ATME College of Engineering

Department of Computer Science & Design

Lesson Plan & Work-done Diary for AY:2023-24, ODD Semester

Course with Code: Database Management System(21CS53)				Faculty : Mrs. Pushpa P			Semester & Section:5th A	
Class No.	**Date planned (DD/MM)**	**Topics to be covered**	**TLP Planned**	**Class No.**	**Date of Conduction (DD/MM)**	**Topics Covered**	**TLP Executed**	**Remarks if any deviation**
MODULE-1								
	28/11/2023	Bridge course -Introduction to DBMS Syllabus discussion .						
1		Introduction to Databases: Introduction, Characteristics of database approach	PPT					
2		Advantages of using the DBMS approach	PPT					
3		History of database applications	PPT					
4		Overview of Database Languages and Architectures: Data Models, Schemas, and Instances	PPT					
5		Three schema architecture and data independence, database languages, and interfaces	PPT					
6		The Database System environment.	PPT					
7		Conceptual Data Modeling using Entities and Relationships: Entity types, Entity sets , attributes roles, and structural constraints	PPT					
8		Weak entity types ,ER diagrams	PPT					
9		ER diagrams, examples	PPT					
10		ER diagrams, examples, Specialization and Generalization.	PPT					

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MODULE-2								
11		Relational Model: Relational Model Concepts, Relational Model Constraints and relational database schemas	PPT					
12		Update operations, transactions, and dealing with constraint violations	PPT					
13		**Relational Algebra:** Unary Relational Operations	PPT					
14		Binary Relational Operations	PPT					
15		Additional Relational Operations	PPT					
16		Examples of Queries in Relational Algebra	PPT/ Chalk&Talk					
17		**Mapping Conceptual Design into Logical design** Relational Database Design Using ER- to-Relational Mapping.	PPT					
18		Introduction to DB, SQL: SQLdata definition and data types	PPT					
19		Specifying constraints in SQL, retrieval queries in SQL	PPT/ Chalk&Talk					
20		Insert, delete and Update statements in SQL, Additional features of SQL	PPT/ Chalk&Talk					

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MODULE-3								
21		SQL: Advances Queries :More complex SQL retrieval queries	PPT/ Chalk&Talk					
22		Specifying constraints as assertions and action triggers	PPT					
23		Views in SQL, Schema change statements in SQL	PPT/ Chalk&Talk					
24		Database Application Development: Accessing databases from applications,	PPT					
25		An introduction to JDBC,JDBC classes and interfaces	PPT					
26		SQLJ, Stored procedures	PPT					
27		Case study: The internet Bookshop	PPT					
28		Internet Applications: The three-Tier application architecture	PPT					
29		The presentation layer	PPT					
30		The Middle Tier	PPT					

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MODULE-4								
31		Normalization: Database Design Theory – Introduction to Normalization using Functional and Multivalued Dependencies Informal design guidelines for relation schema	PPT					
32		Functional Dependencies	PPT					
33		Normal Forms based on Primary Keys,	PPT					
34		Second and Third Normal Forms	PPT					
35		Boyce-Code Normal Form	PPT					
36		Multivalued Dependencies and Fourth Normal Form, Join Dependencies and Fifth Normal Form	PPT					
37		**Normalization Algorithm:** Inference Rules, Equivalence, and Minimal Cover	PPT					
38		Properties of Relational Decompositions, Algorithms for Relational Database Schema Design	PPT					
39		Nulls, Dangling tuples, and alternate Relational Designs	PPT					
40		Further discussion of Multivalued dependencies and 4NF, Other Dependencies and Normal Forms	PPT					

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MODULE-5								
41		**Transaction Processing:** Introduction to Transaction Processing; Transaction and System concepts, Desirable properties of Transactions	PPT					
42		Characterizing schedules based on recoverability, characterizing schedules based on Serializability, Transaction support in SQL	PPT					
43		**Concurrency Control in Databases:** Two-phase locking techniques for Concurrency control	PPT					
44		Concurrency control based on Timestamp ordering, Multi version Concurrency control techniques	PPT					
45		Validation Concurrency control techniques	PPT					
46		Granularity of Data items and Multiple Granularity Locking	PPT					
47		**Introduction to Database Recovery Protocols:** Recovery Concepts	PPT					
48		NO-UNDO/REDO recovery based on Deferred update	PPT					
49		Recovery techniques based on immediate update, Shadow paging	PPT					
50		Database backup and recovery from catastrophic failures	PPT					

	Activity	Planned	Actual	Remarks
1	Theory Classes	50		
2	Assignments/Quizzes/ Self-study	5		
3	Tutorials/Extra classes			
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)			
Planning			**Execution**	
Faculty Signature:			**Faculty Signature:**	
HoD Signature:			**HoD Signature:**	