

ASSIGNMENT-6

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Subject-Assignment-6 of DBMS Lab

Query-

1.Display the name of employees who earn maximum salary.

Ans-

```
select ename from EMP
```

```
where sal=(select max(sal) from EMP);
```

```
mysql> select ename from EMP where sal=(select max(sal) from EMP);
+-----+
| ename |
+-----+
| King  |
+-----+
1 row in set (0.00 sec)
```

2. Display the name of employees who earn maximum salary and job is salesman.

Ans-

select ename from EMP

where (sal,job)=(select max(sal),job from EMP

where job='Salesman');

```
mysql> select ename from EMP where (sal,job)=
-> (select max(sal),job from EMP where job='Salesman');
+-----+
| ename |
+-----+
| Allen |
+-----+
1 row in set (0.00 sec)
```

3Q. Display the departments whose average salary is maximal.

Ans-

select dname from dept where deptno in(

select deptno from EMP

group by deptno having avg(sal)>=

all(select avg(sal) from EMP group by deptno));

```
mysql> select dname from dept where deptno in(  
-> select deptno from EMP  
-> group by deptno having avg(sal)>=  
-> all(select avg(sal) from EMP group by deptno));
```

```
+-----+
```

```
| dname |
```

```
+-----+
```

```
| Accounting |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

4Q. Display the name of employees whose salary is more than 'TURNER'.

Ans-

select ename from EMP where

sal>(select sal from EMP where ename='TURNER');

```
mysql> select ename from EMP where
      -> sal>(select sal from EMP where ename='TURNER');
+-----+
| ename |
+-----+
| Allen |
| Jones |
| Blake |
| Clark |
| Scott |
| King  |
| Ford  |
+-----+
7 rows in set (0.00 sec)
```

5Q. Display the name of employees who joined after 'ALLEN'.


Ans-

select ename from EMP where hiredate>

(select hiredate from EMP where ename='ALLEN');

```
mysql> select ename from EMP where hiredate>
      -> (select hiredate from EMP where ename='ALLEN');
+-----+
| ename |
+-----+
| Ward  |
| Jones |
| Martin|
| Blake |
| Clark |
| Scott |
| King  |
| Turner|
| Adams |
| James |
| Ford  |
| Miller|
+-----+
12 rows in set (0.00 sec)

mysql> _
```



6Q. Display the name of the department in which 'FORD' works.

Ans-

select dname from dept where

**deptno in(select deptno from EMP where
ename='FORD');**

```
mysql> select dname from dept where  
      -> deptno in(select deptno from EMP where ename='FORD');
```

```
+-----+
```

```
| dname |
```

```
+-----+
```

```
| Research |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

7Q. Display the name of the city in which 'SMITH' works.

Ans-

**select loc from dept where deptno in
(select deptno from EMP where ename='SMITH');**

```
mysql> select loc from dept where deptno in  
-> (select deptno from EMP where ename='SMITH');
```

```
+-----+  
| loc   |
```

```
+-----+  
| Dallas |
```

```
+-----+  
1 row in set (0.00 sec)
```

```
mysql> █
```



8Q. List names of employees who are not managers.

Ans-

**select ename from EMP where empno not in
(select mgr from EMP where mgr is not NULL);**

```
mysql> select ename from EMP where empno not in  
-> (select mgr from EMP where mgr is not NULL);  
+-----+  
| ename |  
+-----+  
| Smith |  
| Allen |  
| Ward  |  
| Martin|  
| Turner|  
| Adams |  
| James |  
| Miller|  
+-----+  
8 rows in set (0.00 sec)  
mysql>
```

9Q. List the names of employees who work in 'Research' department and have joined before 30th July, 2007.

Ans-

**select ename from EMP where hiredate<'2007-7-30'
and deptno in(
select deptno from dept where dname='Research');**

```
mysql> select ename from EMP where hiredate<'2007-7-30'  
-> and deptno in(  
-> select deptno from dept where dname='Research');
```

ename
Smith
Jones
Scott
Adams
Ford

```
5 rows in set (0.00 sec)
```

10Q. 10. Retrieve the second highest salary from EMP table.

Ans-

**select max(sal) from EMP where
sal<(select max(sal) from EMP);**

```
mysql> select max(sal) from EMP where  
-> sal<(select max(sal) from EMP);  
+-----+  
| max(sal) |  
+-----+  
|      3000 |  
+-----+  
1 row in set (0.00 sec)
```

11Q. Find the name of the second highest paid employee(s).

