DBMS LAB ASSIGNMENT-4

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Create the table Employee and Department and Write SQL queries for the following:

```
mysql>use 20BCS009;
```

CREATION OF TABLES;

```
msql> create table Employee
(
Emp_id int,
Emp_name varchar(20),
Salary int,
Dno varchar(6)
);
```

```
mysql> create table Department
(
Dno varchar(6),
Dept_name varchar(20)
);
```

```
mysql> desc Employee;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| Emp_id   | int         | YES  |     | NULL    |       |
| Emp_name | varchar(20) | YES  |     | NULL    |       |
| Salary   | int         | YES  |     | NULL    |       |
| Dno      | varchar(6)  | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
```

```
mysql> desc Department;
+-----------+------------+------+-----+---------+-------+
```

Field	Type	Null	Key	Default	Extra
Dno	varchar(6)	YES		NULL	
Dept_name	varchar(20)	YES		NULL	

FEEDING DATA INTO TABLES:

TABLE Employee:

```
insert into Employee values (101,'Amit',25000,'D1001');
insert into Employee values (102,'Sunil',20000,'D1002');
insert into Employee values (103,'Rakesh',18000,'D1003');
insert into Employee values (104,'Ajay',16000,'D1001');
insert into Employee values (105,'Suhail',20000,'D1002');
insert into Employee values (106,'Arif',18000,'D1004');
insert into Employee values (107,'Suresh',24000,'D1002');
insert into Employee values (108,'Vijay',22000,'D1003');
```

TABLE Department:

```
insert into Department values ('D1001' ,'IT');
insert into Department values ('D1002' ,'Sales');
insert into Department values ('D1003' ,'Marketing');
insert into Department values ('D1004' ,'HR');
```

```
mysql> select * from Employee;
+--------+----------+--------+-------+
| Emp_id | Emp_name | Salary | Dno   |
+--------+----------+--------+-------+
|    101 | Amit     |  25000 | D1001 |
|    102 | Sunil    |  20000 | D1002 |
|    103 | Rakesh   |  18000 | D1003 |
|    104 | Ajay     |  16000 | D1001 |
|    105 | Suhail   |  20000 | D1002 |
|    106 | Arif     |  18000 | D1004 |
|    107 | Suresh   |  24000 | D1002 |
|    108 | Vijay    |  22000 | D1003 |
+--------+----------+--------+-------+
```

```
mysql> select * from Department;
+-------+-----------+
| Dno   | Dept_name |
+-------+-----------+
| D1001 | IT        |
| D1002 | Sales     |
| D1003 | Marketing |
| D1004 | HR        |
+-------+-----------+
```

EXERCISE:

a)Display the total sum required to pay the salary of all:

```
mysql> select sum(Salary) from Employee;
+-------------+
| sum(Salary) |
+-------------+
|      163000 |
+-------------+
```

b)Display the average salary, minimum salary and maximum salary of the company:

```
mysql> select avg(Salary), max(Salary), min(Salary) from
Employee;
+-------------+-------------+-------------+
| avg(Salary) | max(Salary) | min(Salary) |
+-------------+-------------+-------------+
|  20375.0000 |       25000 |       16000 |
+-------------+-------------+-------------+
```

c)Display the sum of the salary department-wise.

```
mysql> select sum(Salary),Dept_name from Employee natural join
Department group by Dept_name;

+-------------+-----------+
| sum(Salary) | Dept_name |
+-------------+-----------+
|       41000 | IT        |
|       64000 | Sales     |
|       40000 | Marketing |
|       18000 | HR        |
+-------------+-----------+
```

d)Display the maximum salary department-wise.

```
mysql> select max(Salary),Dept_name from Employee natural join Department
group by Dept_name;
+-------------+-----------+
| max(Salary) | Dept_name |
+-------------+-----------+
|       25000 | IT        |
|       24000 | Sales     |
|       22000 | Marketing |
|       18000 | HR        |
+-------------+-----------+
```

e)Display the details of the employee who earns the maximum salary.

```
mysql> select * from Employee where Salary =(select max(Salary) from
Employee);
+--------+----------+--------+-------+
| Emp_id | Emp_name | Salary | Dno   |
+--------+----------+--------+-------+
|    101 | Amit     |  25000 | D1001 |
+--------+----------+--------+-------+
```

f)Display details of every employee having a maximum salary in his department.

```
mysql> SELECT Emp_id, Emp_name, Salary, Dno FROM Employee where (Dno,
Salary) in  (Select Dno, max(Salary) from Employee group by Dno);
+--------+----------+--------+-------+
| Emp_id | Emp_name | Salary | Dno   |
+--------+----------+--------+-------+
|    101 | Amit     |  25000 | D1001 |
|    106 | Arif     |  18000 | D1004 |
|    107 | Suresh   |  24000 | D1002 |
|    108 | Vijay    |  22000 | D1003 |
+--------+----------+--------+-------+
```

g)Display the details of the employee who earns more salary than the average salary of his department.

```
mysql> SELECT Emp_name, Dno, Salary FROM Employee e WHERE Salary > (select
avg(Salary) from Employee e2 where e2.Dno = e.Dno);
+----------+-------+--------+
| Emp_name | Dno   | Salary |
+----------+-------+--------+
| Amit     | D1001 |  25000 |
| Suresh   | D1002 |  24000 |
| Vijay    | D1003 |  22000 |
+----------+-------+--------+
```

H)Display total number of employees in each department along with the department name.

```
mysql> SELECT Dept_name, count(*) FROM Department INNER JOIN Employee ON
Employee.Dno = Department.Dno GROUP BY Department.Dno, Dept_name;
+-----------+----------+
| Dept_name | count(*) |
+-----------+----------+
| IT        |        2 |
| Sales     |        3 |
| Marketing |        2 |
| HR        |        1 |
+-----------+----------+
```