SQL Exercise 1

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

EMPNO	CHAR(4)
EMPNAME	CHAR(20)
BASIC	FLOAT
DEPTNO	CHAR(2)
DEPTHEAD	CHAR(4)

```
mysql> create table SEMP (Empno char(4), Empname char(20), Basic float,
          Deptno char(2), Depthead char(4));
Query OK, 0 rows affected (0.06 sec)
```

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

DEPTNO	CHAR(2)
DEPTNAME	CHAR(15)

```
mysql> create table SDEPT (Deptno char(2), Deptname char(15));
Query OK, 0 rows affected (0.02 sec)
```

3. **Insert into the SDEPT table the following values:-**

10, Development
20, Training

```
mysql> insert into SDEPT(Deptno, Deptname) values
   -> (10,'Development'),
   -> (20, 'Training');
Query OK, 2 rows affected (0.00 sec)
Records: 2  Duplicates: 0  Warnings: 0
```

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> insert into SEMP (Empno, Empname, Basic, Deptno, Depthead) values
    -> (0001, 'SUNIL', 6000, 10, null),
    -> (0002, 'HIREN', 8000, 20, null),
    -> (0003, 'ALI', 4000, 10, 0001),
    -> (0004, 'GEORGE', 6000, 0002, null);
Query OK, 4 rows affected (0.01 sec)
Records: 4  Duplicates: 0  Warnings: 0
```

Create S, P, J, SPJ tables as specified below and insert a few rows in each table:-

Supplier Table –

```
mysql> create table Supplier(`S#` varchar(10), Sname varchar(10), Status int, City
varchar(20) );
Query OK, 0 rows affected (0.03 sec)

mysql> insert into Supplier(`S#`, Sname,Status, City) values
    -> ("S1", "Supplier1",10 , "Mumbai"),
    -> ("S2", "Supplier2", 20,  "Thane"),
    -> ("S3", "Supplier3", 30,  "Panvel");
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select * from supplier;
+------+-----------+--------+--------+
| S#   | Sname     | Status | City   |
+------+-----------+--------+--------+
| S1   | Supplier1 |     10 | Mumbai |
| S2   | Supplier2 |     20 | Thane  |
| S3   | Supplier3 |     30 | Panvel |
+------+-----------+--------+--------+
```

Parts Table –

```
mysql> create table Parts(`P#` varchar(10), Pname varchar(10), Color varchar(10),
Weight int, City varchar(20) );
Query OK, 0 rows affected (0.03 sec)

mysql> insert into Supplier(`S#`, Sname,Status, City) values
    -> ("P1", "Part1", “Red”, 13, "London"),
    -> ("P2", "Part2", “Green”, 12, "Paris"),
    -> ("P3", "Part3", “Blue”, 11, "UK");
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select * from parts;
+------+-------+-------+--------+--------+
| P#   | Pname | Color | Weight | City   |
+------+-------+-------+--------+--------+
| P1   | Part1 | Red   |     13 | London |
| P2   | Part2 | Green |     12 | Paris  |
| P3   | Part3 | Blue  |     11 | UK     |
+------+-------+-------+--------+--------+
3 rows in set (0.00 sec)
```

Projects Table –

```
mysql> create table Projects(`J#` varchar(10), Jname varchar(10), City varchar(20) );
Query OK, 0 rows affected (0.03 sec)
mysql> insert into Projects(`J#`, Jname, City) values
    -> ("J1", "Project1", "Athens"),
    -> ("J2", "Project2", "Athens"),
    -> ("J3", "Project3", "London");
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
mysql> select * from projects;
+------+----------+--------+
| J#   | Jname    | City   |
+------+----------+--------+
| J1   | Project1 | Athens |
| J2   | Project2 | Athens |
| J3   | Project3 | London |
+------+----------+--------+
```

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

SPJ Table –

```
mysql> create table SPJ(`S#` varchar(20), `P#`
varchar(20), `J#` varchar(20), Qty int);
Query OK, 0 rows affected (0.03 sec)

mysql> insert into SPJ(`S#`, `P#`, `J#`, Qty)
values
    -> ("S1", "P1", "J1", 200)
    -> ("S2", "P2", "J2", 200),
    -> ("S3", "P3", "J3", 300);
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> select * from SPJ;
+------+------+------+------+
| S#   | P#   | J#   | Qty  |
+------+------+------+------+
| S1   | P1   | J1   |  200 |
| S2   | P2   | J2   |  200 |
| S3   | P3   | J3   |  300 |
+------+------+------+------+
3 rows in set (0.00 sec)
```

Write the SELECT queries to do the following:-

5. **Display all the data from the S table.**

