SQL EXERCISE 1

1. Create the table SEMP with the following structure:-
   EMPNO CHAR(4)
   EMPNAME CHAR(20)
   BASIC FLOAT(9,2)
   DEPTNO CHAR(2)
   DEPTHEAD CHAR(4)

```
mysql> create table SEMP(EMPNO CHAR(4), EMPNAME CHAR(20), BASIC FLOAT(9,2),
DEPTNO CHAR(2),DEPTHEAD CHAR(4));
Query OK, 0 rows affected, 1 warning (0.05 sec)
```

```
mysql> dESC semp
    -> ;
+----------+------------+------+-----+---------+-------+
| Field    | Type       | Null | Key | Default | Extra |
+----------+------------+------+-----+---------+-------+
| EMPNO    | char(4)    | YES  |     | NULL    |       |
| EMPNAME  | char(20)   | YES  |     | NULL    |       |
| BASIC    | float(9,2) | YES  |     | NULL    |       |
| DEPTNO   | char(2)    | YES  |     | NULL    |       |
| DEPTHEAD | char(4)    | YES  |     | NULL    |       |
+----------+------------+------+-----+---------+-------+
5 rows in set (0.02 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)

mysql> DESC SDEPT;
+----------+----------+------+-----+---------+-------+
| Field    | Type     | Null | Key | Default | Extra |
+----------+----------+------+-----+---------+-------+
| DEPTNO   | char(2)  | YES  |     | NULL    |       |
| DEPTNAME | char(15) | YES  |     | NULL    |       |
+----------+----------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

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

```
mysql> INSERT INTO SDEPT VALUES(10,'Development'),(20,'Training');
Query OK, 2 rows affected (0.01 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> select * from sdept;
+--------+-------------+
| DEPTNO | DEPTNAME    |
+--------+-------------+
| 10     | Development |
| 20     | Training    |
+--------+-------------+
2 rows in set (0.00 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> insert into SEMP (empno,empname,basic,deptno) values(0001,'SUNIL', 60
00,10);
Query OK, 1 row affected (0.01 sec)

mysql> insert into SEMP (empno,empname,basic,deptno) values(0002,'HIREN', 80
00,20);
Query OK, 1 row affected (0.01 sec)

mysql> insert into SEMP (empno,empname,basic,deptno,depthead) values(0003,'A
LI', 4000,10,0001);
Query OK, 1 row affected (0.01 sec)

mysql> insert into SEMP (empno,empname,basic,depthead) values(0004,'GEORGE',
 6000,0002);
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from semp;
+-------+---------+---------+--------+----------+
| EMPNO | EMPNAME | BASIC   | DEPTNO | DEPTHEAD |
+-------+---------+---------+--------+----------+
| 1     | SUNIL   | 6000.00 | 10     | NULL     |
| 2     | HIREN   | 8000.00 | 20     | NULL     |
| 3     | ALI     | 4000.00 | 10     | 1        |
| 4     | GEORGE  | 6000.00 | NULL   | 2        |
+-------+---------+---------+--------+----------+
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)

```
mysql> create table supp(sid char(2),sname varchar(20), status int, city var
char(10));
Query OK, 0 rows affected (0.03 sec)
```

PARTS

(P#, Pname, Color, Weight, City)

```
mysql> create table parts(pid char(2),pname varchar(20), colour varchar(20),
weight int, city varchar(10));
Query OK, 0 rows affected (0.03 sec)
```

PROJECTS

(J#, Jname, City)

```
mysql> create table project(jid char(2),jname varchar(20),city varchar(10));

Query OK, 0 rows affected (0.03 sec)
```

