Subject:

.

Unit/

Rook

No of



SWARNANDHRA COLLEGE OF ENGINEERING & TECHNOLOGY

Code:

(AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA Recognized under 2(f) & 12(B) of UGC Ait 1958, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

DEPARTMENT OF INFORMATION TECHNOLOGY

Course Code	Course Title DATA BASE MANAGEMENT SYSTEMS		Semester Branch Contact Periods		Week Academic Year		Date of commencement			
20IT4T03			IV	IV IT 5			2023-24	3-01-2024		
COURSE	OUTCOM	IES								
1	Explain the basic concepts of database management system and design an Entity- Relationship (E-R) model and convert E-R model to relational model.									
2	Construct database using Relational algebra and SQL.									
3										
4	Apply Normalization techniques to normalize the database. Discuss transaction management using different concurrency control protocols and recovery algorithms.									
5				on and inde	exing methods.					
UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity			Test Book/ Ref	Contact Hour	Delivery Method		
	CO-1			Introduction	ı;					
		1.1	Database Sys	tem Applic	cations,	72	1			
		The same	1.2	Purpose of D	atabase Sy	stems.	12	1		
		1.3	View of Data Instances and	- Data Ab		12	1			
		1.4	Data Models,	Database	Languages	72	1			
			1.5		hitecture, I	Database Users	12	1	Chalk & Board	
					Introduction	to Databa	ase Design:		1	Doard
1		1.6	Database Des			12	1	Power point		
		1.7	Entities, Attri			12	1	presentations		
				1.8	Relationships	THE RESERVE AND ADDRESS OF THE PARTY OF THE		72	1	
		1.9		esign with	R Model, the ER Model	711	1	Assignment		
			Relational M					Test		
		1.10	Integrity Con	straints ove		71	1			
		1.11	Enforcing Int relational data		straints, querying	23	1			
		1.12	Logical data	base Design	n, Views.	73	1			
ontent beyon	nd syllabus	1.13	Distributed Databases: Architecture				1			
		34				Times	13			
			Relational A	_				76		
		2.1	Relational Al		150000000000000000000000000000000000000	73	1			
П	CO-2	2.2		ction and Projection		73	1	Chalk		
**		2.3	Set operation			75%		0		



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		SC		Seetharampuram, W.G.DT., Narsapur-534	280, (Andria	Pradesn)	da
			2.5	Examples of Basic SQL Queries, UNION	T1	1	1
			2.6	INTERSECT, and EXCEPT	T1	1	Power point
			2.7	Introduction to Nested Queries, Correlated Nested Queries	T1	1	presentations
Date of commencement 2.		2.8	Set Comparison Operators, Aggregate Operators	T1	1	Assignment	
3-01-			2.9	NULL values - Comparison using Null	T1	1	Test
-				values - Logical connectives - AND	T1	•	10
1			2.10	OR and NOT - Outer Joins	T1	1	v
		-	2.11	Disallowing NULL values, Triggers		1	
	maxi demonst	iniliabus	2.12	Introduction to PL/SQL	T1,T3 Total	12	*
				SCHEMA REFINEMENT AND	Total	12	4
	_			NORMAL FORMS:			
			3.1	Introduction to Schema Refinement -	T1	1	1
			3.2	Problems Caused by redundancy	T1	1	J
			3.3	Decompositions - Problem related to decomposition	T1	1	Chalk
			3.4	Functional Dependencies -	T1	1	& Board
١.	Delivery		3.5	Reasoning about FDS	T1	1	Board
	Method	CO-3	3.6	Normal Forms - FIRST, SECOND	T1	1	Power point
+			3.7	THIRD Normal forms - BCNF - Properties of Decompositions	Т1	1	presentation
7	4 10 10 10 10 10		3.8	Loss less join Decomposition	T1	1	Assignment
-4			3.9	Dependency preserving Decomposition	T1	1	Test
-			3.10	Multi valued Dependencies - FOURTH Normal Form	T1	1	
-			3.11	Join Dependencies, FIFTH Normal form.	T1	1	1
	Chalk	Imiliabus	3.12	Non-loss Decomposition	T1,T3	1	4
1	& Board	-	5.12	Tion loss becomposition	Total	12	4
-	Board			Transaction Management:			1
-	Power point		4.1	The ACID Properties	T1	1	4
_	presentations		4.2	Transactions and Schedules	T1	1	74
	P		4.3	Concurrent Execution of Transactions-	T1	1	Challe
1	Assignment		4.4	Lock-Based Concurrency Control- 2PL	T1	1	Chalk &
1			4.5	Serializability	T1	1	Board
	Test		4.6	Recoverability	T1	1	7
	1	0-4	4.7	Dealing With Deadlocks	T1	1	Power point
				Concurrency Control without Locking	T1	1	presentation
1			4.8				
1	-		4.8				79
1	-	1		CRASH RECOVERY:		1	
1			4.9	CRASH RECOVERY: Introduction to ARIES The Log - The Write-Ahead Log Protocol	T1 T1	1	Assignment Test
1			4.9	CRASH RECOVERY: Introduction to ARIES The Log - The Write-Ahead Log Protocol - Checkpoints Recovering from a System Crash(ARIES)	T1		
1 1 1	Chalk	Ilabus	4.9	CRASH RECOVERY: Introduction to ARIES The Log - The Write-Ahead Log Protocol - Checkpoints	T1 T1	1	Assignment Test

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Content I

v	CO-5	5.4	Organization and indexing			4	
		5.3	Clustered Indexes	T1	1	Chal	
		5.4	Primary and Secondary Indexes	T1, R1	1		
		5.5	Index data Structures -	T1, R1		&	
			Hash Based Indexing	T1		Boa	
		5.7 Tree bas 5.8 Compari Tree Str	70 5	T1, R1	1	Power p presenta	
			Comparison of File Organizations	T1, R1	1		
			-	Tree Structured Indexing:			Assign
			5.9	Intuitions for tree indexes	T1, R1	1	Te
		5.10	Indexed Sequential Access Methods(ISAM),	T1, R1	1		
		5.11	B+ Trees: A Dynamic Index Structure	T1, R1	1		
		5.12	Search, Insert, Delete	T1, R1	1		
		5.13	Oueries in IR systems	T1, R1	1	4	
Total				13			
			Cumulative Propo	sed Periods	62		

TEACHING PLAN

5		Name	Signature with Date			
i.	Faculty	Mrs. R. Uma Aruna Devi	R.OAD			
ii.	Module Coordinator	Dr. RVVSV Prasad	Rusopina d			
iii.	Programme Coordinator	Dr. RVVSV Prasad	Rusi pias 2			

Principal

No. of

periods