1. Create the following tables:

College_info
Faculty_info

College_info consists of fields: college_code, college_name, address
Faculty_info consists of fields: college_code, faculty_code, faculty_name, qualification, experience_in_no_of_years, address.

The field college_code is foreign key.

(i) List all those faculty members whose experience is greater than or equal to 10 years and have M.Tech degree.

(ii) List all those faculty members, who have at least 10 years of experience but do not have M. Tech degree.

2. we have a following relation

Emp(eno, ename, jobtitle, managerno, hiredate, salary, deptno)

Dept(deptno, dname,loc)

Answer the following queries: (any 5)

1. **Find the employees working in department 10,20,30.**
2. **Find the employees whose name is start with letter A or a.**
3. **Find employees along with department name.**
4. **Insert data in emp table.**
5. **Find the employee who are working in raj's department.**
6. **update department name of department no=10.**
7. **display employees who are getting maximum salary in each department.**

3. **Student (stud_no: integer, stud_name: string, class: string)**
   Class (class: string,descrip: string)
   Lab (machi_no: integer, Lab_no: integer, description: String)
   Allotment (Stud_no: Integer, mach_no: integer, day of week: string)
   For the above schema, perform the following—(any 6)
   a) Create the tables with the appropriate integrity constraints
   b) Insert around 10 records in each of the tables
   c) List all the machine allotments with the student names, lab and machine numbers
   d) List the total number of lab allotments day wise
   e) Give a count of how many machines have been allocated to the 'CSIT' class
   f) Give a machine allotment details of the stud_no 5 with his personal and class details
   g) Count for how many machines have been allocated in Lab_no 1 for the day of the week as "Monday"
   h) How many students class wise have allocated machines in the labs
   i) Create a view which lists out the stud_no, stud_name, mach_no, lab_no, day of week
   j) Create a view which lists the machine allotment details for "Thursday".

4. **Consider following relational schema**

TABLE : **DEPT**

PTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

--TABLE: **EMP**

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-Dec-80	800		20
7499	ALLEN	SALESMAN	7698	20-Feb-81	1600	300	30
7521	WARD	SALESMAN	7698	22-Feb-81	1250	500	30
7566	JONES	MANAGER	7839	2-Apr-81	2975		20
7654	MARTIN	SALESMAN	7698	28-Sep-81	1250	1400	30
7698	BLAKE	MANAGER	7839	1-May-81	2850		30
7782	CLARK	MANAGER	7839	9-Jun-81	2450		10
7788	SCOTT	ANALYST	7566	9-Dec-82	3000		20
7839	KING	PRESIDENT		17-Nov-81	5000		10
7844	TURNER	SALESMAN	7698	8-Sep-81	1500	0	30
7876	ADAMS	CLERK	7788	12-Jan-83	1100		20
7900	JAMES	CLERK	7698	3-Dec-81	950		30
7902	FORD	ANALYST	7566	3-Dec-81	3000		20
7934	MILLER	CLERK	7782	23-Jan-82	1300		10

Answer the following queries: (any 5)

a) Display all the managers working in 20 & 30 department.
b) Display job-wise average salaries for the employees whose employee number is not from 7788 to 7790.
c) Select all the employees who work in DALLAS
d) Display all the managers & clerks who work in Accounts and Marketing departments.
e) Display all the employees whose naming is having letter ‘E’ as the last but one character
f) Display the first maximum salary.
g) Display all the ANALYSTs whose name doesn’t ends with ‘S’

5. **Consider following relational schema**

TABLE : **DEPT**

PTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

--TABLE: **EMP**

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-Dec-80	800		20
7499	ALLEN	SALESMAN	7698	20-Feb-81	1600	300	30
7521	WARD	SALESMAN	7698	22-Feb-81	1250	500	30
7566	JONES	MANAGER	7839	2-Apr-81	2975		20
7654	MARTIN	SALESMAN	7698	28-Sep-81	1250	1400	30
7698	BLAKE	MANAGER	7839	1-May-81	2850		30
7782	CLARK	MANAGER	7839	9-Jun-81	2450		10
7788	SCOTT	ANALYST	7566	9-Dec-82	3000		20
7839	KING	PRESIDENT		17-Nov-81	5000		10
7844	TURNER	SALESMAN	7698	8-Sep-81	1500	0	30
7876	ADAMS	CLERK	7788	12-Jan-83	1100		20
7900	JAMES	CLERK	7698	3-Dec-81	950		30
7902	FORD	ANALYST	7566	3-Dec-81	3000		20
7934	MILLER	CLERK	7782	23-Jan-82	1300		10

Answer the following queries: (any 5)

a) Display job-wise maximum salary.
b) Select all the departmental information for all the managers.
c) Display all the employees who total salary is more than 2000. (Total Salary= Sal + Comm)
d) Select department name & location of all the employees working for CLARK.
e) Display all the managers working in 20 & 30 department.
f) Display all the employees who earning salary not in the range of 2500 and5000 in department 10 & 20.
g) Display all the managers who don’t have a manager

