Course Code & Name	26CAPL2002 RDBMS Lab		
Teaching Hours /week (L: T:P: R)	0:0:4:0	Credits	2
CIE Marks	50	ESE Marks	50
Course Type	Lab (PLC)	Exam Hours	3
Prerequisites (if any)	26CAPCC108		

Course Objectives:

1. To develop SQL, PL/SQL programs to solve computational problems that they may have to solve in their professional life.
2. To gain basic knowledge to develop database projects.

Course Outcomes (COs)

At the end of the course students should be able to:

Course Outcome		Bloom's Knowledge Level (KL)
CO 1	Explain the underlying concepts of database technologies	2
CO 2	Design and implement a database schema for a given problem-domain. Apply different normalization techniques.	3
CO 3	Populate and query a database using SQL DML/DDL commands.	3
CO 4	Develop and implement real-world database applications using Oracle as a back-end system.	5

Note: *K1- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate, K6- Create*

CO-PO Mapping Table (Mapping of Course Outcomes to Program Outcomes)

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1	3	2	2	2	1	-	1	2
CO 2	3	3	2	2	1	-	1	2
CO 3	3	3	2	3	2	1	2	2
CO 4	3	3	3	3	2	2	2	3

Note: *1: Slight (Low), 2: Moderate (Medium), 3: Substantial (High), - : No Correlation*

Course Assessment Method

(CIE: 50 marks, ESE: 50 marks)

Continuous Internal Evaluation Marks (CIE)

Attendance	Continuous Assessment (Lab Experiments/Project, Viva, Completion of Lab Reports / Project Report)	Internal Lab Examination-1	Internal Lab Examination- 2	Total
8	22	10	10	50 Marks

End Semester Examination Marks (ESE)

Submission of Record: Students shall be allowed for the end semester examination only upon submitting the duly certified record.

Procedure/ Algorithm/ Flowchart	Conduct of experiment/ Execution of work	Quality of Output	Viva voce	Record	Total
10	15	10	10	5	50 Marks

Continuous Assessment (22 Marks)

1. Conduct of Lab Experiments/Project (12 Marks)
2. Timely Completion of Lab Reports/ Project Reports (5 Marks)
3. Viva Voce (5 Marks)

Final Marks Averaging: The final marks for conduct of experiments, viva, and records are the average of all the specified experiments in the syllabus.

Evaluation Pattern for End Semester Examination (50 Marks)

1. Procedure/Algorithm/Flowchart (10 Marks)
2. Conduct of Experiment/Execution of Work (15 Marks)
3. Quality of Output (10 Marks)
4. Viva Voce (10 Marks)
5. Record (5 Marks)

SYLLABUS

Exp. No.	List of Experiments
1	Create a DEPT table with the following structure. DEPTNO NUMBER(2) DNAME VARCHAR2(10) LOC VARCHAR2(10) Deptno as the primary key Create a table called EMP with the following structure. EMPNO NUMBER(6) ENAME VARCHAR2(20) JOB VARCHAR2(10) DEPTNO NUMBER(3) SAL NUMBER(7,2) Allow NULL for all columns except ename and job. Establish integrity reference between EMP and DEPT table. Add constraints to check the empno value while entering (i.e) empno >100.
2	Add a column experience to the emptable. Modify the column width of the job field of emptable. Drop a column experience to the emptable. Insert a single record into dept table The organization wants to display only the details of the employees who areASP. The organization wants to display only the details like empno, empname, deptno, deptname of the employees.
3	Generate View for emp and dept tables and Display the views. Drop a view Insert more than a record into emp table using a single insert command Update the emp table to set the salary of all employees to Rs15000/- who are working as ASP Create a pseudo table employee with the same structure as the table emp and insert rows into the table using select clauses.
4	Select employee name, job from the emp table Delete only those who are working as lecturer List the records in the emp table order by salary in ascending order. List the records in the emp table order by salary in descending order. Display deptno from the table employee avoiding the duplicated values. Site examples for the use of data and built in functions inSQL Site examples for the use of date & time functions Site examples for the use of Numeric & Math functions
5	Display all employee names and salary whose salary is greater than minimum salary of the company and job title starts with 'M' Issue a query to find all the employees who work in the same job as Arjun Display all the dept numbers available with the dept and emp tables avoiding duplicates. Display all the dept numbers available with the dept and emp tables. Display all the dept numbers available in emp and not in dept tables and vice

	versa. Display the employee details, group by department
6	Display the employee details, departments that the departments are not same in both the emp and dept. Solution: 1.Use select from clause. 2. Use non equi join in select clause to get the result Display the Student name and grade by implementing a left outer join. Display the Student name, register no, and result by implementing a right outer join Display the Student name register no by implementing a full outer join Write a query to display their employee names Display the details of those who draw the salary greater than the average salary
7	Develop a query to grant all privileges of employees table into departments table Develop a query to grant some privileges of employees table into departments table Develop a query to revoke all privileges of employees table from departments table Develop a query to revoke some privileges of employees table from departments table Write a query to implement the save point Write a query to implement the rollback Write a query to implement the commit
8	Write a program to implement a cursor for setting grades for a student group. Use trigger for setting the grade for the student. Create a function to find the factorial of a number.
9	Design database and implement payroll processing. Design and implementation of banking system. Design and implementation of library management system.

Text Books				
Sl. No	**Title of the Book**	**Name of the Author/s**	**Name of the Publisher**	**Edition and Year**
1	Database Principles: Fundamentals of Design, Implementation and Management	Peter Rob and Carlos Coronel	Thomson Press (India) Ltd	9th Edition 2012
2	Database Management Concepts	Ashutosh Kumar Dubay	S.K. Kataria & Sons	1st Edition 2012

Reference Books				
Sl. No	**Title of the Book**	**Name of the Author/s**	**Name of the Publisher**	**Edition & Year**
1	Database Management Systems	Raghu Ramakrishnan, Johannes Gehrke	McGraw Hill	3rd Edition 2014
2	Database System Concepts	Henry Korth A. Silberschat	McGraw-Hill	Sixth Edition, 2011

Web References/ Video Links (NPTEL, SWAYAM…)	
Sl.No	**Link ID**
1	https://nptel.ac.in/courses/106/106/106106220
2	https://www.udacity.com/course/database-systems-concepts-design--ud150

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