

## Assignment 3

### Table Data:

#### Employee:

Emp_id	Dept_id	Emp_fname	Emp_lname	Emp_Position	Emp_salary	Emp_JoinDate
1	1	Amit	Sharma	Manager	75000.00	2010-05-10
2	2	Priya	Iyer	Software Engineer	95000.00	2012-07-23
3	3	Ravi	Kumar	Marketing Executive	55000.00	2014-06-15
4	4	Sanjay	Reddy	Sales Executive	62000.00	2017-11-01
5	5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30
6	2	Vikram	Singh	Senior Developer	105000.00	2019-01-12
7	1	Sanya	Patel	HR Specialist	58000.00	2020-02-19

#### Dept:

Dept_id	Dept_name	Dept_location
1	HR	Mumbai
2	IT	Bangalore
3	Marketing	Delhi
4	Sales	Hyderabad
5	Finance	Chennai

#### Project :

Proj_id	Dept_id	Proj_Name	Proj_Location	Proj_cost	Proj_year
1	2	Tech Innovators	Bangalore	45000.00	2015
2	1	HR Management System	Mumbai	25000.00	2018
3	3	Marketing Campaign 2020	Delhi	32000.00	2020
4	2	E-commerce Platform	Hyderabad	50000.00	2020
5	4	Sales Expansion	Hyderabad	40000.00	2017
6	5	Financial System Overhaul	Chennai	60000.00	2015

## 1. Find Employee details and Department details using NATURAL JOIN.

=>

```
mysql> select * from Employee e natural join Dept d;
```

Dept_id	Emp_id	Emp_fname	Emp_lname	Emp_Position	Emp_salary	Emp_JoinDate	Dept_name	Dept_location
1	1	Amit	Sharma	Manager	75000.00	2010-05-10	HR	Mumbai
2	2	Priya	Iyer	Software Engineer	95000.00	2012-07-23	IT	Bangalore
3	3	Ravi	Kumar	Marketing Executive	55000.00	2014-06-15	Marketing	Delhi
4	4	Sanjay	Reddy	Sales Executive	62000.00	2017-11-01	Sales	Hyderabad
5	5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30	Finance	Chennai
2	6	Vikram	Singh	Senior Developer	105000.00	2019-01-12	IT	Bangalore
1	7	Sanya	Patel	HR Specialist	58000.00	2020-02-19	HR	Mumbai

## 2. Find the emp\_fname,Emp\_position,location,Emp\_JoinDate who have same Dept id.

=>

```
mysql> select e.Emp_fname, e.Emp_position, p.Proj_Location, e.Emp_JoinDate from Employee e join Project p on e.Dept_id = p.Dept_id;
```

Emp_fname	Emp_position	Proj_Location	Emp_JoinDate
Amit	Manager	Mumbai	2010-05-10
Priya	Software Engineer	Bangalore	2012-07-23
Priya	Software Engineer	Hyderabad	2012-07-23
Ravi	Marketing Executive	Delhi	2014-06-15
Sanjay	Sales Executive	Hyderabad	2017-11-01
Kavitha	Financial Analyst	Chennai	2008-09-30
Vikram	Senior Developer	Bangalore	2019-01-12
Vikram	Senior Developer	Hyderabad	2019-01-12
Sanya	HR Specialist	Mumbai	2020-02-19

### 3. Find the Employee details ,Proj\_id,Project cost who does not have Project location as 'Hyderabad'.

=>

```
mysql> select e.*, p.Proj_id,p.Proj_Location, p.Proj_Cost from Employee e join Project p on e.Dept_id = p.Dept_id where p.Proj_Location<>'Hyderabad';
```

Emp_id	Dept_id	Emp_fname	Emp_lname	Emp_Position	Emp_salary	Emp_JoinDate	Proj_id	Proj_Location	Proj_Cost
1	1	Amit	Sharma	Manager	75000.00	2010-05-10	2	Mumbai	25000.00
2	2	Priya	Iyer	Software Engineer	95000.00	2012-07-23	1	Bangalore	45000.00
3	3	Ravi	Kumar	Marketing Executive	55000.00	2014-06-15	3	Delhi	32000.00
5	5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30	6	Chennai	60000.00
6	2	Vikram	Singh	Senior Developer	105000.00	2019-01-12	1	Bangalore	45000.00
7	1	Sanya	Patel	HR Specialist	58000.00	2020-02-19	2	Mumbai	25000.00

### 4. Find Department Name ,employee name, Emp\_position for which project year is 2020,

=>

```
mysql> select concat(e.Emp_fname,' ', e.Emp_lname), d.Dept_name, e.Emp_position, p.Proj_year from Employee e join Dept d on e.Dept_id = d.Dept_id join Project p on p.Dept_id = e.Dept_id where p.Proj_year=2020;
```

concat(e.Emp_fname,' ', e.Emp_lname)	Dept_name	Emp_position	Proj_year
Priya Iyer	IT	Software Engineer	2020
Ravi Kumar	Marketing	Marketing Executive	2020
Vikram Singh	IT	Senior Developer	2020