6. **Consider following relational schema**

TABLE : **DEPT**

PTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

--TABLE: **EMP**

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7369	SMITH	CLERK	7902	17-Dec-80	800		20
7499	ALLEN	SALESMAN	7698	20-Feb-81	1600	300	30
7521	WARD	SALESMAN	7698	22-Feb-81	1250	500	30
7566	JONES	MANAGER	7839	2-Apr-81	2975		20
7654	MARTIN	SALESMAN	7698	28-Sep-81	1250	1400	30
7698	BLAKE	MANAGER	7839	1-May-81	2850		30
7782	CLARK	MANAGER	7839	9-Jun-81	2450		10
7788	SCOTT	ANALYST	7566	9-Dec-82	3000		20
7839	KING	PRESIDENT		17-Nov-81	5000		10
7844	TURNER	SALESMAN	7698	8-Sep-81	1500	0	30
7876	ADAMS	CLERK	7788	12-Jan-83	1100		20
7900	JAMES	CLERK	7698	3-Dec-81	950		30
7902	FORD	ANALYST	7566	3-Dec-81	3000		20
7934	MILLER	CLERK	7782	23-Jan-82	1300		10

Answer the following queries: (any 5)

a) Display the first maximum salary.
b) Display all the employees who total salary is more than 2000. (Total Salary= Sal + Comm)
c) Display department-wise total salaries for all the Managers andAnalysts, only if the average salaries for the same is greater than or equal to 3000.
d) Display all the employees who are getting 2500 and excess salaries in department 20.
e) Select all the employees who work in DALLAS.
f) Display all the managers whose name doesn't start with A & S
g) Display all the managers working in 20 & 30 department.

7. Design any database with at least 3 entities and relationships between them. Draw suitable ER/EER diagram for the system.
   Design and implement a database (for above assignment) using DDL statements and apply normalization on them. Perform following SQL queries on the database created:
   a) Implementation of relational operators in SQL
   b) Complex queries and set operators

8. **we have a following relation**

   Emp(eno, ename, jobtitle, managerno, hiredate, salary, deptno)

   Dept(deptno, dname,loc)

   Perform following SQL queries on the database created
   - Implementation of relational operators in SQL
   - Boolean operators and pattern matching
   - Arithmetic operations and built in functions
   - Group functions
   - Processing Date and Time functions
   - Complex queries and set operators

9. Execute DDL/DML statements which demonstrate the use of views. Update the base table using its corresponding view. Also consider restrictions on updatable views and perform view creation from multiple tables

10. Write and execute PL/SQL stored procedure and function to perform a suitable task on the database. Demonstrate its use.

11. Write and execute suitable database triggers. Consider row level trigger.

12. Write a PL/SQL block to implement all types of cursor.

13. Create a tables

Emp(eno ,ename ,designation ,salary, Date_Of_Joining)

Dept(dno,dname ,loc)

The relationship between Dept & Emp is one-to-many. Constraints: - Primary Key, ename should not be NULL, salary must be greater than 0.

Consider the above tables and Execute the following queries: (any 5)

1. Add column phone_No into Emp table with data type int.
2. Delete the details of Employee whose designation is 'Manager'.
3. Display the count of employee's department wise.
4. Display the name of employee who is 'Manager' of "Account Department".
5. Display the name of department whose location is "Pune" and "Mr. Advait" is working in it.
6. Display the names of employees whose salary is greater than 50000 and department is "Quality".
7. Update Date of joining of employee to '15/06/2019' whose department is 'computer science' and name is "Mr. Roy'.

14. Define the schema for the following databases with specific data type and constraints, the table name and its fields name are to be taken from database description which are given below:

A database is being constructed for storing sales information system. A product can be described with a unique product number, product name, selling price, manufacturer name. The product can sale to a particular client and each client have its own unique client number, client name, client addresses, city, pin code, state and total balance to be required to paid. Each client order to buy product from the salesman. In the order, it has unique sales order number, sales order date, client number, salesman number (unique), billed whole payment by the party or not and its delivery date. The salesman has the name, addresses, city, pin code, state, salary of the sales man, delivery date, total quantity ordered, product rate.

Write the SQL queries for the following – (any 5)

(1) Retrieve the list of names and the cities of all the clients.

(2) Find the names of all clients having 'a' as the second letter in their names.

(3) Find the products whose selling price is greater than 2000 and less than or equal to 3000

(4) Rename the column product_rate of Sales_Order_Details to new_product_rate.

(5) Display the order number and date on which the clients placed their order.

(6) Change the delivery date of order number 2 to 16-08-08

(7) Find the product with description as 'shampoo' and 'soap'

(8) List of all orders that were canceled in the of March.

15. Define the schema for the following databases with specific data type and constraints, the table name and its fields name are to be taken from database description which are given below:

A database is being constructed for storing sales information system. A product can be described with a unique product number, product name, selling price, manufacturer name. The product can sale to a particular client and each client have its own unique client number, client name, client addresses, city, pin code, state and total balance to be required to paid. Each client order to buy product from the salesman. In the order, it has unique sales order number, sales order date, client number, salesman number (unique), billed whole payment by the party or not and its delivery date. The salesman has the name, addresses, city, pin code, state, salary of the sales man, delivery date, total quantity ordered, product rate.

Write the SQL queries for the following – (any 5)

(1) List the various products available.

(2) List all the clients who are located in pune.

(3) Add a new column NEW_PRICE into the product_master table.

(4) List the products in sorted order of their description.

(5) Delete all the records having delivery date before 25th december, 2008.

(6) Change the bal_due of client_no 2 to 1200

(7) List the names, city and state of the clients not in the state of 'ASSAM'

(8) List of all orders that were canceled in the of March.