MUTHOOT INSTITUTE OF TECHNOLOGY AND SCIENCE

DEPARTMENT OF COMPUTER APPLICATIONS

20MCA134 ADVANCED DBMS LAB

LAB ASSIGNMENT -2

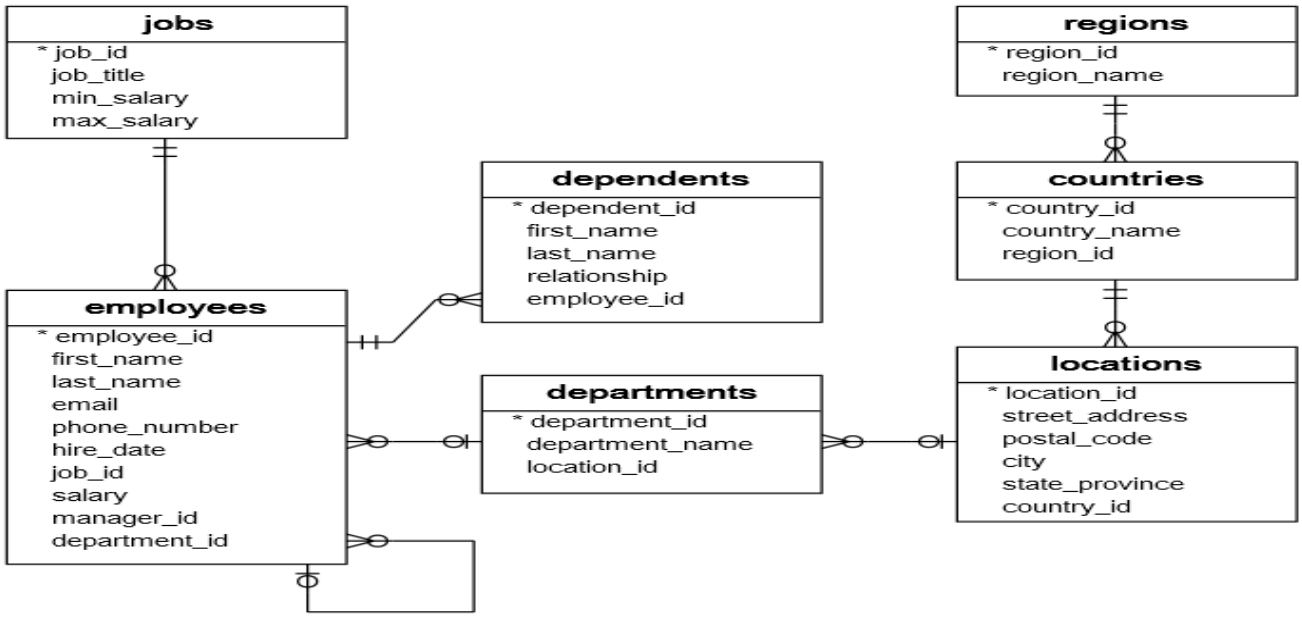
ISSUE DATE: 01/03/25

****

Submission Date: 04-Mar-2025 Mark: 30 Marks

Mode of Submission:

1. Create a database **Company**, create **tables Employees, Jobs, Departments, Dependents, Locations, Countries,** and **Regions**.
2. After the creation of tables as per the design below, the tables are to be populated.



3. The following queries are to be used on these tables and output is to be generated. After the generation of output, the output screenshot should be submitted along with the corresponding query. The tables should be populated to get outputs from the queries posted below.
4. **Submit the SQL query along with the output screenshots in ET lab.**
5. **File naming convention: "LabPgm2_ rollno_your name .pdf"**

Eg:- LabPgm2_ 45_SujithraSankar.pdf

2. **Upload the SQL queries in GitHub also.**

QUERIES:

1. Write a query to display all the countries.

```
MariaDB [company]> select * from countries;
+------------+--------------+-----------+
| country_id | country_name | region_id |
+------------+--------------+-----------+
|          1 | America      |         1 |
|          2 | Canada       |         1 |
|          3 | Brazil       |         2 |
|          4 | Germany      |         3 |
|          5 | Somalia      |         4 |
+------------+--------------+-----------+
5 rows in set (0.001 sec)
```