Ans-

```
select ename from EMP where sal in  
(select max(sal) from EMP where  
sal<(select max(sal) from EMP));
```

```
mysql> select ename from EMP where sal in  
-> (select max(sal) from EMP where  
->  
-> sal<(select max(sal) from EMP));  
+-----+  
| ename |  
+-----+  
| Scott |  
| Ford  |  
+-----+  
2 rows in set (0.00 sec)  
  
mysql>
```



12Q. Retrieve the fifth highest salary from EMP table.

Ans-

select min(sal) from (

**select distinct(sal) from EMP order by sal desc limit 5)
as T;**

```
mysql> select min(sal) from (  
    -> select distinct(sal) from EMP order by sal desc limit 5) as T;  
+-----+  
| min(sal) |  
+-----+  
|      2450 |  
+-----+  
1 row in set (0.00 sec)  
  
mysql>
```



13Q. Enlist top five paid employees.

Ans-

select empno,ename from EMP order by sal desc limit 5;

```
mysql> select empno,ename from EMP order by sal desc limit 5;
```

empno	ename
7839	King
7788	Scott
7902	Ford
7566	Jones
7698	Blake

5 rows in set (0.00 sec)

```
mysql> _
```

14.Q List the employees who earn more than every employee in 'DALLAS'.

Ans-

select ename from EMP where sal>all((select sal from EMP where deptno in(select deptno from DEPT where loc='DALLAS')));

```
mysql> select ename from EMP where sal>
-> all((select sal from EMP where deptno in
-> (select deptno from DEPT where loc='DALLAS')));
+-----+
| ename |
+-----+
| King  |
+-----+
1 row in set (0.00 sec)

mysql>
```



15Q. Display the name of the departments that has no employee.

Ans-

**select dname from dept where deptno not in
(select deptno from EMP);**

```
mysql> select dname from dept where deptno not in  
-> (select deptno from EMP);
```

```
+-----+
```

```
| dname |
```

```
+-----+
```

```
| Operations |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql>
```



16Q. List the name of the employees who joined in the same date of 'ADAMS'.

Ans-

**select ename from EMP where hiredate=
(select hiredate from EMP where ename='ADAMS')
and ename!='ADAMS';**

```
mysql> select ename from EMP where hiredate=  
-> (select hiredate from EMP where ename='ADAMS') and ename!='ADAMS';  
Empty set (0.00 sec)  
  
mysql>
```



17Q. Display the name of the departments that get commission.

Ans-

select dname from dept where deptno in

(select deptno from EMP where comm is not NULL);

```
mysql> select dname from dept where deptno in
      -> (select deptno from EMP where comm is not NULL);
+-----+
| dname |
+-----+
| Sales |
+-----+
1 row in set (0.00 sec)
```

18Q. List the employees who earn the lowest salary in their respective department.

Ans-

select ename from EMP e where sal in (select min(sal) from EMP e1 where e.deptno=e1.deptno);

```
mysql> select ename from EMP e where sal in
-> (select min(sal) from EMP e1 where e.deptno=e1.deptno);
+-----+
| ename |
+-----+
| Smith |
| James |
| Miller |
+-----+
3 rows in set (0.00 sec)
```

Part-B

1Q. Display the manager number and the salary of the lowest paid employee for that manager. Exclude anyone whose manager is not known. Exclude any group where the minimum salary is less than \$1,000. Sort the output in descending order of salary.

Ans-

```
select mgr,min(sal) from EMP where mgr is not NULL  
group by mgr having min(sal)>1000 order by min(sal)  
desc;
```

```
mysql> select mgr,min(sal) from EMP where mgr is not NULL  
-> group by mgr having min(sal)>1000 order by min(sal) desc;
```

mgr	min(sal)
7566	3000
7839	2450
7782	1300
7788	1100

```
4 rows in set (0.00 sec)
```

2Q. Write a query to display the department name, location name, number of employees, and the average salary for all employees in that department.

Ans-

```
SELECT DNAME,LOC,COUNT(DISTINCT  
EMPNO),AVG(SAL)
```

```
FROM DEPT D,EMP E
```

```
WHERE D.DEPTNO=E.DEPTNO
```

```
GROUP BY E.DEPTNO;
```

```
mysql> SELECT DNAME,LOC,COUNT(DISTINCT EMPNO),AVG(SAL)  
-> FROM DEPT D,EMP E  
-> WHERE D.DEPTNO=E.DEPTNO  
-> GROUP BY E.DEPTNO;
```

DNAME	LOC	COUNT(DISTINCT EMPNO)	AVG(SAL)
Accounting	New York	3	2916.6667
Research	Dallas	5	2175.0000
Sales	Chicago	6	1566.6667

3 rows in set (0.00 sec)

3Q. Display the employee name and employee number along with their manager's name and manager's number including King who has no manager. Label the columns EMPLOYEE, EMP#, MANAGER, MGR# respectively.

