SQL Exercise 1

1.Create the table SEMP with the following structure:-

```
mysql> select * from semp;
+--------+---------+-------+--------+----------+
| EMPNO  | EMPNAME | BASIC | DEPTNO | DEPTHEAD |
+--------+---------+-------+--------+----------+
| 0001   | SUNIL   | 6000  | 10     | NULL     |
| 0002   | HIREN   | 8000  | 20     | NULL     |
| 0003   | ALI     | 4000  | 10     | 0001     |
| 0004   | GEORGE  | 6000  | 20     | 0002     |
+--------+---------+-------+--------+----------+
4 rows in set (0.00 sec)
```

2. Create the table SDEPT with the following structure:-

3. Insert into the SDEPT table the following values:- 10, Development 20, Training

```
mysql> select * from semp;
+--------+---------+-------+--------+----------+
| EMPNO  | EMPNAME | BASIC | DEPTNO | DEPTHEAD |
+--------+---------+-------+--------+----------+
| 0001   | SUNIL   | 6000  | 10     | NULL     |
| 0002   | HIREN   | 8000  | 20     | NULL     |
| 0003   | ALI     | 4000  | 10     | 0001     |
| 0004   | GEORGE  | 6000  | 20     | 0002     |
+--------+---------+-------+--------+----------+
4 rows in set (0.00 sec)

mysql> select * from sdept;
+--------+-------------+
| DEPTNO | DEPTNAME    |
+--------+-------------+
| 10     | Development |
| 20     | Training    |
+--------+-------------+
2 rows in set (0.01 sec)
```

4. Insert into the SEMP table the following values:- 0001, SUNIL, 6000, 10 0002, HIREN, 8000, 20 0003, ALI, 4000, 10, 0001 0004, GEORGE, 6000, 0002

```
mysql> select * from semp;
+-------+---------+-------+--------+----------+
| EMPNO | EMPNAME | BASIC | DEPTNO | DEPTHEAD |
+-------+---------+-------+--------+----------+
| 0001  | SUNIL   | 6000  | 10     | NULL     |
| 0002  | HIREN   | 8000  | 20     | NULL     |
| 0003  | ALI     | 4000  | 10     | 0001     |
| 0004  | GEORGE  | 6000  | 20     | 0002     |
+-------+---------+-------+--------+----------+
4 rows in set (0.00 sec)
```

Create S, P, J, SPJ tables as specified below and insert a few rows in each table:-
SUPPLIER (S#, Sname, Status, City) - S PARTS (P#, Pname, Color, Weight, City) - P
PROJECTS (J#, Jname, City) - J SUPPLIER-PARTS-PROJECT (S#, P#, J#, Qty) - SPJ Sample
data for S# column:- 'S1', 'S2', 'S3', etc. Sample data for P# column:- 'P1', 'P2', 'P3', etc.
Sample data for J# column:- 'J1', 'J2', 'J3', etc. Sample data for Status column:- 10, 20,
30, etc. Write the SELECT queries to do the following:-

```
MySQL 8.0 Command Line Cli    X    +    ∨
ysql> select * from s;
----+---------+--------+--------+
 S# | Sname   | Status | City   |
----+---------+--------+--------+
 S1 | Tata    |     10 | Mumbai |
 S2 | Reliance|     20 | Delhi  |
 S3 | Infosys |     30 | Pune   |
----+---------+--------+--------+
 rows in set (0.01 sec)

ysql> select * from sj;
RROR 1146 (42S02): Table 'class.sj' doesn't exist
ysql> select * from j;
----+---------------------+-----------+
 J# | Jname               | City      |
----+---------------------+-----------+
 J1 | Highway Project     | Chennai   |
 J2 | Metro Build         | Bangalore |
 J3 | Airport Construction| Hyderabad |
----+---------------------+-----------+
 rows in set (0.02 sec)

ysql> select * from p;
----+-------+-------+--------+--------+
 P# | Pname | Color | Weight | City   |
----+-------+-------+--------+--------+
 P1 | Bolt  | Red   |    1.2 | Mumbai |
 P2 | Nut   | Blue  |    0.5 | Delhi  |
 P3 | Screw | Black |    0.8 | Pune   |
----+-------+-------+--------+--------+
 rows in set (0.00 sec)

ysql> select * from spj;
----+----+----+------+
 S# | P# | J# | Qty  |
----+----+----+------+
 S1 | P1 | J1 |  300 |
 S1 | P2 | J3 |  180 |
 S2 | P2 | J2 |  200 |
 S3 | P3 | J3 |  150 |
----+----+----+------+
```

5. Display all the data from the S table.

```
mysql> select * from s;
+-----+-----------+--------+--------+
| S#  | Sname     | Status | City   |
+-----+-----------+--------+--------+
| S1  | Tata      |     10 | Mumbai |
| S2  | Reliance  |     20 | Delhi  |
| S3  | Infosys   |     30 | Pune   |
+-----+-----------+--------+--------+
3 rows in set (0.01 sec)
```

