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));

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');

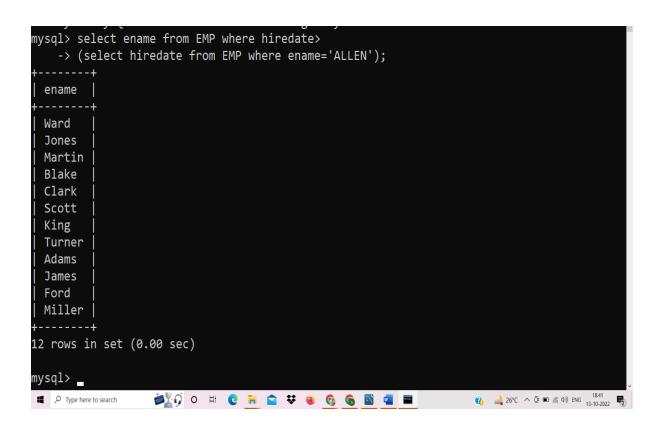
```
mysql> select ename from EMP where
    -> sal>(select sal from EMP where ename='TURNER');
+-----+
| ename |
+-----+
| Allen |
| Jones |
| Blake |
| Clark |
| Scott |
| King |
| Ford |
+-----+
7 rows in set (0.00 sec)
```

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

Ans-

select ename from EMP where hiredate>

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



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');

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)
```

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);</pre>
```

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

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>

■ P Type here to search
```

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;
```

13Q. Enlist top five paid employees.

Ans-

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

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>

P Type here to search

P Type here to search
```

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

Ans-

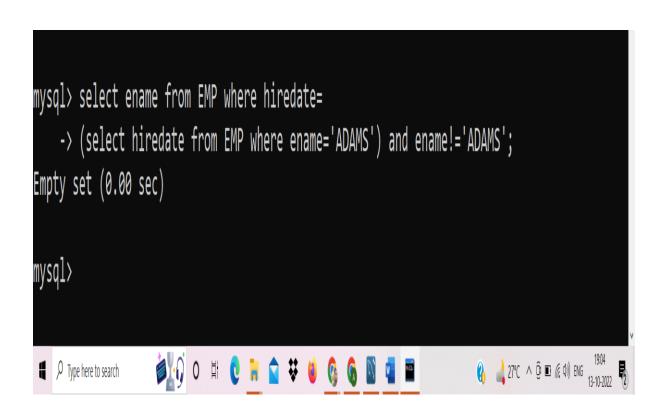
select dname from dept where deptno not in (select deptno from EMP);

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';



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;

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

```
-> '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
           7499
 Allen
                  Blake
                           7698
           7521
                 Blake
 Ward
                           7698
 Jones
           7566
                 King
                           7839
 Martin
           7654
                  Blake
                           7698
 Blake
           7698
                  King
                           7839
 Clark
                           7839
           7782
                  King
 Scott
           7788
                  Jones
                           7566
                  NULL
           7839
 King
                           NULL
           7844
                  Blake
                           7698
 Turner
           7876
 Adams
                  Scott
                           7788
 James
           7900
                  Blake
                            7698
 Ford
           7902
                  Jones
                           7566
                Clark
 Miller
           7934
                           7782
14 rows in set (0.00 sec)
```

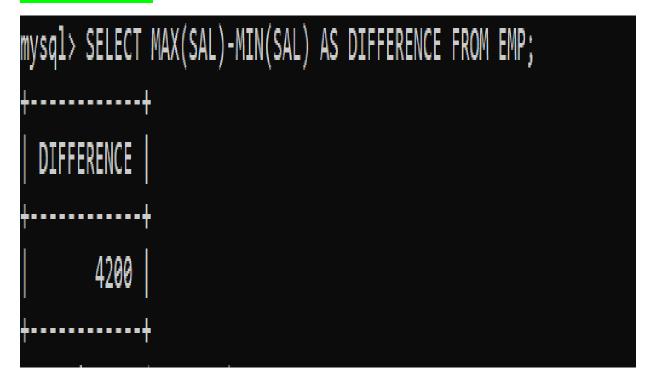
4Q. Write a query that will display the difference between the highest and lowest salaries.

Label the column a DIFFERENCE.

Ans-

SELECT MAX(SAL)-MIN(SAL) AS DIFFERENCE

FROM EMP;



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;