Ans-

```
SELECT E1.ENAME EMPLOYEE,E1.EMPNO AS  
'EMP#',E2.ENAME MANAGER,E2.EMPNO 'MGR#'  
FROM EMP E1  
LEFT JOIN EMP E2  
ON E1.MGR=E2.EMPNO;
```

```
mysql> SELECT E1.ENAME EMPLOYEE,E1.EMPNO AS  
-> 'EMP#',E2.ENAME MANAGER,E2.EMPNO 'MGR#'  
-> FROM EMP E1  
-> LEFT JOIN EMP E2  
-> ON E1.MGR=E2.EMPNO;
```

EMPLOYEE	EMP#	MANAGER	MGR#
Smith	7369	Ford	7902
Allen	7499	Blake	7698
Ward	7521	Blake	7698
Jones	7566	King	7839
Martin	7654	Blake	7698
Blake	7698	King	7839
Clark	7782	King	7839
Scott	7788	Jones	7566
King	7839	NULL	NULL
Turner	7844	Blake	7698
Adams	7876	Scott	7788
James	7900	Blake	7698
Ford	7902	Jones	7566
Miller	7934	Clark	7782

14 rows in set (0.00 sec)

4Q. Write a query that will display the difference between the highest and lowest salaries.

Label the column a DIFFERENCE.

Ans-

```
SELECT MAX(SAL)-MIN(SAL) AS DIFFERENCE  
FROM EMP;
```

```
mysql> SELECT MAX(SAL)-MIN(SAL) AS DIFFERENCE FROM EMP;  
  
+-----+  
| DIFFERENCE |  
+-----+  
|      4200 |  
+-----+
```

5Q. Write a query that will display the difference between the highest and lowest salaries for each department. Label the column a DIFF.

Ans-

```
SELECT DEPTNO,(MAX(SAL)-MIN(SAL)) AS DIFF  
FROM EMP  
GROUP BY DEPTNO;
```

```
mysql> SELECT DEPTNO,(MAX(SAL)-MIN(SAL)) AS DIFF  
-> FROM EMP  
-> GROUP BY DEPTNO;  
+-----+-----+  
| DEPTNO | DIFF |  
+-----+-----+  
|      20 | 2200 |  
|      30 | 1900 |  
|      10 | 3700 |  
+-----+-----+  
3 rows in set (0.00 sec)
```


6Q. Display the employee's names and hire dates along with their manager's names and hire dates for all employees who were hired before their managers. Label the columns EMPLOYEE, EMP HIREDATE, MANAGER and MGR HIREDATE respectively.

Ans-

```
SELECT E1.ENAME EMPLOYEE,E1.HIREDATE 'EMP  
HIREDATE',E2.ENAME MANAGER,E2.HIREDATE 'MGR  
HIREDATE'
```

```
FROM EMP E1,EMP E2
```

```
WHERE E1.MGR=E2.EMPNO AND  
E2.HIREDATE>E1.HIREDATE;
```

```
mysql> SELECT E1.ENAME EMPLOYEE,E1.HIREDATE 'EMP  
'> HIREDATE',E2.ENAME MANAGER,E2.HIREDATE 'MGR HIREDATE'  
-> FROM EMP E1,EMP E2  
-> WHERE E1.MGR=E2.EMPNO AND E2.HIREDATE>E1.HIREDATE;  
+-----+-----+-----+-----+  
| EMPLOYEE | EMP  
HIREDATE | MANAGER | MGR HIREDATE |  
+-----+-----+-----+-----+  
| Smith    | 1980-12-17 | Ford    | 1981-12-04 |  
| Allen    | 1981-02-20 | Blake   | 1981-05-01 |  
| Ward     | 1981-02-22 | Blake   | 1981-05-01 |  
| Jones    | 1981-04-02 | King    | 1981-11-17 |  
| Blake    | 1981-05-01 | King    | 1981-11-17 |  
| Clark    | 1981-06-09 | King    | 1981-11-17 |  
+-----+-----+-----+-----+  
6 rows in set (0.00 sec)  
  
mysql>
```