```
mysql> select * from supplier;
+------+-----------+--------+--------+
| S#   | Sname     | Status | City   |
+------+-----------+--------+--------+
| S1   | Supplier1 |     10 | Mumbai |
| S2   | Supplier2 |     20 | Thane  |
| S3   | Supplier3 |     30 | Panvel |
+------+-----------+--------+--------+
3 rows in set (0.00 sec)
```

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

```
mysql> select `S#`, Sname from Supplier;
+------+-----------+
| S#   | Sname     |
+------+-----------+
| S1   | Supplier1 |
| S2   | Supplier2 |
| S3   | Supplier3 |
+------+-----------+
3 rows in set (0.00 sec)
```

7. **Display the PNAME and COLOR from the P table for the CITY=”London”.**

```
mysql> select Pname, Color from Parts
    -> where City = "London";
+-------+-------+
| Pname | Color |
+-------+-------+
| Part1 | Red   |
+-------+-------+
1 row in set (0.00 sec)
```

8. **Display all the Suppliers from London.**

```
mysql> select * from Supplier
    -> where city = "Mumbai";
+------+-----------+--------+--------+
| S#   | Sname     | Status | City   |
+------+-----------+--------+--------+
| S1   | Supplier1 |     10 | Mumbai |
+------+-----------+--------+--------+
1 row in set (0.00 sec)
```

9. Display all the Suppliers from Mumbai or Thane.

```
mysql> select * from Supplier
    -> where city in ("Mumbai", "Thane");
+------+-----------+--------+--------+
| S#   | Sname     | Status | City   |
+------+-----------+--------+--------+
| S1   | Supplier1 |     10 | Mumbai |
| S2   | Supplier2 |     20 | Thane  |
+------+-----------+--------+--------+
2 rows in set (0.00 sec)

mysql>
```

10. Display all the Projects in Athens.

```
mysql> select * from projects
    -> where city = "Athens";
+------+----------+--------+
| J#   | Jname    | City   |
+------+----------+--------+
| J1   | Project1 | Athens |
| J2   | Project2 | Athens |
+------+----------+--------+
2 rows in set (0.00 sec)
```

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

```
mysql> select Pname,weight from parts
    -> where weight between 12 and 14;
+-------+--------+
| Pname | weight |
+-------+--------+
| Part1 |     13 |
| Part2 |     12 |
+-------+--------+
2 rows in set (0.00 sec)
```

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

```
mysql> select * from supplier
    -> where status >= 20;
+------+-----------+--------+--------+
| S#   | Sname     | Status | City   |
+------+-----------+--------+--------+
| S2   | Supplier2 |     20 | Thane  |
| S3   | Supplier3 |     30 | Panvel |
+------+-----------+--------+--------+
2 rows in set (0.00 sec)
```

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

```
mysql> select * from supplier
    -> where city != "Thane";
+------+-----------+--------+--------+
| S#   | Sname     | Status | City   |
+------+-----------+--------+--------+
| S1   | Supplier1 |     10 | Mumbai |
| S3   | Supplier3 |     30 | Panvel |
+------+-----------+--------+--------+
2 rows in set (0.00 sec)
```

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

```
mysql> select city from supplier;
+--------+
| city   |
+--------+
| Mumbai |
| Thane  |
| Panvel |
+--------+
3 rows in set (0.00 sec)
```

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

```
mysql> select Pname, weight as weight_in_g,
    -> (weight * 1000) as weight_in_mg,
    -> (weight / 1000) as weight_in_kg from parts;
+-------+------------+-------------+-------------+
| Pname | weight_in_g | weight_in_mg | weight_in_kg |
+-------+------------+-------------+-------------+
| Part1 |         13 |       13000 |      0.0130 |
| Part2 |         12 |       12000 |      0.0120 |
| Part3 |         11 |       11000 |      0.0110 |
+-------+------------+-------------+-------------+
3 rows in set (0.00 sec)
```