

VISUAL PROGRAMMING AND DBMS

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
III		Core Paper – 3	5	75	5	75	-	-	4

COURSE OBJECTIVE

The objective of the **course** is to present an introduction to **database management** systems, with an emphasis on how to organize, maintain and retrieve - efficiently, and effectively - information from a **DBMS**.

It also develop the students about Data Base Creation and Manipulation, along with

Application development in Visual Basic 6.0 with database connectivity.

COURSE OUTCOME

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1 – K4)
CO1	Explain the structure and model of the relational database system	K2
CO2	Design a database based on a data model considering the normalization to a specified level	K3
CO3	Explain the basics of Oracle and PL/SQL.	K1
CO4	Learn to use Visual basic Integrated Development Environment and language basics.	K2
CO5	Learn the concept of Arrays, Objects and Database connectivity.	K3

Knowledge Level – K1 – Remember, K2 – Understand, K3 – Apply, K4 – Analyze

MAPPING WITH PROGRAMME OUTCOME

COS	PO 1	PO2	PO3	PO4	PO5	PO 6
CO1	M	M	S	S	S	S
CO2	S	S	S	M	S	S
CO3	S	S	M	M	S	M
CO4	S	S	S	S	S	M
CO5	S	S	S	M	S	M

S – Strong

M – Medium

L – Low

SYLLABUS

UNIT I – Basics of Dbms and Relational Algebra

16 hrs

Purpose of Database – Overall system Structure – Entity Relationship Model – Mapping Constraints – Keys – E – R Diagram. Relational Algebra – Tuple And Domain Relational Calculus.

UNIT II – Normalization and SQL

16 hrs

Normalization Using Functional Dependencies – First Normal Form – Second Normal Form – Third Normal Form – Fourth Normal Form and BCNF. Structured Query Language – Basic Structure – Set Operation – Aggregate Function

UNIT III – Basics of Oracle

12 hrs

Introduction to ORACLE – ORACLE Commands: DDL – DML and DCL Statements – ORACLE Built – in Functions – PL/SQL: Blocks

– Control statements – Loops – Cursor Management – Triggers – Functions & Procedure – Data types – Exception Handling.

UNIT IV – VB Integrated Development Environment

15 hrs

IDE Integrated Development Environment – Creating Controls and Properties – Variables and Data types – Message box–List box – Combo box – Control and Loop structures – Procedures and Functions

UNIT V – Arrays and ODBC

16 hrs

Arrays – Records – Control Arrays – MS Flex Grid Control– VB objects – Menus – Mouse Events– Dialog boxes – MDI form – Do events and sub main – Error trapping – File Handling – File System control – ODBC using RDO and DAO – OLE fundamentals

Distribution of Marks: Theory: 75% and Applications: 25% TEXT

BOOKS

S.No	Authors	Title	Publishers	Year of Publication
1.	Abraham Silberschartz, H.F. Korth and S.Sudarshan	Database System Concepts	McGraw Hill Publication.	2012
2	Gary Cornell	VB6 from the ground up	McGraw Hill Publication.	2017

REFERENCE BOOKS

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1.	Singh	Database Systems: Concepts, Design & Applications,	Pearson Education	2010

2.	Gerald V.Post	DBMS- Designing and Business Applications	McGraw Hill Publications.	2012
3.	Deitel and Deitel	VB6 How To Program	Person Education	2010
4.	Dan Rahmel	Visual Basic Programmer's Reference	McGraw Hill Publications.	2018
5.	Noel Jerke	VB6:The Complete Reference	McGraw Hill Publications.	2017
6.	Raghu Ramakrishnan	Database Management Systems	McGraw Hill Publications.	2013
7.	Mark L Gillenson	Fundamentals of Database Management Systems	Mark L Gillenson John Wiley & Sons, Inc.	2011
8.	Seyed M. Tahaghoghi	Learning MySQL	O'Reilly Media, Inc.	2016

WEB RESOURCES

<https://www.capterra.com/database-management-software/>

1. <https://www.vbtutor.net/vbtutor.html>
2. <https://docs.microsoft.com/.../get-started/visual-basic/tutorial-console>

TEACHING METHODOLOGY

- o Class room teaching.
- o Group discussions
- o Seminars
- o Demo using systems
- o Chart/Assignment
- o Smart Class room

SYLLABUS DESIGNERS

1. Mrs. B.Arulmozhi , Assistant Professor and Head, Department of Computer Science
2. Mrs. S. Shanthi, Assistant Professor, Department of Computer Science