### 5. Display emp\_position,D\_name who have Project cost >30000

=>

```
mysql> select e.Emp_position, d.Dept_name, p.Proj_cost from Employee e join Dept d on e.Dept_id = d.Dept_id join Project p on p.Dept_id = e.Dept_id where p.Proj_Cost>30000;
```

```
+-----+-----+-----+
| Emp_position | Dept_name | Proj_cost |
+-----+-----+-----+
| Software Engineer | IT | 45000.00 |
| Software Engineer | IT | 50000.00 |
| Marketing Executive | Marketing | 32000.00 |
| Sales Executive | Sales | 40000.00 |
| Financial Analyst | Finance | 60000.00 |
| Senior Developer | IT | 45000.00 |
| Senior Developer | IT | 50000.00 |
+-----+-----+-----+
```

### 6. Find the names of all the Projects that started in the year 2015.

=>

```
mysql> select * from Project where proj_year=2015;
```

```
+-----+-----+-----+-----+-----+-----+
| Proj_id | Dept_id | Proj_Name | Proj_Location | Proj_cost | Proj_year |
+-----+-----+-----+-----+-----+-----+
| 1 | 2 | Tech Innovators | Bangalore | 45000.00 | 2015 |
| 6 | 5 | Financial System Overhaul | Chennai | 60000.00 | 2015 |
+-----+-----+-----+-----+-----+-----+
```

### 7. List the Dept\_name having no\_of\_emp=10

=>

```
mysql> select d.Dept_name from Dept d join Employee e on d.Dept_id = e.Dept_id group by d.Dept_id, d.Dept_name having count(e.Emp_id)=10;
Empty set (0.01 sec)
```

```
mysql> SELECT d.Dept_name FROM Dept d JOIN Employee e ON d.Dept_id = e.Dept_id GROUP BY d.Dept_id, d.Dept_name HAVING COUNT(e.Emp_id) = 2;
```

```
+-----+
| Dept_name |
+-----+
| HR |
| IT |
+-----+
```

```
mysql> SELECT d.Dept_name FROM Dept d JOIN Employee e ON d.Dept_id = e.Dept_id GROUP
BY d.Dept_id, d.Dept_name HAVING COUNT(e.Emp_id) = 1;
```

```
+-----+
| Dept_name |
+-----+
| Marketing |
| Sales     |
| Finance   |
+-----+
```

3 rows in set (0.00 sec)

### 8. Display the total number of employee who have joined any project before 2009

=>

```
mysql> select count(distinct e.Emp_id) as Total_Employees from Employee e join Project p on
e.Dept_id = p.Dept_id where e.Emp_JoinDate<'2009-01-01' and p.Proj_year<2009;
```

```
+-----+
| Total_Employees |
+-----+
|          0      |
+-----+
```

1 row in set (0.00 sec)

```
mysql> select count(distinct e.Emp_id) as Total_Employees from Employee e join Project p on
e.Dept_id = p.Dept_id where e.Emp_JoinDate<'2016-01-01' and p.Proj_year<2016;
```

```
+-----+
| Total_Employees |
+-----+
|          2      |
+-----+
```

1 row in set (0.05 sec)

### 9. Create a view showing the employee and Department details.

=>

```
mysql> CREATE VIEW Employee_Dept_View AS SELECT e.Emp_id, e.Emp_fname, e.Emp_lname,
e.Emp_Position, e.Emp_salary, e.Emp_JoinDate, d.Dept_name, d.Dept_location FROM Employee e J
OIN Dept d ON e.Dept_id = d.Dept_id;
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> select * from Employee_Dept_View;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| Emp_id | Emp_fname | Emp_lname | Emp_Position | Emp_salary | Emp_JoinDate | Dept_name | Dept_location |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | Amit | Sharma | Manager | 75000.00 | 2010-05-10 | HR | Mumbai |
| 2 | Priya | Iyer | Software Engineer | 95000.00 | 2012-07-23 | IT | Bangalore |
| 3 | Ravi | Kumar | Marketing Executive | 55000.00 | 2014-06-15 | Marketing | Delhi |
```

4	Sanjay	Reddy	Sales Executive	62000.00	2017-11-01	Sales	Hyderabad
5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30	Finance	Chennai
6	Vikram	Singh	Senior Developer	105000.00	2019-01-12	IT	Bangalore
7	Sanya	Patel	HR Specialist	58000.00	2020-02-19	HR	Mumbai

## 10. Perform Manipulation on simple view-Insert, update, delete, drop view.

=>

### Insert Into View:

```
mysql> INSERT INTO Employee (Emp_id, Dept_id, Emp_fname, Emp_lname, Emp_Position, Emp_salary, Emp_JoinDate)
```

```
-> VALUES (101, 5, 'John', 'Doe', 'Manager', 60000, '2022-05-10');
```

