

### 1. DEPARTMENT TABLE

```
1 CREATE DATABASE EXERCISE;
2 • USE EXERCISE;
3
4 • CREATE TABLE DEPARTMENTS(
5     DEPT_ID INT PRIMARY KEY,
6     DEPT_NAME VARCHAR(100)
7 );
8 • INSERT INTO DEPARTMENTS VALUES
9     (1, 'CSC'),
10    (2, 'ECE'),
11    (3, 'EIE');
```

### 2. EMPLOYEES TABLE

```
12 • CREATE TABLE EMPLOYEES(
13     EMP_ID INT PRIMARY KEY,
14     EMP_NAME VARCHAR(100),
15     DEPT_ID INT,
16     SALARY INT
17 );
18 • INSERT INTO EMPLOYEES VALUES
19     (101, 'ELAKKIYA', 3, 35000),
20     (102, 'LAVANYA', 2, 28000),
21     (103, 'KASHIFA', 2, 30000),
22     (104, 'SEREESHA', 1, 32000),
23     (105, 'RITHIKA', NULL, 28000);
```

### 3. JOIN BASED QUESTIONS

1. Show all employees with their department names

```
mysql> SELECT E.EMP_NAME, D.DEPT_NAME FROM EMPLOYEES E
-> JOIN DEPARTMENTS D ON E.DEPT_ID = D.DEPT_ID;

+-----+-----+
| EMP_NAME | DEPT_NAME |
+-----+-----+
| ELAKKIYA | EIE       |
| LAVANYA  | ECE       |
| KASHIFA  | ECE       |
| SEREESHA | CSC       |
+-----+-----+
4 rows in set (0.00 sec)
```

2. List employees who do not belong to any department

```
mysql> SELECT EMP_NAME FROM EMPLOYEES
-> LEFT JOIN DEPARTMENTS ON EMPLOYEES.DEPT_ID = DEPARTMENTS.DEPT_ID
-> WHERE DEPARTMENTS.DEPT_ID IS NULL;

+-----+
| EMP_NAME |
+-----+
| RITHIKA  |
+-----+
1 row in set (0.00 sec)
```

3. Display the total number of employees in each department

```
mysql> SELECT D.DEPT_NAME, COUNT(E.EMP_NAME) AS TOTAL_EMPLOYEES FROM DEPARTMENTS D
-> JOIN EMPLOYEES E ON D.DEPT_ID = E.DEPT_ID
-> GROUP BY D.DEPT_NAME;
+-----+-----+
| DEPT_NAME | TOTAL_EMPLOYEES |
+-----+-----+
| EIE      | 1               |
| ECE      | 2               |
| CSC      | 1               |
+-----+-----+
3 rows in set (0.00 sec)
```

4. Show departments with no employees

```
mysql> SELECT DEPT_NAME FROM DEPARTMENTS
-> LEFT JOIN EMPLOYEES ON DEPARTMENTS.DEPT_ID = EMPLOYEES.DEPT_ID
-> WHERE DEPARTMENTS.DEPT_ID IS NULL;
Empty set (0.00 sec)
```

Every department has employees

5. List employee name and dept name those who earn > 30000

```
mysql> SELECT E.EMP_NAME, D.DEPT_NAME, E.SALARY FROM EMPLOYEES E
-> JOIN DEPARTMENTS D ON E.DEPT_ID = D.DEPT_ID
-> WHERE E.SALARY > 30000;
+-----+-----+-----+
| EMP_NAME | DEPT_NAME | SALARY |
+-----+-----+-----+
| ELAKKIYA | EIE      | 35000  |
| SEREESHA | CSC      | 32000  |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

In order to capture query and output together I have used MySQL command line