Practical Plan

Branch: Computer Engineering (DIV B)

Semester: IV **Year: 2023-24**

Course Title: Database management system lab (CSL402)	SEE: 2 Hours – Practical
Total Contact Hours: 20 Hours	
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Course Outcomes:

Lab Outcome: At the end of this course students should be able to

Co-code	CO
CSL402.1	Design ER/EERdiagram and convert it into relational model for the real life problem
CSL402.2	Apply DDL, DML, DCL, TCL commands.
CSL402.3	Write Simple and complex queries.
CSL402.4	Use PL/SQL construct
CSL402.5	Demonstrate the concept of concurrent transaction execution and front end and Back End concurrency

List of Experiments:

Sr. No.	List of experiments	CO mapping (LAB)	Batch A	Batch B	Batch C	Batch D
1	Identify the case study and detail statement of problem. Design an Entity-Relationship (ER) / Extended Entity-Relationship (EER) Model.	**CSL402.1**	**25.1.24**	**24.1.24**	**23.1.24**	**22.1.24**
2	Mapping ER/EER to Relational schema model.	**CSL402.1**	**01.2.24**	**31.1.24**	**30.1.24**	**29.1.24**
3	Create and populate database using Data Definition Language (DDL) and DML Commands for the specified System.	**CSL402.2**	**8.2.24**	**7.2.24**	**6.2.24**	**12.2.24**
4	Perform Simple queries, Date operations.	**CSL402.2**	**15.2.24**	**14.2.24**	**13.2.24**	**26.2.24**
5	Apply Integrity Constraints for the specified system.(Part1,2,3)	**CSL402.2**	**29.2.24**	**28.2.24**	**27.2.24**	**26.2.24**
6	Perform Join operations and Complex queries	**CSL402.3**	**7.3.24**	**6.3.24**	**3.3.24**	**4.3.24**
7	Perform nested sub-queries in SQL	**CSL402.3**	**14.3.24**	**6.3.24**	**12.3.24**	**4.3.24**
8	PL/SQL and procedure.	**CSL402.4**	**21.3.24**	**13.3.23**	**12.3.24**	**18.3.23**
9	Function and Triggers	**CSL402.3**	**21.3.24**	**20.3.23**	**19.3.24**	**18.3.23**
10	Transaction and Concurrency control	**CSL402.4**	**28.3.24**	**27.3.23**	**26.3.23**	**1.4.24**
11	Mini project- Creating a 2/3-tier client-server database applications using JDBC/ODBC	All COs	**4.4.24**	**10.4.24**	**16.4.23**	**8.4.24**

CO	BL	C	PI	PO	Mapping
CSL 402.1 Design ER/EERdiagram and convert it into relational model for the real life problem	L5	1.4	1.4.1	PO1	3

		2.1.	2.1.2	PO2	3
		3.2.	3.2.1	PO3	3
		9.3	9.3.1	PO9	2
		10.1	10.1.1 10.1.2	PO10	2
		11.3	11.3.1	PO11	1
		12.2	12.2.1	PO12	2
CSL 402.2 Apply DDL, DML, DCL, TCL commands .	L4,L5	1.4	1.4.1	PO1	3
		2.1.	2.1.2	PO2	3
		3.3	3.3.1	PO3	3
		4.1.	4.1.2	PO4	2
		5.5	5.2.2	PO5	3
		10.1.	10.1.1	PO10	2
		11.3	11.3.1	PO11	1
		12.2	12.2.1	PO12	2
CSL 402.3 Write Simple and complex queries.	L4,L5	1.4	1.4.1	PO1	3

		2.1.	2.1.2	PO2	3
		3.3	3.3.1	PO3	3
		4.1.	4.1.2	PO4	2
		5.5	5.2.2	PO5	3
		10.1.	10.1.1	PO10	2
		11.3	11.3.1	PO11	1
		12.2	12.2.1	PO12	2
CSL 402.4 Use PL/SQL construct	L3,L4	1.4	1.4.1	PO1	3
		2.1.	2.1.2	PO2	3
		3.3	3.3.1	PO3	3
		4.1.	4.1.2	PO4	2
		5.5	5.2.2	PO5	3
		10.1.	10.1.1	PO10	2
		11.3	11.3.1	PO11	1
		12.2	12.2.1	PO12	2
CSL 402.5 Demonstrate the concept of concurrent transaction execution and front end and Back End concurrency	L1,L2,L4	1.4	1.4.1	PO1	3
		2.1.	2.1.2	PO2	3
		3.3	3.3.1	PO3	3

	4.1	4.1.1	PO4	2
	5.2	5.2.2	PO5	2
	9.2	9.2.3	PO9	2
	10.1	10.1.1	PO10	1
	11.3	11.3.1	PO11	1

Mapping of CO and PO/PSO

Relationship of course outcomes with program outcomes: Indicate 1 (low importance), 2 (Moderate Importance) or 3 (High Importance) in respective mapping cell.

