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Enrl : 2020CSB092

ASSIGNMENT No 2

Creating Table dept

```
mysql> CREATE TABLE dept(
    -> deptNo int(10) PRIMARY KEY,
    -> deptName varchar(20),
    -> loc varchar(20));
Query OK, 0 rows affected (0.01 sec)

mysql> DESC dept;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| deptNo   | int(10)     | NO   | PRI | NULL    |       |
| deptName | varchar(20) | YES  |     | NULL    |       |
| loc      | varchar(20) | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)
```

Inserting data in dept table

```
mysql> INSERT INTO dept VALUES(10,"Accounting","New York");
Query OK, 1 row affected (0.00 sec)
```

dept table after inserting values

```
mysql> SELECT * FROM dept;
+--------+------------+----------+
| deptNo | deptName   | loc      |
+--------+------------+----------+
|     10 | Accounting | New York |
|     20 | Research   | Dallas   |
|     30 | Sales      | Chicago  |
|     40 | Operations | Boston   |
+--------+------------+----------+
4 rows in set (0.00 sec)
```

Creating table emp

```
mysql> CREATE TABLE emp(
    -> EMPNO int PRIMARY KEY,
    -> ENAME varchar(255),
    -> JOB char(255),
    -> MGR int REFERENCES emp(EMPNO),
    -> HIREDATE date,
    -> SAL int,
    -> COMM int,
    -> DEPTNO int REFERENCES dept(deptNo));
Query OK, 0 rows affected (0.00 sec)

mysql> DESC emp;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| EMPNO    | int(11)      | NO   | PRI | NULL    |       |
| ENAME    | varchar(255) | YES  |     | NULL    |       |
| JOB      | char(255)    | YES  |     | NULL    |       |
| MGR      | int(11)      | YES  |     | NULL    |       |
| HIREDATE | date         | YES  |     | NULL    |       |
| SAL      | int(11)      | YES  |     | NULL    |       |
| COMM     | int(11)      | YES  |     | NULL    |       |
| DEPTNO   | int(11)      | YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

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 (0.00 sec)
```

emp table after insertion of values:

```
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     | 7582 | 1982-01-23 | 1300 | NULL |     10 |
+-------+--------+-----------+------+------------+------+------+--------+
14 rows in set (0.00 sec)
```

a)

```
mysql> SELECT ENAME FROM emp WHERE JOB="Analyst" OR JOB="Salesman";
+--------+
| ENAME  |
+--------+
| Allen  |
| Ward   |
| Martin |
| Scott  |
| Turner |
| Ford   |
+--------+
6 rows in set (0.00 sec)
```

b)

```
mysql> SELECT * FROM emp WHERE HIREDATE<"1981-09-30";
+-------+--------+----------+------+------------+------+------+--------+
| 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 |
|  7844 | Turner | Salesman | 7698 | 1981-09-08 | 1500 |    0 |     30 |
+-------+--------+----------+------+------------+------+------+--------+
8 rows in set (0.00 sec)
```

c)

```
mysql> SELECT ENAME FROM emp WHERE JOB!="Manager";
+--------+
| ENAME  |
+--------+
| Smith  |
| Allen  |
| Ward   |
| Martin |
| Scott  |
| King   |
| Turner |
| Adams  |
| James  |
| Ford   |
| Miller |
+--------+
11 rows in set (0.00 sec)
```

d)

```
mysql> SELECT ENAME FROM emp WHERE EMPNO = 7369 OR EMPNO = 7521 OR EMPNO = 7839 OR EMPNO = 7934 OR EMPNO = 7788;
+--------+
| ENAME  |
+--------+
| Smith  |
| Ward   |
| Scott  |
| King   |
| Miller |
+--------+
5 rows in set (0.00 sec)
```

e)

```
mysql> SELECT * FROM emp WHERE DEPTNO !=30 AND DEPTNO !=40 AND DEPTNO !=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)

```
mysql> SELECT ENAME FROM emp WHERE HIREDATE >"1981-06-30" AND HIREDATE < "1981-12-31";
+--------+
| ENAME  |
+--------+
| Martin |
| King   |
| Turner |
| James  |
| Ford   |
+--------+
5 rows in set (0.00 sec)
```

g)

```
mysql> SELECT DISTINCT(JOB) FROM emp;
+-----------+
| JOB       |
+-----------+
| Clerk     |
| Salesman  |
| Manager   |
| Analyst   |
| President |
+-----------+
5 rows in set (0.00 sec)
```

h)
```
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)
```
mysql> SELECT ENAME,JOB FROM emp WHERE MGR IS NULL;
+-------+-----------+
| ENAME | JOB       |
+-------+-----------+
| King  | President |
+-------+-----------+
1 row in set (0.00 sec)
```

j)
```
mysql> SELECT * FROM emp WHERE DEPTNO IS NULL;
Empty set (0.00 sec)
```

k)
```
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)

```
mysql> SELECT * FROM emp WHERE ENAME LIKE "S%" OR ENAME LIKE "%s";
+-------+-------+---------+------+------------+------+------+--------+
| 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 |
|  7900 | James | Clerk   | 7698 | 1981-12-03 |  950 | NULL |     30 |
+-------+-------+---------+------+------------+------+------+--------+
5 rows in set (0.00 sec)
```

m)

```
mysql> SELECT * FROM emp WHERE ENAME LIKE "_i%";
+-------+--------+-----------+------+------------+------+------+--------+
| EMPNO | ENAME  | JOB       | MGR  | HIREDATE   | SAL  | COMM | DEPTNO |
+-------+--------+-----------+------+------------+------+------+--------+
|  7839 | King   | President | NULL | 1981-11-17 | 5000 | NULL |     10 |
|  7934 | Miller | Clerk     | 7582 | 1982-01-23 | 1300 | NULL |     10 |
+-------+--------+-----------+------+------------+------+------+--------+
2 rows in set (0.00 sec)
```

n)

```
mysql> SELECT COUNT(*) FROM emp;
+----------+
| COUNT(*) |
+----------+
|       14 |
+----------+
1 row in set (0.03 sec)
```

o)

```
mysql> SELECT COUNT(DISTINCT JOB) FROM emp;
+---------------------+
| COUNT(DISTINCT JOB) |
+---------------------+
|                   5 |
+---------------------+
1 row in set (0.00 sec)
```

p)

```
mysql> SELECT SUM(SAL) FROM emp;
+----------+
| SUM(SAL) |
+----------+
|    29025 |
+----------+
1 row in set (0.00 sec)
```

q)

```
mysql> SELECT MAX(SAL) AS MAXSALARY FROM emp;
+-----------+
| MAXSALARY |
+-----------+
|      5000 |
+-----------+
1 row in set (0.00 sec)

mysql> SELECT MIN(SAL) AS MINSALARY FROM emp;
+-----------+
| MINSALARY |
+-----------+
|       800 |
+-----------+
1 row in set (0.00 sec)

mysql> SELECT AVG(SAL) AS AVERAGESALARY FROM emp;
+---------------+
| AVERAGESALARY |
+---------------+
|     2073.2143 |
+---------------+
1 row in set (0.00 sec)
```

r)

```
mysql> SELECT MAX(SAL) FROM emp WHERE JOB="Salesman";
+----------+
| MAX(SAL) |
+----------+
|     1600 |
+----------+
1 row in set (0.00 sec)
```