```sql
CREATE DATABASE Employee;
USE Employee;


-- Create Department Table
CREATE TABLE Dept (
    DeptNo INT PRIMARY KEY,
    Dname VARCHAR(30),
    Dloc VARCHAR(50)
);


-- Create Employee Table
CREATE TABLE Employee (
    Eno INT PRIMARY KEY,
    Ename VARCHAR(30) NOT NULL,
    Mgr_No INT,
    Hiredate DATE,
    Sal DECIMAL(10,2),
    DeptNo INT,
    FOREIGN KEY (DeptNo) REFERENCES Dept(DeptNo)
);


-- Create Project Table
CREATE TABLE Project (
    Pno INT PRIMARY KEY,
    Pname VARCHAR(30),
    Ploc VARCHAR(50)
);


-- Create AssignedTo Table (junction table)
CREATE TABLE AssignedTo (
    Eno INT,
```

```sql
    Pno INT,

    JobRole VARCHAR(50),

    PRIMARY KEY (Eno, Pno),

    FOREIGN KEY (Eno) REFERENCES Employee(Eno),

    FOREIGN KEY (Pno) REFERENCES Project(Pno)

);


-- Create Incentive Table
CREATE TABLE Incentive (

    Eno INT,

    Incentive_Date DATE,

    Incentive_Amount DECIMAL(10,2),

    FOREIGN KEY (Eno) REFERENCES Employee(Eno)

);


-- Insert values into Dept
INSERT INTO Dept (DeptNo, Dname, Dloc)

VALUES

(10, 'HR', 'Mysore'),

(20, 'IT', 'Bangalore'),

(30, 'Finance', 'Delhi'),

(40, 'Marketing', 'Chennai'),

(50, 'Operations', 'Hyderabad');


-- Insert values into Employee
INSERT INTO Employee (Eno, Ename, Mgr_No, Hiredate, Sal, DeptNo)

VALUES

(101, 'Rajesh', NULL, '2019-04-12', 55000.00, 10),

(102, 'Sneha', 101, '2020-07-13', 48000.00, 20),

(103, 'Kiran', 101, '2021-01-25', 42000.00, 30),

(104, 'Priya', 103, '2022-04-14', 39000.00, 40),
```

```sql
(105, 'Arjun', 103, '2023-11-15', 38000.00, 50);


-- Insert values into Project
INSERT INTO Project (Pno, Pname, Ploc)
VALUES
(1, 'Recruitment', 'Mumbai'),
(2, 'ERP Upgrade', 'Bangalore'),
(3, 'Audit System', 'Delhi'),
(4, 'Product Launch', 'Chennai'),
(5, 'Logistic Hub', 'Hyderabad');


-- Insert values into AssignedTo
INSERT INTO AssignedTo (Eno, Pno, JobRole)
VALUES
(101, 1, 'Project Manager'),
(102, 2, 'Software Engineer'),
(103, 3, 'Analyst'),
(104, 4, 'Accountant'),
(105, 5, 'Coordinator');


-- Insert values into Incentive
INSERT INTO Incentive (Eno, Incentive_Date, Incentive_Amount)
VALUES
(101, '2024-02-10', 5000.00),
(102, '2024-06-25', 3000.00),
(103, '2024-07-18', 2800.00),
(104, '2024-09-12', 2800.00),
(105, '2024-12-05', 3200.00);
```

```sql
SELECT E.Eno,E.Ename,d.Dname,d.Dloc

from Employee E

join Dept d on e.Deptno=d.Deptno;
```

Eno	Ename	Dname	Dloc
101	Rajesh	HR	Mysore
102	Sneha	IT	Bangalore
103	Kiran	Finance	Delhi
104	Priya	Marketing	Chennai
105	Arjun	Operations	Hyderabad

```sql
SELECT E.Eno, E.Ename

FROM Employee E

LEFT JOIN AssignedTo A ON E.Eno = A.Eno

WHERE A.Pno IS NULL;
```

Eno	Ename

```sql
SELECT P.Pname, COUNT(A.Eno) AS Headcount

FROM Project P

LEFT JOIN AssignedTo A ON P.Pno = A.Pno

GROUP BY P.Pname;
```

Pname	Headcount
Recruitment	1
ERP Upgrade	1
Audit System	1
Product Launch	1
Logistic Hub	1

```sql
SELECT D.Dname, AVG(E.Sal) AS Avg_Salary, MAX(E.Sal) AS Max_Salary

FROM Dept D

JOIN Employee E ON D.DeptNo = E.DeptNo

GROUP BY D.Dname;
```

Eno	Ename	Total_Incentives
101	Rajesh	5000.00
102	Sneha	3000.00
103	Kiran	2800.00
104	Priya	2800.00
105	Arjun	3200.00

```
SELECT E.Eno, E.Ename, SUM(I.Incentive_Amount) AS Total_Incentives

FROM Employee E

JOIN Incentive I ON E.Eno = I.Eno

GROUP BY E.Eno, E.Ename;
```

Eno	Ename	Total_Incentives
101	Rajesh	5000.00
102	Sneha	3000.00
103	Kiran	2800.00
104	Priya	2800.00
105	Arjun	3200.00

Result 35

```
SELECT E.Eno, E.Ename

FROM Employee E

JOIN AssignedTo A ON E.Eno = A.Eno

JOIN Project P ON A.Pno = P.Pno

WHERE P.Pname = 'Recruitment ';
```

Eno	Ename
101	Rajesh

```
SELECT D.DeptNo, D.Dname

FROM Dept D

LEFT JOIN Employee E ON D.DeptNo = E.DeptNo

WHERE E.Eno IS NULL;
```

DeptNo	Dname

SELECT M.Eno AS Manager_ID, M.Ename AS Manager_Name, COUNT(E.Eno) AS Report_Count

FROM Employee M

JOIN Employee E ON M.Eno = E.Mgr_No

GROUP BY M.Eno, M.Ename;

Manager_ID	Manager_Name	Report_Count
101	Rajesh	2
103	Kiran	2

SELECT E.Eno, E.Ename, COUNT(A.Pno) AS Project_Count

FROM Employee E

JOIN AssignedTo A ON E.Eno = A.Eno

GROUP BY E.Eno, E.Ename

HAVING COUNT(A.Pno) > 1;

Eno	Ename	Project_Count