I) Implement  the following Relation schema with the given specifications

 **Employee** (empid string, emp_name string, address_city string , phoneno number, DOB date, DOJ date , Gender char, salary number, designation string, Project_domain string)

    a.   Empid is the primary key. Starts with PSG followed by 3digit number. (eg. PSG100, PSG101)

    b.   address_city comes with default value 'Coimbatore'

    c.   Phone should contain ten digits and  should be unique

    d.   Hiredate > DOB   and age is above 21.

    e.   Minimum salary paid is 2000 and should not exceed 60000.

    f.   Gender should be F/M

    g.   Emp_name, Project_domain should not be left with no data.

 II) Insert the given sample records into the employee table using INSERT Statement.

| Emp_Name | Designation | Salary | gender | DoB | HireDate | Projet domain | Phone no |
|---|---|---|---|---|---|---|---|
| Arul | Developer | 17000 | M | 21-apr-66 | 10-jun-86 | Banking | 7806745231 |
| Anand | Programmer | 15000 | M | 11-sep-75 | 17-jun-97 | Retail | null |
| Ilamathi | System Analyst | 21000 | M | 07-feb-66 | 21-apr-91 | Retail | 7806745229 |
| Deepak | Programmer | 12000 | M | 14-feb-67 | 21-sep-90 | Ecommerce | 7806745230 |
| Elavarasi | System Analyst | 22000 | F | 23-mar-70 | 21-apr-86 | Banking | 7806745232 |
| Juliana | Programmer | 12000 | F | 14-jul-70 | 21-mar-89 | Banking | null |
| Kamala | Programmer | 12000 | F | 14-jul-66 | 04-mar-90 | Finance | 7806745233 |
| Nelson | Project Leader | 25000 | M | 27-jun-69 | 07-sep-90 | Ecommerce | 7806745234 |
| Palani | System Analyst | 20000 | M | 29-apr-62 | 21-sep-93 | MobileApp | 7806745235 |
| Ramesh | Programmer | 17000 | M | 21-apr-66 | 12-oct-93 | MobileApp | 7806745236 |
| Revathi | Programmer | 20000 | F | 21-apr-70 | 14-dec-99 | MobileApp | 7806745237 |
| Xavier | Programmer | 20000 | M | 21-apr-71 | 12-mar-97 | Ecommerce | 7806745238 |
| Vijaya | Developer | 17000 | F | 21-apr-72 | 21-sep-94 | Ecommerce | 7806745239 |

III)  1. Add a new column Project_location

2.  Modify the constraint stated in I)d. as salary >=1000.

3. Delete the employees of Finance division.

4. Change the title of 'Programmers' of MobileApp domain to 'AppProgrammer'.

5. update project_location of project_domain Banking, Retail, Ecommerce  - Bangalore

MobileApp  – Chennai respectively.  (use update … case expression)

IV) write SQL Statements for the following requirements.
1. Display all employee's ID, name, city and the employee's salary.
2. Display the number of employees working in the company.
3. Display all employee's ID and name and the employee's salary with a 5% increase under a heading of "Increased Salary".
4. Get the number of people employed in Mobileapp project.
5. Modify query 3 statement so that it lists employees from the highest "Increased Salary" to the lowest.
6. Display all information about employees those who are coming from chennai.
7. Display the names and ages of all employees whose name start with 'A'
8. Display the name, city and phone number of employees earning more than 15000.
9. Display the employee's name and the lowest salary earned by them in each project.
10. Display the name of employee earning highest salary for the projects that includes minimum 2 employees in its team.
11. Who are all joined to the company in the month did the most number of programmers join
12. Display the names of all employees along with designation and project_domain in alphabetical ordering of name, designation, project_domain.
13. Display the sum of salary and average salary of employees in each project.
14. Display the names and date of birth of all employees born in January.
15. Display the employee who is oldest.
16. Display number of employees working in each project.
17. Display the name of employees whose salary is between 2500 and 10000.
18. How old is the oldest employee.?
19. Display the name and phone number of employees having no contact number.
20. What is the average age of male and female employee?
21. Who are the employees who celebrate their birthdays during this current month?
22. Display the system analyst and project leader details joined before 1991
23. How many female employees are there with more than 10 years of experience.
24. Display the details of those who weren't born in October and March.
25. Display employees' name, city, phone no and DOB in descending order of their age.
26. Display the highest, lowest and average salaries for those earning above 10000.
27. Display the salary difference between highest and lowest salary.
28. Display the names of employees whose names contain up to 5 characters
29. How many different projects are in employee table?
30. Which project has lowest number of employees?
31. Who is the youngest male, oldest female employee born in 1970?
32. In which year was the most number of employees born?
33. In which month was the most number of employees born?
34. Who are the male employees earning below the average salary of the female employees?
35. Who are the female employees earning more than the highest salary of male employee?
36. Display the details of those who are drawing the same salary.
37. Display the names of employees whose names contain the occurrence of the letter 'E'.
38. List the details of the highly paid programmer.
39. Display all the employees with their DOB as follows:

        Ex. Dear 'ROBERT', you were born on '11, Monday – September – 1972'.

40. Consider the following conditions to update the salary. i) increase it by 20% if years of experience is more than 25 ii) increase by 10% if years of experience is between 20 and 25 iii) Else 5%

V)1. Create an external schema accounts_employee for the accounts department that has access only to salary information of all employees. (empid, name, designation, salary)

2. Accounts department is asked to revise the salary as i) 5 % increase for System Analyst  ii) 10 % increase for Project leaders. iii) 3% for others.

Observe the state of employee relation and accounts_employee view before and after salary revision.