



Lesson Plan

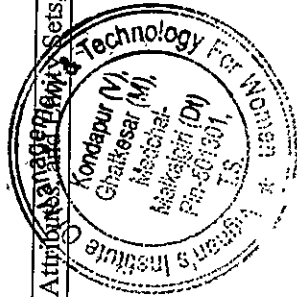
Subject Name : DATABASE MANAGEMENT SYSTEMS

Year & Semester: II-II Branch: IT

Name of the Faculty : A.EENAJA

Academic Year: 2023-2024

Unit No.	Topic of Syllabus to be covered	Learning Outcomes	Teaching Mode (BB/PPPT/Video)	Total No. of Hours (Cumulative)	Date (As per Timetable)
I	Introduction to DBMS	Understand Databases	BB & PPT	1	26-Feb-24
I	Introduction: Database System Applications	Understand Database System Applications	BB	2	27-Feb-24
I	A Historical Perspective, File Systems versus a DBMS	Gain knowledge of the evolution of database management systems and	BB	3	28-Feb-24
I	Data Models	Understanding data representation	BB	4	29-Feb-24
I	Purpose of Database Systems	Describing and Analyzing Purpose of Database Systems,	BB	5	2-Mar-24
I	Levels of Abstraction in a DBMS	Understanding the concept of three levels of abstraction in DBMS	BB	6	4-Mar-24
I	Data Independence	Understanding data independence:	BB	7	5-Mar-24
I	Database Languages – DDL, DML, DCL, TCL	Explain Database Languages – DDL, DML, Relational Databases	BB	8	6-Mar-24
I	Structure of a DBMS	Understanding the architecture and components of a database management system (DBMS),	BB	9	
I	Introduction to Data base design: Database Design and ER diagrams	Illustrate Introduction to Data base design: Database Design and ER diagrams	BB	10	7-Mar-24
I	Entities, Attributes, Keys, Relationships and	Understand Specialty Databases,	BB	11	9-Mar-24 11-Mar-24



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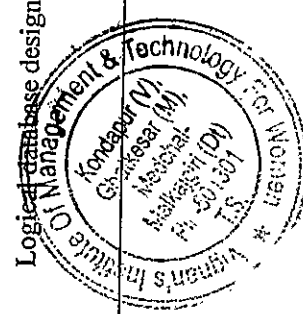


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Relationship Sets		Database users and Administrators,		
I	Additional Features of the ER Model	History of Database Systems		
I	Conceptual Design With the ER Model	Understand Logical data base Design: ER to Relational	BB	12 13
II	UNIT-I TEST	Understanding the fundamental concepts of tables, rows, columns, keys, and relationships in relational databases.	BB	14 15
II	Introduction to the Relational Model	Ability to define, enforce, and manage integrity constraints such as primary keys, foreign keys, uniqueness constraints, and referential integrity within relational database relations.	BB	16
II	Integrity constraint over relations			16-Mar-24
II	Enforcing integrity constraints	Ability to implement and enforce integrity constraints, ensuring data accuracy and consistency in a database management system (DBMS).	BB	17
II	Querying relational data	Able to write and execute SQL queries to retrieve, manipulate, and analyze relational data stored in a database management system (DBMS).	BB	18
II	Logical database design	Understanding the principles and techniques for organizing data logically, including entity-relationship modeling, normalization, and schema design, in database management systems (DBMS).	BB	19
				20-Mar-24
				21-Mar-24



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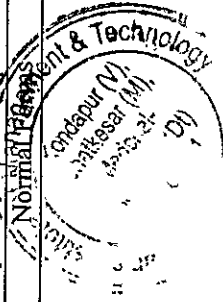
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II	Introduction to views	Able to comprehend the concept of database views	BB	20	23-Mar-24
II	Destroying/Altering tables and views.	Understand how to effectively modify and delete database tables and views, ensuring data integrity and consistency within the database management system (DBMS).	BB	21	
II	Relational Algebra and Calculus: Preliminaries	Understand Relational Algebra and Calculus: Preliminaries	BB	22	26-Mar-24
II	Relational Algebra	Illustrate Relational Algebra	BB	23	27-Mar-24
II	Relational calculus – Tuple relational Calculus	Illustrate Relational calculus – Tuple relational Calculus	BB	24	28-Mar-24
II	Domain relational calculus	Illustrate Domain relational calculus	BB	25	30-Mar-24
II	UNIT-TEST II			26	1-Apr-24
III	SQL: Queries, Constraints	Explain SQL: Queries	BB	27	2-Apr-24
III	Triggers: Form of Basic SQL Query	Triggers: Form of Basic SQL Query	BB	28	3-Apr-24
III	UNION, INTERSECT, and EXCEPT	Analyzing UNION, INTERSECT, and EXCEPT	BB	29	4-Apr-24
III	Nested Queries, Aggregation operators	Understand Nested Queries	BB	30	6-Apr-24
III	NULL values Complex Integrity Constraints in SQL	Understand NULL values Complex Integrity Constraints in SQL	BB	31	8-Apr-24
III	Triggers and Active Databases	Understand Designing Active Databases a		32	10-Apr-24
III	Introduction to Schema Refinement	Introduction to Schema Refinement	BB	33	13-Apr-24
III	Examples on schema refinement	Illustrate Examples on schema refinement	BB	34	15-Apr-24
III	Problems caused by redundancy decompositions, problems related to decomposition		BB	35	16-Apr-24
III	reasoning about functional dependencies	Illustrate Reasoning about FDs	BB	36	18-Apr-24
III	Properties of Decompositions			37	20-Apr-24
III	Normal Forms	Understand Normal Forms	BB	38	22-Apr-24
					23-Apr-24



