

1.	Design and develop a database schema for a College Library Management System that demonstrates the use of SQL DDL statements. Create SQL objects such as Tables, Views, Indexes, Sequences, and Synonyms with appropriate constraints like Primary Key, Foreign Key, Unique, Check, and Not Null. The database should store information about students, books, and transactions efficiently.
2.	Design and implement at least 10 SQL DML queries for a Student Result Management System. The queries should perform operations such as Insert, Update, Delete, and Select using arithmetic, comparison, logical, and set operators, as well as built-in SQL functions. Demonstrate practical data manipulation for tables like Student, Marks, and Result
3.	Develop 10 SQL queries for a Company Employee Database Application using different types of Joins, Sub-queries, and Views. The queries should extract meaningful business insights such as department-wise employee lists, highest-paid employees, and performance-based selections using advanced SQL techniques.
4.	<p>Unnamed PL/SQL code block: Use of Control structure and Exception handling is mandatory. Write a PL/SQL block of code for the following requirements:-</p> <p>Schema:</p> <ol style="list-style-type: none"> 1. Borrower(Rollin, Name, DateofIssue, NameofBook, Status) 2. Fine(Roll_no,Date,Amt) <p>Accept roll_no & name of book from user.</p> <p>Check the number of days (from date of issue), if days are between 15 to 30 then fine amount will be Rs 5per day.</p> <ul style="list-style-type: none"> • If no. of days>30, per day fine will be Rs 50 per day & for days less than 30, Rs. 5 per day. • After submitting the book, status will change from I to R. • If condition of fine is true, then details will be stored into fine table.
5.	<p>Write a Stored Procedure namely proc_Grade for the categorization of student. If marks scored by students in examination is ≤ 1500 and marks ≥ 990 then student will be placed in distinction category if marks scored are between 989 and 900 category is first class, if marks 899 and 825 category is Higher Second Class.</p> <p>Write a PL/SQL block for using procedure created with above requirement. Stud_Marks(name, total_marks) Result(Roll,Name, Class) .</p>

6.	<p>Write a PL/SQL block of code using parameterized Cursor, that will merge the data available in the newly created table N_RollCall with the data available in the table O_RollCall. If the data in the first table already exist in the second table then that data should be skipped.</p> <p style="text-align: center;">And</p> <p>Write a database trigger on Library table. The System should keep track of the records that are being updated or deleted. The old value of updated or deleted records should be added in Library_Audit table.</p>
7.	Write a program to implement MySQL/Oracle database connectivity with java to implement Database navigation operations (add, delete, edit etc.)
8.	Design and develop a MongoDB database for an Online Shopping Application. Implement and demonstrate CRUD (Create, Read, Update, Delete) operations using MongoDB queries, including the use of logical operators and the save() method. The database should manage data for collections such as
9.	<p>a) Implement aggregation and indexing with suitable example using MongoDB.</p> <p>b) Implement Map reduces operation with suitable example using MongoDB</p>
10.	Write a Program to Implement MongoDB Database Connectivity with Java to Perform Database Navigation Operations (Add, Delete, Edit, etc.)