

## MC128-Database Management Systems Lab

### Learning Outcomes:

The student will be familiarized with

- Familiarization of Oracle RDBMS
- Data Definition, Table Creation, Constraints, Insert, Select Commands, Update and Delete Commands.
- Nested Queries and Join Queries
- Views
- Design and development of database using Oracle
- High level programming language extensions (Control structures, Procedures and Functions).
- Front end Tools
- Forms
- Triggers
- Menu Design
- Reports.
- Case Study/ Database application project.

1. Creation, altering and dropping of tables and inserting rows into a table (use constraints while creating tables) examples using SELECT command.
2. Queries (along with sub Queries) using ANY, ALL, IN, EXISTS, NOTEXISTS, UNION, INTERSET, EXCEPT and Constraints.
3. Queries using Aggregate functions (COUNT, SUM, AVG, MAX and MIN), GROUP BY, HAVING and Creation and dropping of Views.
4. i) Creation of simple PL/SQL program which includes declaration section, executable section and exception – Handling section (Ex. Student marks can be selected from the table and printed for those who secured first class and an exception can be raised if no records were found)  
ii) Insert data into student table and use COMMIT, ROLLBACK and SAVEPOINT in PL/SQL block
5. Program development using WHILE LOOPS, numeric FOR LOOPS, nested loops using ERROR Handling, BUILT –IN Exceptions, User defined Exceptions, RAISE- APPLICATION ERROR.
6. Programs development using creation of procedures, passing parameters IN and OUT of PROCEDURES.
7. Program development using creation of stored functions, invoke functions in SQL Statements and write complex functions.
8. Program development using creation of package specification, package bodies, private objects, package variables and cursors and calling stored packages.
9. Develop programs using features parameters in a CURSOR, FOR UPDATE CURSOR, WHERE CURRENT of clause and CURSOR variables.
10. Develop Programs using BEFORE and AFTER Triggers, Row and Statement Triggers and INSTEAD OF Triggers

### TEXT BOOKS:

1. ORACLE DATA BASE LOG PL/SQL Programming SCOTT URMAN, Tata Mc-Graw Hill.
2. SQL & PL/SQL for Oracle 10g, Black Book, Dr.P.S. Deshpande.
3. SQL and PL/SQL for oracle 9i, Ivan Byross.
4. Oracle certified associate Mysql beginner's guide.
5. Oracle certified associate Oracle 10g &11 g SQL fundamentals.