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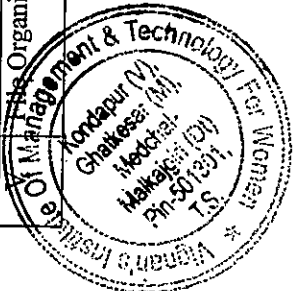
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III	I NF 2 NF	Illustrate Properties of Decompositions		39		24-Apr-24
III	3 NF	Understand Normalization	BB	40		25-Apr-24
III	BCNF		BB	41		27-Apr-24
III	lossless join decomposition	Understand 1 NF 2 NF	BB	42		29-Apr-24
III	multivalued dependencies			43		6-May-24
III	Fourth normal form, Fifth normal form.	Understand 3 NF 4 NF	BB	44		7-May-24
III	Examples on Normal Forms	Understand BCNF		45		8-May-24
III	Examples on Normal Forms	Understand Examples on Normal Forms	BB	46		9-May-24
	Unit test-III			47		11-May-24
IV	Transaction Management: Transactions, Transaction Concept	Understand Transaction Management: Transactions	BB	48		27-May-24
IV	A Simple Transaction Model Transaction State,	Understand A Simple Transaction Model		49		28-May-24
IV	Implementation of Atomicity and Durability, Concurrent Executions		BB	50		29-May-24
IV	Serializability, Recoverability	Understand Serializability	BB	51		30-May-24
IV	Implementation of Isolation Levels	Explain Implementation of Isolation Levels		52		1-Jun-24
IV	Testing for serializability, Lock Based Protocols, Timestamp Based Protocols, Validation- Based Protocols,		BB	53		3-Jun-24
IV	Concurrency Control: Lock-Based Protocols, Timestamp-Based Protocols, Validation-Based Protocols	Understand Concurrency Control: Lock-Based Protocols	BB	54		4-Jun-24
IV	Multiple Granularity			55		5-Jun-24
IV	Recovery and Atomicity	Recovery and Atomicity	BB	56		6-Jun-24
IV	Log-Based Recovery, Recovery with Concurrent Transactions	Recovery Algorithm	BB	57		8-Jun-24
	UNIT TEST-IV			58		10-Jun-24
V	Overview of Storage and Indexing, Data on External Storage	Understand Overview of Storage and Indexing	BB	59		11-Jun-24
	The Organization and Indexing, Cluster Indexes, Primary and Secondary Indexes	Understand File Organization and Indexing	BB	60		12-Jun-24



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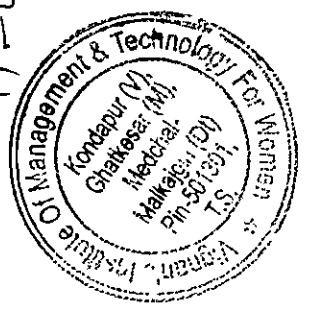
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V	Index Data Structures	Explain Index Data Structures	BB	13-Jun-24
V	Hash- Based Indexing: Static Hashing	Understand Hash- Based Indexing: Static Hashing	BB	61
V	Extendible hashing* Linear Hashing*	Explain Extendible hashing	BB	62
V	Extendible Hashing versus Linear Hashing *	Evaluate Linear Hashing	BB	63
V	Tree based Indexing	Evaluate Tree-Structured Indexing: Intuition for tree	BB	64
V	Comparison of File Organizations	Understand Indexed Sequential Access Method (ISAM)	BB	65
V	Tree-Structured Indexing: Intuition for tree Indexes	Understand B+ Trees: A Dynamic Index Structure	BB	66
V	Indexed Sequential Access Methods (ISAM)	UNIT-TEST -V	BB	67
V	B+ Trees: A Dynamic Index Structure		BB	68
	Revision		BB	69
	Revision		BB	70
	Revision		BB	71
	Revision		BB	72
	Revision		BB	73
	Revision		BB	74
	Revision		BB	75
	Previous Question Papers Discussion		BB	76
	Previous Question Papers Discussion		BB	77
	Previous Question Papers Discussion		BB	78
	Important questions discussion		BB	79
	Important questions discussion		BB	80
			BB	81

Subject Teacher *Alex*
Date: 19-02-24

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Date: 19-02-24



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