2. Write a query to display specific columns like email and phone number for all the employees.

```
MariaDB [company]> Select email,phone_number from employees;
+--------------------+--------------+
| email              | phone_number |
+--------------------+--------------+
| abhishek@gmail.com | 9756456626   |
| rahul@gmail.com    | 9756283626   |
| nirmal@gmail.com   | 9722178926   |
| adharsh@gmail.com  | 9562532327   |
| shyam@gmail.com    | 9967367327   |
+--------------------+--------------+
5 rows in set (0.001 sec)
```

3. Write a query to display the data of employee whose last name is “Lal”.

```
MariaDB [company]> Select * from employees where last_name='Lal';
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------+
| employee_id | first_name | last_name | email           | phone_number | hire_date  | job_id | salary | manager_id | department_id |
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------+
|           5 | Shyam      | Lal       | shyam@gmail.com | 9967367327   | 0000-00-00 |      5 |  60000 |          2 |             5 |
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------+
1 row in set (0.000 sec)
```

4. Write a query to find the hire date for employees whose last name is “John” or “Sivan”.

```
MariaDB [company]> SELECT hire_date from employees where last_name IN ('John','sivan');
+------------+
| hire_date  |
+------------+
| 2019-06-11 |
+------------+
1 row in set (0.000 sec)
```

5. Write a query to display name of the employees who work as clerks.

```
MariaDB [company]> SELECT e.first_name,e.last_name FROM employees e JOIN jobs j ON e.job_id = j.job_id WHERE j.job_title = 'Clerk';
+------------+-----------+
| first_name | last_name |
+------------+-----------+
| Shyam      | Lal       |
+------------+-----------+
1 row in set (0.001 sec)
```

6. Write a query to get all the employees who work for department 3.

```
MariaDB [company]> Select * from employees where department_id=3;
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------
+
| employee_id | first_name | last_name | email           | phone_number | hire_date  | job_id | salary | manager_id | department_id
|
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------
+
|           3 | Nirmal     | Kumar     | nirmal@gmail.com | 9722178926   | 2022-07-08 |      3 |  90000 |       NULL |             3
|
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------
+
1 row in set (0.003 sec)
```

7. Write a query to display the departments in the descending order.

```
MariaDB [company]> Select * from departments order by department_id desc;
+---------------+-------------------------+-------------+
| department_id | department_name         | location_id |
+---------------+-------------------------+-------------+
|             5 | IT Support              |           5 |
|             4 | Research & Development  |           4 |
|             3 | Marketing               |           3 |
|             2 | Sales                   |           2 |
|             1 | Human Resource          |           1 |
+---------------+-------------------------+-------------+
5 rows in set (0.000 sec)
```

8. Write a query to display all the employees whose last name starts with “K”.

```
MariaDB [company]> Select * from employees where last_name LIKE 'k%';
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------
+
| employee_id | first_name | last_name | email           | phone_number | hire_date  | job_id | salary | manager_id | department_id
|
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------
+
|           3 | Nirmal     | Kumar     | nirmal@gmail.com | 9722178926   | 2022-07-08 |      3 |  90000 |       NULL |             3
|
+-------------+------------+-----------+-----------------+--------------+------------+--------+--------+------------+---------------
+
1 row in set (0.000 sec)
```

9. Display name of the employees whose hire dates are between 2015 and 2019.

```
MariaDB [company]> select first_name,last_name,hire_date from employees where hire_date between '2015-01-01' and '2019-12-31';
+------------+-----------+------------+
| first_name | last_name | hire_date  |
+------------+-----------+------------+
| Rahul      | sivan     | 2019-06-11 |
| Adharsh    | joseph    | 2018-09-18 |
+------------+-----------+------------+
2 rows in set (0.000 sec)
```

10. Write a query to display jobs where the maximum salary is less than 5000.

```
MariaDB [company]> Select job_title,max_salary from jobs where max_salary<5000;
+-----------+------------+
| job_title | max_salary |
+-----------+------------+
| Clerk     |       4500 |
+-----------+------------+
1 row in set (0.000 sec)
```

