Assignment-2

Name-Anubhav Anand

Enrollment Number-2020CSB102

G-Suite Id-2020CSB102.anubhav@students.iiests.ac.in

Subject-Database Management System(DBMS)

Creation of Tables-

- ## Creation of dept table:

Query:

mysql>create table DEPT

    -> (DEPTNO number(2),

    -> DNAME varchar(20),

    -> LOC varchar(20));

Query:

->insert into DEPT values(10,'Accounting','New York');

->insert into DEPT values(20,'Research','Dallas');

->insert into DEPT values(30,'Sales','Chicago');

-> insert into DEPT values(40,'Operations','Boston');

Dept table after insertion of values:

```
+----------+------------+----------+
| DEPTNO   | DNAME      | LOC      |
+----------+------------+----------+
|       10 | Accounting | New York |
|       20 | Research   | Dallas   |
|       30 | Sales      | Chicago  |
|       40 | Operations | Boston   |
+----------+------------+----------+
```

- **Creation of EMP Table:**

Query:

mysql> create table EMP(

   -> EMPNO integer(4) PRIMARY KEY,

   -> ENAME varchar(20),

   -> JOB varchar(20),

   -> MGR integer(4) references EMP(EMPNO) on delete cascade,

   -> HIREDATE date,

   -> SAL integer(5) NOT NULL,

   -> COMM integer(5),

   -> DEPTNO integer(2) references DEPT(DEPTNO) on delete cascade);

Query for inserting values in emp-table->

```
mysql> insert into EMP values(
    -> 7839,
    -> 'King',
    -> 'President',
    -> NULL,
    -> '1981-11-17',
    -> 5000,
    -> NULL,
    -> 10);
Query OK, 1 row affected (0.01 sec)

mysql> select * from EMP;
+-------+-------+-----------+------+------------+------+------+--------+
| EMPNO | ENAME | JOB       | MGR  | HIREDATE   | SAL  | COMM | DEPTNO |
+-------+-------+-----------+------+------------+------+------+--------+
|  7839 | King  | President | NULL | 1981-11-17 | 5000 | NULL |     10 |
+-------+-------+-----------+------+------------+------+------+--------+
1 row in set (0.00 sec)
```

EMP Table after insertion of values:

```
MySQL 8.0 Command Line Client
mysql> select * from emp;
+-------+--------+-----------+------+------------+------+------+--------+
| EMPNO | ENAME  | JOB       | MGR  | HIREDATE   | SAL  | COMM | DEPTNO |
+-------+--------+-----------+------+------------+------+------+--------+
|  7369 | Smith  | Clerk     | 7902 | 1980-12-17 |  800 | NULL |     20 |
|  7499 | Allen  | Salesman  | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | Ward   | Salesman  | 7698 | 1981-02-22 | 1250 |  500 |     30 |
|  7566 | Jones  | Manager   | 7839 | 1981-04-02 | 2975 | NULL |     20 |
|  7654 | Martin | Salesman  | 7698 | 1981-09-28 | 1250 | 1400 |     30 |
|  7698 | Blake  | Manager   | 7839 | 1981-05-01 | 2850 | NULL |     30 |
|  7782 | Clark  | Manager   | 7839 | 1981-06-09 | 2450 | NULL |     10 |
|  7788 | Scott  | Analyst   | 7566 | 1982-12-09 | 3000 | NULL |     20 |
|  7839 | King   | President | NULL | 1981-11-17 | 5000 | NULL |     10 |
|  7844 | Turner | Salesman  | 7698 | 1981-09-08 | 1500 |    0 |     30 |
|  7876 | Adams  | Clerk     | 7788 | 1983-01-12 | 1100 | NULL |     20 |
|  7900 | James  | Clerk     | 7698 | 1981-12-03 |  950 | NULL |     30 |
|  7902 | Ford   | Analyst   | 7566 | 1981-12-04 | 3000 | NULL |     20 |
|  7934 | Miller | Clerk     | 7782 | 1982-01-23 | 1300 | NULL |     10 |
+-------+--------+-----------+------+------------+------+------+--------+
14 rows in set (0.00 sec)

mysql> select count(*) from emp;
+----------+
| count(*) |
+----------+
|       14 |
+----------+
1 row in set (0.01 sec)
```

