

LAB 4

ER DIAGRAM AND QUERIES

create database Employee;

use Employee;

```
CREATE TABLE Department (  
    Dept_No INT PRIMARY KEY,  
    Dept_Name VARCHAR(50),  
    Dept_Location VARCHAR(50)  
);
```

```
CREATE TABLE Employee (  
    Emp_No INT PRIMARY KEY,  
    Emp_Name VARCHAR(50),  
    Job_Role VARCHAR(50),  
    Dept_No INT,  
    FOREIGN KEY (Dept_No) REFERENCES Department(Dept_No)  
);
```

```
CREATE TABLE Project (  
    Proj_No INT PRIMARY KEY,  
    Proj_Name VARCHAR(50),  
    Proj_Location VARCHAR(50),  
    Dept_No INT,  
    FOREIGN KEY (Dept_No) REFERENCES Department(Dept_No)  
);
```

```
CREATE TABLE Incentives (  
    Incentive_ID INT PRIMARY KEY,  
    Emp_No INT,  
    Incentive_Date DATE,  
    Amount DECIMAL(10,2),  
    FOREIGN KEY (Emp_No) REFERENCES Employee(Emp_No)  
);
```

```
CREATE TABLE Works_On (  
    Emp_No INT,  
    Proj_No INT,  
    PRIMARY KEY (Emp_No, Proj_No),  
    FOREIGN KEY (Emp_No) REFERENCES Employee(Emp_No),  
    FOREIGN KEY (Proj_No) REFERENCES Project(Proj_No)  
);
```

```
INSERT INTO Department VALUES
```

```
(1, 'HR', 'Bengaluru'),  
(2, 'IT', 'Hyderabad'),  
(3, 'Finance', 'Mysuru'),  
(4, 'Admin', 'Chennai'),  
(5, 'R&D', 'Bengaluru');
```

```
INSERT INTO Employee VALUES
```

```
(101, 'Asha', 'Manager', 1),  
(102, 'Kiran', 'Analyst', 2),  
(103, 'Ravi', 'Clerk', 3),  
(104, 'Manu', 'Developer', 2),
```

(105, 'Deepa', 'Tester', 5),
(106, 'Rohit', 'HR Executive', 1);

INSERT INTO Project VALUES

(201, 'Payroll System', 'Bengaluru', 1),
(202, 'ERP Implementation', 'Hyderabad', 2),
(203, 'Tax Portal', 'Mysuru', 3),
(204, 'Automation', 'Chennai', 4),
(205, 'AI Tool', 'Bengaluru', 5);

INSERT INTO Works_On VALUES

(101, 201),
(102, 202),
(103, 203),
(104, 202),
(105, 205),
(106, 201);

INSERT INTO Incentives VALUES

(1, 101, '2019-01-10', 2000),
(2, 102, '2019-01-15', 1500),
(3, 103, '2019-01-18', 1000),
(4, 105, '2019-01-20', 1800);

Queries

3.

SELECT DISTINCT e.Emp_No

```

FROM Employee e
JOIN Works_On w ON e.Emp_No = w.Emp_No
JOIN Project p ON w.Proj_No = p.Proj_No
WHERE p.Proj_Location IN ('Bengaluru', 'Hyderabad', 'Mysuru');

```

77 • `SELECT DISTINCT e.Emp_No`
78 `FROM Employee e`
79 `JOIN Works_On w ON e.Emp_No = w.Emp_No`
80 `JOIN Project p ON w.Proj_No = p.Proj_No`
81 `WHERE p.Proj_Location IN ('Bengaluru', 'Hyderabad', 'Mysuru');`

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	Emp_No
▶	101
	106
	102
	104
	103
	105

4.

```

SELECT Emp_No
FROM Employee
WHERE Emp_No NOT IN (SELECT Emp_No FROM Incentives);

```

83 • `SELECT Emp_No`
84 `FROM Employee`
85 `WHERE Emp_No NOT IN (SELECT Emp_No FROM Incentives);`

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

	Emp_No
▶	106
	104
*	NULL

5.

```
SELECT e.Emp_Name, e.Emp_No, d.Dept_Name, e.Job_Role,  
       d.Dept_Location, p.Proj_Location  
FROM Employee e  
JOIN Department d ON e.Dept_No = d.Dept_No  
JOIN Project p ON e.dept_No = p.dept_No  
WHERE d.Dept_Location = p.Proj_Location;
```

```
87 • SELECT e.Emp_Name, e.Emp_No, d.Dept_Name, e.Job_Role,  
88       d.Dept_Location, p.Proj_Location  
89 FROM Employee e  
90 JOIN Department d ON e.Dept_No = d.Dept_No  
91 JOIN Project p ON e.dept_No = p.dept_No  
92 WHERE d.Dept_Location = p.Proj_Location;  
93  
94
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

	Emp_Name	Emp_No	Dept_Name	Job_Role	Dept_Location	Proj_Location
▶	Asha	101	HR	Manager	Bengaluru	Bengaluru
	Rohit	106	HR	HR Executive	Bengaluru	Bengaluru
	Kiran	102	IT	Analyst	Hyderabad	Hyderabad
	Manu	104	IT	Developer	Hyderabad	Hyderabad
	Ravi	103	Finance	Clerk	Mysuru	Mysuru
	Deepa	105	R&D	Tester	Bengaluru	Bengaluru