	Advanced Database Management Systems Lab	L	T	P	C
Version 1.0		0	0	2	1
Pre-requisites/Exposure	Data structures and algorithms, programming knowledge				
Co-requisites	–				

Course Objectives

The major objective of this lab is to provide a strong formal foundation in database concepts, technology and practice to the students to groom them into well-informed database application developers. The sub objectives are:

1. To give a good formal foundation on the relational model of data
2. To present SQL and procedural interfaces to SQL comprehensively
3. To give an introduction to systematic database design approaches covering conceptual design, logical design and an overview of physical design
4. To present the concepts and techniques relating to query processing by SQL engines

Course Outcomes

1. Implement a database schema for a given problem-domain using DDL/DML/DCL commands.
2. Use SQL queries in databases.
3. Implement Cursors & Triggers using PL\SQL.

Catalog Description

SQL forms the cornerstone of all relational database operations. The ability to write the SQL language is essential for those who develop database applications. This course provides a solid foundation of the SQL programming language that enables students to build, query and manipulate databases.

List of Experiments

1. EXPERIMENT-1

Title: To implement DDL and DML commands

Objective: To understand the concept of designing issue related to the database with creating, populating the tables. Also familiarize students with different ways of manipulation in database.

2. EXPERIMENT-2

Title: 2. To understand and apply the concept of Constraints.

Objective: To understand the concept of data constraints that is enforced on data being stored in the table. Focus on Primary Key and the Foreign Key.

3. EXPERIMENT-3

Title: 3. To implement and use SQL Sub-Query

Objective: To understand the use of sql subquery.

4. EXPERIMENT-4

Title: 4. Use of Inbuilt functions and relational algebra operation

Objective: To understand the use of inbuilt function and relational algebra with sql query.

5. **EXPERIMENT-5**

Title: 5. Use of different SQL clauses and join
Objective: To understand the use of group by and having clause and execute the SQL commands using JOIN

6. **EXPERIMENT-6**

Title: 6. To implement the concepts of Views.
Objective: Students will be able to implement the concept of views.

7. **EXPERIMENT-7**

Title: 7. To implement the concepts of Index.
Objective: Students will be able to implement the concept of index.

8. **EXPERIMENT-8**

Title: 8. To implement the concepts of Sequence.
Objective: Students will be able to implement the concept of sequence.

9. **EXPERIMENT-9**

Title: 9. To implement the concepts of PL/SQL programming.
Objective: Students will be able to implement the basic concepts of Pl/SQL.

10. **EXPERIMENT-10**

Title: 10. To implement the concepts of function and procedure in PL/SQL.
Objective: Students will be able to implement the Pl/SQL programs using function and procedure.

11. **EXPERIMENT-11**

Title: 11. To implement the concepts of implicit and explicit cursor.
Objective: Students will be able to implement the concept of implicit and explicit cursor.

12. **EXPERIMENT-12**

Title: 12. To implement the concepts of Trigger.
Objective: Students will be able to implement the concept of trigger.

Text Books / Reference Books

1. SQL, PL/SQL the programming language of Oracle, iii- edition, Ivan Bayross

Continuous Evaluation- There will be continuous evaluation for all practical subjects of SCS during the semester. The performance of a student in a Practical subject will be evaluated as per process given below:

- Components of evaluation
  a. Viva voce / Quiz (50%) + Performance & Records (50%).
  b. Lab performance and record evaluation shall be a continuous process throughout the semester.

c. Minimum three Viva voce/ Quiz based on practical sessions shall be conducted during the semester.

Relationship between the Course Outcomes (COs) and Program Outcomes (POs) and Program Specific Outcomes (PSOs)

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO 12	PSO 1	PSO 2	PSO 3
CO1	2	3	2										2	3	
CO2	2	3	2										2	3	
CO3	2	3	2										2	3	
Average	2	3	2										2	3	

1=weak 2= moderate 3=strong