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(20), depthead char(4));

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));

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

    10, Development
    20, Training

    mysql> insert into sdept(deptno, deptname) values(10, 'Development');
    mysql> insert into sdept(deptno, deptname) values(20, 'Training');

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) values('0001', 'SUNIL', 6000, '10');

    mysql> insert into semp(empno, empname, basic, deptno) values('0002', ' HIREN ', 8000, '20');

mysql> insert into semp(empno, empname, basic, deptno, depthead)
values('0003', 'ALI', 4000, '10', '0001');

mysql> insert into semp(empno, empname, basic, depthead) values('0004',
'GEORGE, 6000, '0001');

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

SUPPLIER   -   S
(S#, Sname, Status, City)
PARTS   -   P
(P#, Pname, Color, Weight, City)
PROJECTS   -   J
(J#, Jname, City)
SUPPLIER-PARTS-PROJECT   -   SPJ
(S#, P#, J#, Qty)

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:-

5. Display all the data from the S table.
    mysql> select * from supplier;

```
+------+-------+--------+--------+
| S#   | sname | status | city   |
+------+-------+--------+--------+
| S1   | Smith |     20 | London |
| S2   | Jones |     10 | Paris  |
| S3   | Blake |     30 | Athens |
| S4   | Clark |     20 | London |
| S5   | Adams |     25 | Paris  |
+------+-------+--------+--------+
5 rows in set (0.01 sec)
```

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

    mysql> select `S#`, sname from supplier;
```
+------+-------+
| S#   | sname |
+------+-------+
| S1   | Smith |
```

```
| S2   | Jones |
| S3   | Blake |
| S4   | Clark |
| S5   | Adams |
+------+-------+
5 rows in set (0.01 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 |
    +--------+-------+
    | Nut    | Red   |
    | Washer | Red   |
    +--------+-------+
    2 rows in set (0.02 sec)
    ```

8. Display all the Suppliers from London.

    ```
    mysql> select * from supplier where city = 'London';
    +------+-------+--------+--------+
    | S#   | sname | status | city   |
    +------+-------+--------+--------+
    | S1   | Smith |     20 | London |
    | S4   | Clark |     20 | London |
    +------+-------+--------+--------+
    2 rows in set (0.00 sec)
    ```

9. Display all the Suppliers from Paris or Athens.

    ```
    mysql> select * from supplier where city = 'Paris' or city = 'Athens';
    +------+-------+--------+--------+
    | S#   | sname | status | city   |
    +------+-------+--------+--------+
    | S2   | Jones |     10 | Paris  |
    | S3   | Blake |     30 | Athens |
    | S5   | Adams |     25 | Paris  |
    +------+-------+--------+--------+
    3 rows in set (0.00 sec)
    ```

10. Display all the Projects in Athens.

    ```
    mysql> select * from projects where city = 'Athens';
    +------+----------+--------+
    | J#   | Jname    | city   |
    +------+----------+--------+
    ```

```
| J2   | Project2 | Athens |
| J4   | Project4 | 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 * from parts;
+------+--------+--------+--------+--------+
| P#   | Pname  | Color  | Weight | city   |
+------+--------+--------+--------+--------+
| P1   | Nut    | Red    |     12 | London |
| P2   | Bolt   | Green  |     17 | Paris  |
| P3   | Screw  | Blue   |     14 | Athens |
| P4   | Washer | Red    |     12 | London |
| P5   | Nail   | Yellow |     10 | Athens |
+------+--------+--------+--------+--------+
5 rows in set (0.20 sec)

mysql> select Pname from parts where weight >= 12 and weight <= 14;
+--------+
| Pname  |
+--------+
| Nut    |
| Screw  |
| Washer |
+--------+
3 rows in set (0.02 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   |
+------+-------+--------+--------+
| S1   | Smith |     20 | London |
| S2   | Jones |     10 | Paris  |
| S4   | Clark |     20 | London |
+------+-------+--------+--------+
3 rows in set (0.01 sec)
```

13. Display all the Suppliers except the Suppliers from London.
    mysql> select * from supplier where city != 'London';
    +------+-------+--------+--------+
    | S# | sname | status | city |
    +------+-------+--------+--------+
    | S2 | Jones | 10 | Paris |
    | S3 | Blake | 30 | Athens |
    | S5 | Adams | 25 | Paris |
    +------+-------+--------+--------+
    3 rows in set (0.00 sec)

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

    mysql> select city from supplier;
    +--------+
    | city |
    +--------+
    | London |
    | Paris |
    | Athens |
    | London |
    | Paris |
    +--------+
    5 rows in set (0.00 sec)

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

    mysql> select weight as "weight_in_grams",

        -> weight * 1000 as "weight_in_milligrams",

        -> weight / 1000 as "weight_in_kilogram"

        -> from parts;

```
+----------------+--------------------+-------------------+
| weight_in_grams | weight_in_milligrams | weight_in_kilogram |
+----------------+--------------------+-------------------+
|             12 |              12000 |             0.012 |
|             17 |              17000 |             0.017 |
|             14 |              14000 |             0.014 |
|             12 |              12000 |             0.012 |
|             10 |              10000 |              0.01 |
+----------------+--------------------+-------------------+
5 rows in set (0.00 sec)
```

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