



SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)



Course: Database Management Systems Lab

Course Code: 0705210506

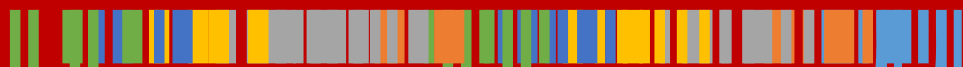
Catalog Course Code: T7487

Symbiosis Institute of Technology, Nagpur

Prof. Firdous Sadaf Mohammad Ismail

Assistant Professor

(For IV Semester Sec B Batch-B2)



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University Mission

- ✓ Promoting International understanding through quality education.

University Vision

- ✓ To inculcate spirit of 'Vasudhaiva Kutumbakam' (the world is one family).
- ✓ To contribute towards knowledge generation and dissemination.
- ✓ To promote ethical and value-based learning.
- ✓ To foster the spirit of national development.
- ✓ To inculcate cross cultural sensitization.
- ✓ To develop global competencies amongst students.
- ✓ To nurture creativity and encourage entrepreneurship.
- ✓ To enhance employability and contribute to human resource development.
- ✓ To promote health and wellness amongst students, staff & community.
- ✓ To instill sensitivity amongst the youth towards the community and environment.
- ✓ To produce thought provoking leaders for the society.



Course Outcomes

- ✓ Understanding database design concepts
- ✓ Demonstrate the ability to data manipulation and querying
- ✓ Effectively utilize advanced SQL features to query and process data for solving complex problems.
- ✓ Implement procedural database solutions using PL/SQL constructs to handle dynamic and transactional operations efficiently.
- ✓ Integrate databases with external applications through ODBC



Evaluation Methods/Plan

Sr. No.	Component	Syllabus	Max. Marks (20)	Tentative Date		
				Notification	Conduction	Result Declaration
1	CA – 1: viva	First three practical	10	Jan 20-25	20-25 Jan 2025	30 January 2025
2	CA2 Mini project	based on all practical	10	Mar 10-12	10-12 Mar 2025	Within 15 Days

Eligibility to appear for CA Component: Must have **attendance above 75%** before the scheduled CA components.



Attendance criteria

- ✓ **Eligibility to appear for CA Component:** Must have **attendance above 75%** before the scheduled CA components.
- ✓ Students failing to meet the attendance criteria will receive a "Course Not Granted" (CNG) status.
- ✓ CNG status indicates ineligibility to take the end-semester exam.



Syllabus: [Credits: 2, Max. Marks: 50 (CA: 20 and ESE: 30), Contact Hours: 4 hrs per week]

1. Draw an ER diagram and EER diagram and convert it into relational database and draw schema diagram.
2. Write and execute basic SQL query- create, alter, insert, update and delete. (instructor should frame appropriate problem definition).
3. Write and execute SQL functions- aggregate, numeric, date, string, and conversion.
4. Write and execute SQL queries- Operators (and, or, not, like, between, in)
5. Write and execute SQL queries- subqueries, joins.
6. Write and execute basic PL/SQL programs - simple program, condition statements and loops.
7. Write and execute PL/SQL function to print /return binary equivalent of decimal number.
8. Write and execute PL/SQL procedure to transfer fund from one account to another.
9. Write and execute triggers using PL/SQL.
10. Create and perform database operations using ODBC (Open Database Connectivity).



Recommended Books:

Book	Author	Publisher
An Approach on Grid Services Transaction Management for Grid Overflow	ICIECS	NA
An Introduction to Database Systems, 7th Edition, 2000	Date C.	Pearson Education.
Database System Concepts, 6th Edition, 2010	Silberschatz A., Korth H., Sudarshan S.	McGraw Hill.
Database Systems Design, Implementation and Management, 5th Edition	Rab P. Coronel C.	Thomson.
Database Systems, 3rd Edition, 2004	Connally T., Begg C.	Pearson Education.
Fundamental Research of Distributed Database	IJCSMS International Journal of Computer Science and Management Studies	NA
Fundamentals of Database Systems, 6th Edition, 2010	Elmasri R., Navathe S.	Pearson Education.
MySQL Administrator's Bible	Sheeri K. Cabral and Keith Murphy	O'Reilly Media.
Object Comparison in Fuzzy object-oriented databases	ICIS	NA