	PO1 (Engg Know)	PO2 (Ana)	PO3 (De sign)	PO4 (inve stiga)	PO5 (tools)	PO6 (engg Soci)	PO7 (Env)	PO8 (Eth)	PO9 (ind/ Team)	PO10 (comm.)	PO11 (PM)	PO12 (Life Long)
CSL402.1	3	3	3						2	2	1	2
CSL402.2	3	3	3	2	3				2	2	1	2
CSL402.3	3	3	3	2	3				2	2	1	2
CSL402.4	3	3	3	2	3				2	2	1	2
CSL402.5	3	3	3	2	2				2	2	1	2
Course To PO												
PO ATTAINMENT												

CO-PSO Mapping:

CO	BL	C	PI	PO	Mapping
CSL 402.1	2	1.1	1.1.1	PSO1	1
CSL402.2	3	1.3	1.3.3	PSO1	1
CSL402.3	3	1.3	1.3.3	PSO1	1
CSL402.4	3	1.3	1.3.3	PSO1	1
CSL 402.5	3	2.1	2.1.2	PSO2	1

	PSO1	PSO2
CSL 402.1	1	-
CSL402.2	1	-
CSL402.3	1	-
CSL402.4	1	-
CSL 402.5	-	1

CO Measurement Weightages for Tools:

Course Outcomes	***Direct Methods (80%)***				***Indirect Method (20%)***
	Lab Performance	Assignments/Post Lab Questions	Mini project	End Sem Exam (oral)	Course exit survey
CSL402.1	20%	10%	10%	60%	100%
CSL402.2	20%	10%	10%	60%	100%
CSL402.3	20%	10%	10%	60%	100%
CSL402.4	20%	10%	10%	60%	100%
CSL 402.5	10%	20%	10%	60%	100%

Attainment:

CO CSL402.1:

Direct Method

$$A_{\text{CSL402.1}D} = 0.2 * Lab\ Performance + 0.1 * Assignment/Post\ Lab + 0.1 * Quizzes + 0.6 * SEE\_TW$$

Final Attainment:

$$A_{\text{CSL402.1}} = 0.8 * A_{\text{CSL402.1}D} + 0.2 * A_{\text{CSL402.1}I}$$

CO CSL402.2:

Direct Method

$$A_{\text{CSL402.2}D} = 0.2 * Lab\ Performance + 0.1 * Assignment/Post\ Lab + 0.1 * Quizzes + 0.6 * SEE\_TW$$

Final Attainment:

$$A_{\text{CSL402.2}} = 0.8 * A_{\text{CSL402.2}D} + 0.2 * A_{\text{CSL402.2}I}$$

CO CSL402.3:

Direct Method

$$A_{\text{CSL402.3}D} = 0.2 * Lab\ Performance + 0.1 * Assignment/Post\ Lab + 0.1 * Quizzes + 0.6 * SEE\_TW$$

Final Attainment:

$$A_{\text{CSL403.1}} = 0.8 * A_{\text{CSL402.1}D} + 0.2 * A_{\text{CSL403.1}I}$$

CO CSL402.4:

Direct Method

$$A_{\text{CSL402.4}D} = 0.2 * Lab\ Performance + 0.1 * Assignment/Post\ Lab + 0.1 * Quizzes + 0.6 * SEE\_TW$$

Final Attainment:

$$A_{\text{CSL402.4}} = 0.8 * A_{\text{CSL402.4}D} + 0.2 * A_{\text{CSL402.4}I}$$

CO CSL402.5:

Direct Method

$$A_{\text{CSL402.5}D} = 0.1 * Lab\ Performance + 0.2 * Assignment/Post\ Lab + 0.1 * Quizzes + 0.6 * SEE\_TW$$

Final Attainment:

$$A_{\text{CSL402.5}} = 0.8 * A_{\text{CSL402.5}D} + 0.2 * A_{\text{CSL402.5}I}$$

Resources

1) https://www.db-book.com/db6/slide-dir/index.html- **Korth, Slberchatz,Sudarshan, 6th Edition**
2) http://www.tutorialspoint.com/
3) https://www.w3schools.com/sql/default.asp
4) http://www.mysqltutorial.org/ or https://www.tutorialspoint.com/postgresql/
5) https://academy.vertabelo.com/course/standard-sql-functions#
6) **www.postgresqltutorial.com/postgresql-grouping-sets/**
7) **www.postgresqltutorial.com**
8) https://www.freeprojectz.com/entity-relationship-diagram
9) https://www.w3schools.com/sql/sql_any_all.asp
10) https://www.geeksforgeeks.org/sql-all-and-any/

Data Base Management System - Course (nptel.ac.in)