6. Display only the S# and SNAME fields from the S table.

```
mysql> SELECT `s#`, sname FROM s;
+-----+-----------+
| s#  | sname     |
+-----+-----------+
| S1  | Tata      |
| S2  | Reliance  |
| S3  | Infosys   |
+-----+-----------+
3 rows in set (0.00 sec)
```

7. Display the PNAME and COLOR from the P table for the CITY="Mumbai".

```
mysql> select pname,color from p where city="Mumbai";
+-------+-------+
| pname | color |
+-------+-------+
| Bolt  | Red   |
+-------+-------+
1 row in set (0.02 sec)
```

8. Display all the Suppliers from Delhi.

```
mysql> select * from s where city in("Paris","Athens");
+----+---------+--------+--------+
| S# | Sname   | Status | City   |
+----+---------+--------+--------+
| S5 | Total   |     18 | Paris  |
| S7 | Atos    |     20 | Paris  |
| S8 | Olympus |     22 | Athens |
+----+---------+--------+--------+
3 rows in set (0.01 sec)
```

```
mysql> select * from s where city="Delhi";
+----+----------+--------+-------+
| S# | Sname    | Status | City  |
+----+----------+--------+-------+
| S2 | Reliance |     20 | Delhi |
+----+----------+--------+-------+
1 row in set (0.01 sec)
```

9. Display all the Suppliers from Paris or Athens.

```
mysql> select * from s where city in("Paris","Athens");
+----+---------+--------+--------+
| S# | Sname   | Status | City   |
+----+---------+--------+--------+
| S5 | Total   |     18 | Paris  |
| S7 | Atos    |     20 | Paris  |
| S8 | Olympus |     22 | Athens |
+----+---------+--------+--------+
3 rows in set (0.01 sec)
```

10. Display all the Projects in Athens.

```
mysql> select * from j where city="Athens";
+----+------------------+--------+
| J# | Jname            | City   |
+----+------------------+--------+
| J6 | Park Development | Athens |
+----+------------------+--------+
1 row in set (0.00 sec)
```

11. Display all the Partnames with the weight between 12 and 14 (inclusive of both).

```
mysql> select * from p where weight between 12 and 14;
+----+-------+--------+--------+--------+
| P# | Pname | Color  | Weight | City   |
+----+-------+--------+--------+--------+
| P5 | Rod   | Yellow |     12 | Paris  |
| P6 | Pin   | Orange |   13.5 | Athens |
+----+-------+--------+--------+--------+
2 rows in set (0.01 sec)
```

12. Display all the Suppliers with a Status greater than or equal to 20.

```
mysql> select * from s where status >= 20
    -> ;
+----+----------+--------+--------+
| S# | Sname    | Status | City   |
+----+----------+--------+--------+
| S2 | Reliance |     20 | Delhi  |
| S3 | Infosys  |     30 | Pune   |
| S6 | Shell    |     25 | London |
| S7 | Atos     |     20 | Paris  |
| S8 | Olympus  |     22 | Athens |
+----+----------+--------+--------+
5 rows in set (0.00 sec)
```

13. Display all the Suppliers except the Suppliers from London.

```
mysql> select * from s where city != "London";
+----+----------+--------+--------+
| S# | Sname    | Status | City   |
+----+----------+--------+--------+
| S1 | Tata     |     10 | Mumbai |
| S2 | Reliance |     20 | Delhi  |
| S3 | Infosys  |     30 | Pune   |
| S5 | Total    |     18 | Paris  |
| S7 | Atos     |     20 | Paris  |
| S8 | Olympus  |     22 | Athens |
+----+----------+--------+--------+
6 rows in set (0.01 sec)
```

14. Display only the Cities from where the Suppliers come from.

```
mysql> SELECT DISTINCT city FROM s;
+--------+
| city   |
+--------+
| Mumbai |
| Delhi  |
| Pune   |
| London |
| Paris  |
| Athens |
+--------+
6 rows in set (0.00 sec)
```

15. Assuming that the Part Weight is in GRAMS, display the same in MILLIGRAMS and KILOGRAMS.

```
mysql>  SELECT pname,
    -> Weight AS `Weight gm`,
    ->        Weight * 100 AS `Weight mg`,
    ->        Weight / 1000 AS `Weight kg`
    -> FROM p;
+--------+-----------+-------------------+------------------------+
| pname  | Weight gm | Weight mg         | Weight kg              |
+--------+-----------+-------------------+------------------------+
| Bolt   |       1.2 | 120.00000476837158 | 0.001200000476837158  |
| Nut    |       0.5 |                 50 |                0.0005  |
| Screw  |       0.8 |  80.0000011920929 | 0.0008000000119209289  |
| Wheel  |      10.5 |              1050 |                0.0105  |
| Rod    |        12 |              1200 |                0.012   |
| Pin    |      13.5 |              1350 |                0.0135  |
| Gear   |        15 |              1500 |                0.015   |
| Cap    |        16 |              1600 |                0.016   |
+--------+-----------+-------------------+------------------------+
8 rows in set (0.00 sec)
```