Query OK, 1 row affected (0.04 sec)

```
mysql> select * from Employee_Dept_View;
```

Emp_id	Emp_fname	Emp_lname	Emp_Position	Emp_salary	Emp_JoinDate	Dept_name	Dept_location
1	Amit	Sharma	Manager	75000.00	2010-05-10	HR	Mumbai
2	Priya	Iyer	Software Engineer	95000.00	2012-07-23	IT	Bangalore
3	Ravi	Kumar	Marketing Executive	55000.00	2014-06-15	Marketing	Delhi
4	Sanjay	Reddy	Sales Executive	62000.00	2017-11-01	Sales	Hyderabad
5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30	Finance	Chennai
6	Vikram	Singh	Senior Developer	105000.00	2019-01-12	IT	Bangalore
7	Sanya	Patel	HR Specialist	58000.00	2020-02-19	HR	Mumbai
101	John	Doe	Manager	60000.00	2022-05-10	Finance	Chennai

8 rows in set (0.00 sec)

### Update View:

```
mysql> update Employee_Dept_View set Emp_salary = 65000 where Emp_id = 101;
```

Query OK, 1 row affected (0.03 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from Employee_Dept_View;
```

Emp_id	Emp_fname	Emp_lname	Emp_Position	Emp_salary	Emp_JoinDate	Dept_name	Dept_location
1	Amit	Sharma	Manager	75000.00	2010-05-10	HR	Mumbai
2	Priya	Iyer	Software Engineer	95000.00	2012-07-23	IT	Bangalore
3	Ravi	Kumar	Marketing Executive	55000.00	2014-06-15	Marketing	Delhi
4	Sanjay	Reddy	Sales Executive	62000.00	2017-11-01	Sales	Hyderabad
5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30	Finance	Chennai
6	Vikram	Singh	Senior Developer	105000.00	2019-01-12	IT	Bangalore
7	Sanya	Patel	HR Specialist	58000.00	2020-02-19	HR	Mumbai

101	John	Doe	Manager	65000.00	2022-05-10	Finance	Chennai

### Delete Record from View:

```
mysql> select * from Employee_Dept_View;
```

Emp_id	Emp_fname	Emp_lname	Emp_Position	Emp_salary	Emp_JoinDate	Dept_name	Dept_location
1	Amit	Sharma	Manager	75000.00	2010-05-10	HR	Mumbai
2	Priya	Iyer	Software Engineer	95000.00	2012-07-23	IT	Bangalore
3	Ravi	Kumar	Marketing Executive	55000.00	2014-06-15	Marketing	Delhi
4	Sanjay	Reddy	Sales Executive	62000.00	2017-11-01	Sales	Hyderabad
5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30	Finance	Chennai
6	Vikram	Singh	Senior Developer	105000.00	2019-01-12	IT	Bangalore
7	Sanya	Patel	HR Specialist	58000.00	2020-02-19	HR	Mumbai

7 rows in set (0.00 sec)

### Drop View:

```
mysql> DROP VIEW Employee_Dept_View;
```

Query OK, 0 rows affected (0.00 sec)

```
mysql> select * from Employee_Dept_View;
```

ERROR 1146 (42S02): Table 'te31455\_db.Employee\_Dept\_View' doesn't exist

### Left Join:

```
mysql> select e.*, d.Dept_id from Employee e left join Dept d on e.Dept_id = d.Dept_id;
```

Emp_id	Dept_id	Emp_fname	Emp_lname	Emp_Position	Emp_salary	Emp_JoinDate	Dept_id
1	1	Amit	Sharma	Manager	75000.00	2010-05-10	1
2	2	Priya	Iyer	Software Engineer	95000.00	2012-07-23	2
3	3	Ravi	Kumar	Marketing Executive	55000.00	2014-06-15	3
4	4	Sanjay	Reddy	Sales Executive	62000.00	2017-11-01	4
5	5	Kavitha	Rajendran	Financial Analyst	80000.00	2008-09-30	5
6	2	Vikram	Singh	Senior Developer	105000.00	2019-01-12	2
7	1	Sanya	Patel	HR Specialist	58000.00	2020-02-19	1

7 rows in set (0.01 sec)

**Right Join :**

```
mysql> select p.*, d.Dept_id from Project p right join Dept d on d.Dept_id = p.Dept_id;
```

Proj_id	Dept_id	Proj_Name	Proj_Location	Proj_cost	Proj_year	Dept_id
2	1	HR Management System	Mumbai	25000.00	2018	1
1	2	Tech Innovators	Bangalore	45000.00	2015	2
4	2	E-commerce Platform	Hyderabad	50000.00	2020	2
3	3	Marketing Campaign 2020	Delhi	32000.00	2020	3
5	4	Sales Expansion	Hyderabad	40000.00	2017	4
6	5	Financial System Overhaul	Chennai	60000.00	2015	5

6 rows in set (0.00 sec)