- **Perform the following queries on the EMP and DEPT Table:**

a)List the Names of Analyst and Salesman

Ans-

```
mysql> select ename from emp
    -> where job in('Analyst','Salesman');
+--------+
| ename  |
+--------+
| Allen  |
| Ward   |
| Martin |
| Scott  |
| Turner |
| Ford   |
+--------+
6 rows in set (0.00 sec)
```

b).List details of employees who have joined before 30 Sep 81.

Ans-

```
mysql> select * from emp
    -> where Hiredate<'1981-11-30';
+-------+--------+-----------+------+------------+------+------+--------+
| EMPNO | ENAME  | JOB       | MGR  | HIREDATE   | SAL  | COMM | DEPTNO |
+-------+--------+-----------+------+------------+------+------+--------+
|  7369 | Smith  | Clerk     | 7902 | 1980-12-17 |  800 | NULL |     20 |
|  7499 | Allen  | Salesman  | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | Ward   | Salesman  | 7698 | 1981-02-22 | 1250 |  500 |     30 |
|  7566 | Jones  | Manager   | 7839 | 1981-04-02 | 2975 | NULL |     20 |
|  7654 | Martin | Salesman  | 7698 | 1981-09-28 | 1250 | 1400 |     30 |
|  7698 | Blake  | Manager   | 7839 | 1981-05-01 | 2850 | NULL |     30 |
|  7782 | Clark  | Manager   | 7839 | 1981-06-09 | 2450 | NULL |     10 |
|  7839 | King   | President | NULL | 1981-11-17 | 5000 | NULL |     10 |
|  7844 | Turner | Salesman  | 7698 | 1981-09-08 | 1500 |    0 |     30 |
+-------+--------+-----------+------+------------+------+------+--------+
9 rows in set (0.00 sec)
```

c>List Names of Employees who are not managers.

Ans-

```
mysql> select ename from emp
    -> where job NOT in ('Manager');
+--------+
| ename  |
+--------+
| Smith  |
| Allen  |
| Ward   |
| Martin |
| Scott  |
| King   |
| Turner |
| Adams  |
| James  |
| Ford   |
| Miller |
+--------+
11 rows in set (0.00 sec)
```

d>.List the names of employees whose employee numbers are 7369,7521,7839,7934,7788.

Ans-

```
mysql> select ename from emp
    -> where EMPNO in (7369,7521,7839,7934,7788);
+--------+
| ename  |
+--------+
| Smith  |
| Ward   |
| Scott  |
| King   |
| Miller |
+--------+
5 rows in set (0.00 sec)
```

e>List employees not belonging to department 30,40 or 10.

Ans-

```
mysql> select * from emp
    -> where deptno NOT in (30,40,10);
+-------+-------+---------+------+------------+------+------+--------+
| EMPNO | ENAME | JOB     | MGR  | HIREDATE   | SAL  | COMM | DEPTNO |
+-------+-------+---------+------+------------+------+------+--------+
|  7369 | Smith | Clerk   | 7902 | 1980-12-17 |  800 | NULL |     20 |
|  7566 | Jones | Manager | 7839 | 1981-04-02 | 2975 | NULL |     20 |
|  7788 | Scott | Analyst | 7566 | 1982-12-09 | 3000 | NULL |     20 |
|  7876 | Adams | Clerk   | 7788 | 1983-01-12 | 1100 | NULL |     20 |
|  7902 | Ford  | Analyst | 7566 | 1981-12-04 | 3000 | NULL |     20 |
+-------+-------+---------+------+------------+------+------+--------+
5 rows in set (0.00 sec)
```

f>.List employees name for those who have joined between 30 june and 31 december '81.