Academic Calendar



Symbiosis Institute of Technology, Nagpur Campus														
Academic Calendar Even Semester 4, 6, 8th Sem														
Session: 2024-25														
	Mon	Tue	Wed	Thur	Fri	Sat	Sun	Days	Holidays	List of Activities	Working days	C A		
												Credit 2	Credit 3	Credit 4
Dec-24							1		Dec 25: Christmas	Dec 26: Orientation Program (All Sem.) Commencement and Registration: 4, 6 and 8 Semester	5			
	2	3	4	5	6	7	8	0						
	9	10	11	12	13	14	15	0						
	16	17	18	19	20	21	22	0						
	23	24	25	26	27	28	29	3						
	30	31						2						
Jan-25			1	2	3	4	5	3	Jan 1: New Year Day, Jan 14: Makar Sankranti and Jan 26: Republic Day	Jan17: Open House	24	CA1 Jan 20- 25	CA1 Jan 20- 25	CA1 Jan 20- 25
	6	7	8	9	10	11	12	6						
	13	14	15	16	17	18	19	5						
	20	21	22	23	24	25	26	6						
	27	28	29	30	31			4						
Feb-25						1	2	0		Feb 10,11: Student Mid Sem Feedback, Feb. 20-22: Cultural/Tech. Fest (Enthusia)	23			
	3	4	5	6	7	8	9	6						
	10	11	12	13	14	15	16	6						
	17	18	19	20	21	22	23	6						
	24	25	26	27	28			5						
Mar-25						1	2	1	March 14: Holi, March 30: Gudipadwa	Mar. 3-7: FDP, IDMP	22	CA2/ MSE Mar10-12	CA2/ MSE Mar10-12	CA2/ MSE Mar10-12
	3	4	5	6	7	8	9	6						
	10	11	12	13	14	15	16	2						
	17	18	19	20	21	22	23	6						
	24	25	26	27	28	29	30	6						
	31							1						



Academic Calendar

Apr-25		1	2	3	4	5	6	5	April 14: Ambedkar Jayanti	April 25-30: Student End Sem Feedback & End Sem Practical Exam	20		CA3 Apr 1-2	
	7	8	9	10	11	12	13	6						
	14	15	16	17	18	19	20	5						
	21	22	23	24	25	26	27	4						
	28	29	30											
May-25				1	2	3	4		May 1: Maharashtra Day		0		CA3 Apr. 18-23	
	5	6	7	8	9	10	11							
	12	13	14	15	16	17	18							
	19	20	21	22	23	24	25							
	26	27	28	29	30	31								
Total Days:											94			

Particulars	Start Date	End Date	
Teaching	26-12-2024	24-04-2025	94
PL	01-05-2025	07-05-2025	7
ESE	08-05-2025	24-05-2025	17
Semester Break	25-05-2025	30-06-2025	37
Commencement of Next Sem	01-07-2025		

(Verified)	(Verified)
Signature: 	Signature: 
Name: Dr. Piyush Chakraborty	Name: Dr. S.S. Pandharge
Date: 17/12/24	Date: 17/12/24
Examination Department	Academic Department


 Director's Signature

	Commencement of Semester
	SUNDAYS
	HOLIDAY as per SIU
	CA(Credit 4)
	CA(Credit 3)
	CA(Credit 2)
	MSE/ESE
	ESE Practical & Feedback
	PL
	Open House
	FDP
	Mid-Sem Feedback
	Last Teaching Day
	Enthusia/Cultural-Tech. Fest



The subject "Database Management Systems Lab" is essential in computer science and engineering. It provides practical exposure to relational databases, SQL, PL/SQL, and advanced database concepts like triggers and procedures. These are fundamental in data-centric application development, enterprise systems, and distributed applications.

Prerequisites:

A foundational understanding of programming and basic algorithms is beneficial.

Related Subjects:

- Data Structures and Algorithms
- Operating Systems
- Computer Networks
- Software Engineering



This subject is crucial for various industry roles, such as:

- **Database Administrator (DBA):** For maintaining, optimizing, and securing databases.
- **Application Developer:** To integrate robust database solutions in applications like banking and reservation systems.
- **Data Analyst/Scientist:** For querying and processing large datasets.
- **Entrepreneurial Ventures:** Designing scalable systems with optimized database structures is fundamental for startups focusing on tech-driven solutions.



Time Table

Symbiosis Institute of Technology, Nagpur										
Ver. 1.1	Time Table B. Tech. (Computer Science and Engineering)							Session: 2024-2025		
								w.e.f.: IV Sem: 26/12/2024		
PERIOD → DAYS ↓	Sem	9.00 - 9.50 (1)	9.50 - 10.40 (2)	10:40 - 11:30 (3)	11:30 - 12:20 (4)	12:20 - 01:10 (5)	01:10 - 02:00 (6)	02:00 - 02:50 (7)	02:50 - 3:40 (8)	03:40 - 04:30 (9)
TUE	IV B	DBMS Lab B2 (FS) (Lab 2)								
THU	IV B							DBMS Lab B2 (FS) (Lab 2)		



About Prof. Firdous Sadaf and area of research

Qualification: Ph.D Pursuing IIIT Nagpur, NET Qualified, M.Tech, B.E (CSE)

Experience: +12years



Area of Research: Cyber & Network security, Machine Learning, Deep Learning & Blockchain Technology

Achievements:

- Delivered training to WCL Nagpur and MOIL Manser's officers in cybersecurity and safeguarding against cyber-attacks.
- Cleared UGC-NET
- Certified by EduSkills & AWS academy as eligible instructor for AWS Cloud Foundation and AWS Cloud Architect
- Certified by EduSkills & Palo alto academy as eligible instructor for Cybersecurity Foundation, Network Security, Cloud Security
- & Security Operations Fundamentals Train the Trainer Course



Research/Project Outputs:

Research articles and patent can be achieved which will benefit students in their academics and lifelong related endeavors.



Thank You!

