



Course Name: DBMS Lab

Course Code: CSEG2146

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Experiment 10:

Title: Create the following views in SQL on the COMPANY database schema presented in Experiment 2.

1. A view that has the department name, manager name, and manager salary for every department.

```
mysql> CREATE VIEW Department_Manager_Salary AS
-> SELECT
->     D.department_name,
->     E.employee_name AS manager_name, -- Assuming the manager's name is stored in employee_name
->     E.salary AS manager_salary
-> FROM
->     DEPARTMENT D
-> JOIN
->     EMPLOYEE E ON D.manager_id = E.employee_id; -- Assuming manager_id references employee_id
Query OK, 0 rows affected (0.01 sec)
```

2. A view that has the employee name, supervisor name, and employee salary for each employee who works in the 'Research' department.

```
mysql> CREATE VIEW Research_Employees AS
-> SELECT
->     E.employee_name,
->     S.employee_name AS supervisor_name,
->     E.salary AS employee_salary
-> FROM
->     EMPLOYEE E
-> JOIN
->     EMPLOYEE S ON E.supervisor_id = S.employee_id
-> JOIN
->     DEPARTMENT D ON E.department_id = D.department_id
-> WHERE
->     D.department_name = 'Research';
Query OK, 0 rows affected (0.01 sec)
```

3. A view that has the project name, controlling department name, number of employees, and total hours worked per week on the project for each project.

```
mysql> CREATE TABLE Hours_Worked (
->     employee_id INT,
->     project_id INT,
->     hours_worked DECIMAL(10, 2),
->     PRIMARY KEY (employee_id, project_id),
->     FOREIGN KEY (employee_id) REFERENCES Employee(employee_id)
->     FOREIGN KEY (project_id) REFERENCES Project(project_id)
-> );
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> CREATE VIEW Project_Details AS
-> SELECT
->     P.project_name,
->     D.department_name AS controlling_department_name,
->     COUNT(E.employee_id) AS number_of_employees,
->     SUM(H.hours_worked) AS total_hours_worked -- Using the hours from the HOURS_WORKED table
-> FROM
->     PROJECT P
-> JOIN
->     DEPARTMENT D ON P.department_id = D.department_id
-> LEFT JOIN
->     HOURS_WORKED H ON P.project_id = H.project_id
-> LEFT JOIN
->     EMPLOYEE E ON H.employee_id = E.employee_id
-> GROUP BY
->     P.project_name, D.department_name;
Query OK, 0 rows affected (0.01 sec)
```

4. A view that has the project name, controlling department name, number of employees, and total hours worked per week on the project for each project with more than one employee working on it.

```
mysql> -- Insert sample data into Department
mysql> INSERT INTO Department (department_id, department_name, manager_id) VALUES
-> (1, 'Research', 1),
-> (2, 'Development', 2);
Query OK, 2 rows affected (0.01 sec)
Records: 2 Duplicates: 0 Warnings: 0

mysql>
mysql> -- Insert sample data into Employee
mysql> INSERT INTO Employee (employee_id, employee_name, salary, supervisor_id, department_id) VALUES
-> (1, 'Alice', 70000, NULL, 1),
-> (2, 'Bob', 60000, 1, 1),
-> (3, 'Charlie', 80000, 1, 2);
Query OK, 3 rows affected (0.00 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql>
mysql> -- Insert sample data into Project
mysql> INSERT INTO Project (project_id, project_name, department_id) VALUES
-> (1, 'Project A', 1),
-> (2, 'Project B', 2);
Query OK, 2 rows affected (0.00 sec)
Records: 2 Duplicates: 0 Warnings: 0
```