Ans-

```
mysql> select ename from emp
    -> where hiredate between '1981-06-30' and '1981-12-31';
+--------+
| ename  |
+--------+
| Martin |
| King   |
| Turner |
| James  |
| Ford   |
+--------+
5 rows in set (0.00 sec)
```

g>.List the different designations in the company.

Ans-

```
mysql> select distinct job from emp;
+-----------+
| job       |
+-----------+
| Clerk     |
| Salesman  |
| Manager   |
| Analyst   |
| President |
+-----------+
5 rows in set (0.00 sec)
```

h>.List the names of employees who are not eligible for commission.

Ans-

```
mysql> select ename from emp
    -> where COMM is NULL;
+--------+
| ename  |
+--------+
| Smith  |
| Jones  |
| Blake  |
| Clark  |
| Scott  |
| King   |
| Adams  |
| James  |
| Ford   |
| Miller |
+--------+
10 rows in set (0.00 sec)
```

i>.List the name and designation of employee who does not report to anybody.

Ans-

```
mysql> select ename,job from emp
    -> where MGR is NULL;
+-------+-----------+
| ename | job       |
+-------+-----------+
| King  | President |
+-------+-----------+
1 row in set (0.00 sec)
```

j>.List the employees not assigned to any department.

Ans-

```
mysql> select ename from emp
    -> where DEPTNO is NULL;
Empty set (0.00 sec)
```

k>.List the employees eligible for commission.

Ans-

```
mysql> select * from emp
    -> where COMM is NOT NULL;
+-------+--------+----------+------+------------+------+------+--------+
| EMPNO | ENAME  | JOB      | MGR  | HIREDATE   | SAL  | COMM | DEPTNO |
+-------+--------+----------+------+------------+------+------+--------+
|  7499 | Allen  | Salesman | 7698 | 1981-02-20 | 1600 |  300 |     30 |
|  7521 | Ward   | Salesman | 7698 | 1981-02-22 | 1250 |  500 |     30 |
|  7654 | Martin | Salesman | 7698 | 1981-09-28 | 1250 | 1400 |     30 |
|  7844 | Turner | Salesman | 7698 | 1981-09-08 | 1500 |    0 |     30 |
+-------+--------+----------+------+------------+------+------+--------+
4 rows in set (0.00 sec)
```

l>.List employees whose names are either start or end with "S".

Ans-

```
mysql> select ename from emp
    -> where ename like 'S%' or'%S';
+-------+
| ename |
+-------+
| Smith |
| Scott |
+-------+
```

m>.List names of employees whose names have "I" as second character.

Ans-

```
mysql> select ename from emp
    ->  where ename like '_I%';
+--------+
| ename  |
+--------+
| King   |
| Miller |
+--------+
2 rows in set (0.00 sec)
```

n>.List the number of employees working with company.

Ans-

```
mysql> select count(*) number_of_employees
    -> from emp;
+---------------------+
| number_of_employees |
+---------------------+
|                  14 |
+---------------------+
1 row in set (0.00 sec)
```

o>.List the number of designations available in the EMP Table.

Ans-

```
mysql> select count(distinct job) job_no from emp;

+--------+
| job_no |
+--------+
|      5 |
+--------+
1 row in set (0.00 sec)
```

p>.List the total Salaries Paid to the Employees.

Ans-

```
mysql> select sum(sal) from emp;

+----------+
| sum(sal) |
+----------+
|    29025 |
+----------+
1 row in set (0.00 sec)
```

q>.List The maximum,minimum And average Salary in the Company.

Ans-

```
mysql> select max(sal),min(sal),avg(sal)
    -> from emp;
+----------+----------+-----------+
| max(sal) | min(sal) | avg(sal)  |
+----------+----------+-----------+
|     5000 |      800 | 2073.2143 |
+----------+----------+-----------+
1 row in set (0.00 sec)
```

r>.List the maximum salary paid to salesman.

Ans-

```
mysql> select max(sal)
    -> from emp
    -> where job='Salesman';
+----------+
| max(sal) |
+----------+
|     1600 |
+----------+
1 row in set (0.00 sec)
```