

Model practical examination

7)

```
mysql> CREATE TABLE Dept (
->   DepartmentID INT PRIMARY KEY,
->   Name VARCHAR(100)
-> );
Query OK, 0 rows affected (0.20 sec)

mysql> CREATE TABLE Emp (
->   EmployeeID INT PRIMARY KEY,
->   Name VARCHAR(100),
->   Salary DECIMAL(10, 2),
->   ManagerID INT,
->   DepartmentID INT,
->   Location VARCHAR(100),
->   FOREIGN KEY (ManagerID) REFERENCES Emp(EmployeeID),
->   FOREIGN KEY (DepartmentID) REFERENCES Dept(DepartmentID)
-> );
Query OK, 0 rows affected (0.32 sec)

mysql> INSERT INTO Dept (DepartmentID, Name)
-> VALUES
->   (1, 'Human Resources'),
->   (2, 'Finance'),
->   (3, 'Marketing');
Query OK, 3 rows affected (0.07 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> INSERT INTO Emp (EmployeeID, Name, Salary, ManagerID, DepartmentID, Location)
-> VALUES
->   (1, 'Ramesh', 60000, NULL, 1, 'Mumbai'),
->   (2, 'Jyoti', 80000, 1, 1, 'Mumbai'),
->   (3, 'Mohan', 70000, NULL, 2, 'Delhi'),
->   (4, 'Geeta', 75000, 3, 2, 'Delhi'),
->   (5, 'Sunil', 55000, 1, 3, 'Bangalore'),
->   (6, 'Pooja', 90000, NULL, 3, 'Bangalore');
Query OK, 6 rows affected (0.08 sec)
Records: 6  Duplicates: 0  Warnings: 0

mysql> select * from Emp;
+-----+-----+-----+-----+-----+-----+
| EmployeeID | Name   | Salary | ManagerID | DepartmentID | Location |
+-----+-----+-----+-----+-----+-----+
| 1 | Ramesh | 60000.00 | NULL | 1 | Mumbai |
| 2 | Jyoti  | 80000.00 | 1 | 1 | Mumbai |
| 3 | Mohan  | 70000.00 | NULL | 2 | Delhi  |
| 4 | Geeta  | 75000.00 | 3 | 2 | Delhi  |
| 5 | Sunil  | 55000.00 | 1 | 3 | Bangalore |
| 6 | Pooja  | 90000.00 | NULL | 3 | Bangalore |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

7 a)

```
mysql> SELECT e.Name
-> FROM Emp e
-> JOIN Emp m ON e.ManagerID = m.EmployeeID
-> WHERE e.Salary > m.Salary;
+-----+
| Name |
+-----+
| Jyoti |
| Geeta |
+-----+
```

7 b)

```
mysql> SELECT e.Name
-> FROM Emp e
-> JOIN (
->     SELECT DepartmentID, MAX(Salary) AS MaxSalary
->     FROM Emp
->     GROUP BY DepartmentID
-> ) max_salaries ON e.DepartmentID = max_salaries.DepartmentID AND
e.Salary = max_salaries.MaxSalary;
+-----+
| Name |
+-----+
| Jyoti |
| Geeta |
| Pooja |
+-----+
```

7 c)

```
mysql> SELECT e1.Name, e2.Name, e1.Location
-> FROM Emp e1, Emp e2
-> WHERE e1.EmployeeID <> e2.EmployeeID
-> AND e1.Location = e2.Location;
+-----+-----+-----+
| Name | Name | Location |
+-----+-----+-----+
| Jyoti | Ramesh | Mumbai |
| Ramesh | Jyoti | Mumbai |
| Geeta | Mohan | Delhi |
| Mohan | Geeta | Delhi |
| Pooja | Sunil | Bangalore |
| Sunil | Pooja | Bangalore |
+-----+-----+-----+
```

7 d)

```
mysql> SELECT e.Name  
-> FROM Emp e  
-> JOIN (  
->     SELECT DepartmentID, MIN(Salary) AS MinSalary  
->     FROM Emp  
->     GROUP BY DepartmentID  
-> ) min_salaries ON e.DepartmentID = min_salaries.DepartmentID  
-> WHERE e.Salary = min_salaries.MinSalary;
```

Name
Ramesh
Mohan
Sunil

7 e)

```
mysql> SELECT d.Name  
-> FROM Dept d  
-> LEFT JOIN Emp e ON d.DepartmentID = e.DepartmentID  
-> WHERE e.EmployeeID IS NULL;  
Empty set (0.00 sec)
```

```
mysql>
```