database Systems" by R. Elmasri and S. Navathe

Reference Books:

1. "Introduction to Database Management System" Atul Kahate
PEARSON EDUCATION ISBN: 9789332505537
"Database System Concepts"
By Abraham Silberschatz, Henry Korth, and S. Sudarshan, McGrawhill, 2010

S.K.R. & S.K.R. Govt. College for Women (A), Kadapa
NAAC Reaccredited – B Level
II B.A, IV SEMESTER
OBJECT ORIENTED PROGRAMMING USING JAVA

UNIT -I

Fundamentals of object–Oriented programming:

Introduction, Object Oriented paradigm, Basic Concepts of OOP, Benefits of OOP, Applications of OOP, Java features.

Overview of java language:

Simple Java program structure, Java tokens, Implementing a Java Program, Java Virtual Machine, Command line arguments.

Constants, Variables & Data types:

Constants, Variables, Data Types, Declaration of Variables, Giving Value to Variables, Getting Value of Variables, Operators in Java.

UNIT-II

Decision making & Branching:

Decision making with if statement-Simple if statement, If-Else statement, Nesting of if-else statements, The else if ladder, The switch statement, The conditional operator.

Looping:

The While statement, The do-while statement, The for statement.

Classes, Objects & Methods:

Defining a class, adding variables, adding methods, creating objects, Accessing class members, Constructors, Method over loading, Static members.

UNIT-III

Inheritance:

Extending a class, Overriding methods, Abstract methods and classes.

Arrays, Strings:

Arrays, One-dimensional arrays, Two – dimensional arrays, Strings.

INTERFACES:

Introduction to multiple inheritance, defining interfaces, Extending interfaces, Implementing interfaces.

UNIT-IV

Multithreaded programming:

Creating Threads, Extending the Threads, Stopping and Blocking a Thread, Life cycle of a Thread, Using Thread Methods.

Managing errors and exceptions:

Types of errors, Compile-time errors, Run-time errors, Exceptions, Exception handling, Multiple Catch Statements.

UNIT-V

Applet Programming:

Local and remote applets, Applets and Applications, Building Applet code, Applet Life cycle: -Initialization state, running state, Idle or stopped state, Dead state, Display state.

Packages:

Java API Packages, Creating Packages, accessing a Package, Using a Package.

Prescribed Books:

1.E.Balaguru swamy, Programming withJ AVA,A primer,3e,TATAMcGraw-Hill Company.

ReferenceBooks:

- 1.Core Java: An Integrated Approach,Authored byDr. R.NageswaraRao&Kogent LearningSolutionsInc.
- 2.JohnR.Hubbard,ProgrammingwithJava,Second Edition,Schaum'soutline Series,TATAMcGraw-Hill Company.
- 3.Deitel&Deitel.JavaTM:HowtoProgram,PHI(2007)
- 4.ObjectOrientedProgrammingThroughJavabyP.RadhaKrishna, Universities Press (2008)

S.K.R. & S.K.R. Govt. College for Women (A), Kadapa
NAAC Reaccredited – B Level
II B.A, IV SEMESTER
WEB DESIGNING

UNIT-I:

Introduction to HTML:

Introduction to HTML, Basic html, Document body text, Hyperlinks , Adding more formatting Lists, Tables, Images, Multimedia Objects, Frames, Forms.

UNIT-II:

Building blocks of PHP:

Variables, Data Types, Operators and Expressions, Constants.

Flow Control Functions in PHP:

Switching Flow, Loops, Code Blocks and Browser Output. Working with Functions: Defining Functions, calling functions, returning the values from User Defined Functions, Variable Scope, Saving State between Function calls with the Static statement, more about arguments.

UNIT-III:

Working with Arrays:

Arrays, Creating Arrays, some Array-Related Functions, Working with Objects: Creating Objects, Object Instance. Working with Strings, Dates and Time: Formatting Strings with PHP, Manipulating Strings with PHP, Using Date and Time Functions in PHP

UNIT-IV:

Working with Forms:

Creating Forms, Accessing Form-Input with User defined Arrays ,Combining HTML and PHP code on a single page, Redirecting the user, Sending Mail on Form Submission, Working with File Uploads. Working with Cookies and User Sessions: Introducing Cookies, setting a Cookie

With PHP, Session Function Overview, Starting a Session, Working with session variables, passing session ID in the Query String.

UNIT-V:

Interacting with My SQL using PHP:

My SQL Versus My SQL Function, connecting to My SQL with PHP, Working with My SQL Data. Creating Database Tables, Creating Menu, Creating Record Addition Mechanism, Viewing Records, Creating the Record Deletion Mechanism, Adding Sub-entities to a Record.

Prescribed Book:

1. Chris Bates, Web Programming Building Internet Application, Second Edition, Wiley(2007)

Reference Books:

1. Head First Servlets and JSP 2nd Edition, Bryan Basham, Kathy Sierra 3. Uttam Kumar Roy, Web Technologies from Oxford University Press
2. Julie C. Meloni, PHP MySQL and Apache, SAMS Teach Yourself, Pearson Education(2007).
3. Xue Bai Michael Ekedahl, The web warrior guide to Web Programming, Thomson(2006).