11. Write a query to display the name of the employees who has dependents.

```
MariaDB [company]> select e.first_name,e.last_name from employees e join dependents d on e.employee_id = d.employee_id;
+------------+-----------+
| first_name | last_name |
+------------+-----------+
| Abhishek   | Sharma    |
| Rahul      | sivan     |
| Nirmal     | Kumar     |
| Adharsh    | joseph    |
| Shyam      | Lal       |
+------------+-----------+
5 rows in set (0.003 sec)
```

12. Write a query to display name of the employees who were hired in 2017.

```
MariaDB [company]> Select first_name,last_name,hire_date from employees where year(hire_date)=2017;
+------------+-----------+------------+
| first_name | last_name | hire_date  |
+------------+-----------+------------+
| Adharsh    | joseph    | 2017-09-18 |
+------------+-----------+------------+
1 row in set (0.000 sec)
```

13. Write a query to insert an employee “Satya Paul” in department 6.

```
MariaDB [company]> Insert into employees values(6,'Satya','Paul','satyapaul@gmail.com',7289674235,'2021-10-01',4,25000,1,4);
Query OK, 1 row affected (0.005 sec)

MariaDB [company]> select * from employees;
+-------------+------------+-----------+--------------------+--------------+------------+--------+--------+------------+-------------
---+
| employee_id | first_name | last_name | email              | phone_number | hire_date  | job_id | salary | manager_id | department_
id |
+-------------+------------+-----------+--------------------+--------------+------------+--------+--------+------------+-------------
---+
|           1 | Abhishek   | Sharma    | abhishek@gmail.com | 9756456626   | 2020-03-18 |      1 |  80000 |       NULL |
 1 |
|           2 | Rahul      | sivan     | rahul@gmail.com    | 9756283626   | 2019-06-11 |      2 |  65000 |          1 |
 2 |
|           3 | Nirmal     | Kumar     | nirmal@gmail.com   | 9722178926   | 2022-07-08 |      3 |  90000 |       NULL |
 3 |
|           4 | Adharsh    | joseph    | adharsh@gmail.com  | 9562532327   | 2017-09-18 |      4 |  40000 |          1 |
 4 |
|           5 | Shyam      | Lal       | shyam@gmail.com    | 9967367327   | 2020-01-02 |      5 |  60000 |          2 |
 5 |
|           6 | Satya      | Paul      | satyapaul@gmail.com | 7289674235   | 2021-10-01 |      4 |  25000 |          1 |
 4 |
+-------------+------------+-----------+--------------------+--------------+------------+--------+--------+------------+-------------
---+
6 rows in set (0.000 sec)
```

14. Write a query to delete the shipping department.

```
MariaDB [company]> Delete from departments where department_name='Shipping';
Query OK, 1 row affected (0.005 sec)

MariaDB [company]> select * from department;
ERROR 1146 (42S02): Table 'company.department' doesn't exist
MariaDB [company]> select * from departments;
+---------------+------------------------+-------------+
| department_id | department_name        | location_id |
+---------------+------------------------+-------------+
|             1 | Human Resource         |           1 |
|             2 | Sales                  |           2 |
|             3 | Marketing              |           3 |
|             4 | Research & Development |           4 |
|             5 | IT Support             |           5 |
+---------------+------------------------+-------------+
5 rows in set (0.000 sec)
```

15. Display names of all departments, its city, country, and region names with a single query.

```
MariaDB [company]> SELECT d.department_name, l.city, c.country_name, r.region_name
    -> FROM departments d
    -> JOIN locations l ON d.location_id = l.location_id
    -> JOIN countries c ON l.country_id = c.country_id
    -> JOIN regions r ON c.region_id = r.region_id;
+------------------------+--------------+--------------+---------------+
| department_name        | city         | country_name | region_name   |
+------------------------+--------------+--------------+---------------+
| Human Resource         | Springfield  | America      | North America |
| Sales                  | Toronto      | Canada       | North America |
| Marketing              | Rio de janero| Brazil       | Europe        |
| Research & Development | Berlin       | Germany      | Asia          |
| IT Support             | Tokyo        | Somalia      | South America |
+------------------------+--------------+--------------+---------------+
5 rows in set (0.001 sec)
```