SUPPLIER-PARTS-PROJECT (S#, P#, J#, Qty) - SPJ

Sample data for S# column:- ‘S1’, ‘S2’, ‘S3’, etc.

```
mysql> insert into supp values(s1,'sarika',0,'nagar');
ERROR 1054 (42S22): Unknown column 's1' in 'field list'
mysql> insert into supp values('s1','sarika',0,'nagar');
Query OK, 1 row affected (0.01 sec)

mysql> insert into supp values('s2','shravani',1,'agra');
Query OK, 1 row affected (0.01 sec)

mysql> insert into supp values('s3','shweta',0,'alibaug');
Query OK, 1 row affected (0.01 sec)

mysql> insert into supp values('s4','Dhanika',1,'shravanbaug');
ERROR 1406 (22001): Data too long for column 'city' at row 1
mysql>
```

Sample data for P# column:- ‘P1’, ‘P2’, ‘P3’, etc.

```
mysql> insert into parts values('p1','Dhanika','black',44,'goa');
Query OK, 1 row affected (0.01 sec)

mysql> insert into parts values('p2','Manoj','red',64,'gujrat');
Query OK, 1 row affected (0.01 sec)

mysql> insert into parts values('p3','Mansi','orange',88,'Bangal');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from parts;
+------+---------+--------+--------+--------+
| pid  | pname   | colour | weight | city   |
+------+---------+--------+--------+--------+
| p1   | Dhanika | black  |     44 | goa    |
| p2   | Manoj   | red    |     64 | gujrat |
| p3   | Mansi   | orange |     88 | Bangal |
+------+---------+--------+--------+--------+
3 rows in set (0.01 sec)
```

Sample data for J# column:- ‘J1’, ‘J2’, ‘J3’, etc.

```
mysql> insert into project values('j1','Krishna','Mathura'),('j2','Gopal','G
okul'),('j3','Nandan','Dwarika');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

```
mysql> select * from project;
+------+---------+---------+
| jid  | jname   | city    |
+------+---------+---------+
| j1   | Krishna | Mathura |
| j2   | Gopal   | Gokul   |
| j3   | Nandan  | Dwarika |
+------+---------+---------+
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 supp
    -> ;
+------+----------+--------+---------+
| sid  | sname    | status | city    |
+------+----------+--------+---------+
| s1   | sarika   |      0 | nagar   |
| s2   | shravani |      1 | agra    |
| s3   | shweta   |      0 | alibaug |
+------+----------+--------+---------+
3 rows in set (0.00 sec)
```

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

```
mysql> select sid,sname from supp;
+------+----------+
| sid  | sname    |
+------+----------+
| s1   | sarika   |
| s2   | shravani |
| s3   | shweta   |
+------+----------+
3 rows in set (0.00 sec)
```

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

```
mysql> select pname, colour from parts where city ="goa";
+---------+--------+
| pname   | colour |
+---------+--------+
| Dhanika | black  |
+---------+--------+
1 row in set (0.00 sec)

mysql>
```

8. Display all the Suppliers from London.

```
mysql> select * from supp where city ="nagar";
+------+--------+--------+-------+
| sid  | sname  | status | city  |
+------+--------+--------+-------+
| s1   | sarika |      0 | nagar |
+------+--------+--------+-------+
1 row in set (0.00 sec)
```

9. Display all the Suppliers from Paris or Athens.

```
mysql> select * from supp where city in ('nagar','alibaug');
+------+--------+--------+---------+
| sid  | sname  | status | city    |
+------+--------+--------+---------+
| s1   | sarika |      0 | nagar   |
| s3   | shweta |      0 | alibaug |
+------+--------+--------+---------+
2 rows in set (0.00 sec)
```

10. Display all the Projects in Athens.

```
mysql> select * from project where city ="Mathura";
+------+---------+---------+
| jid  | jname   | city    |
+------+---------+---------+
| j1   | Krishna | Mathura |
+------+---------+---------+
1 row in set (0.00 sec)
```

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

```
mysql> select pname from parts where weight between 12 and 14;
Empty set (0.00 sec)
```

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

```
mysql> select * from supp where status >=1;
+------+----------+--------+------+
| sid  | sname    | status | city |
+------+----------+--------+------+
| s2   | shravani |      1 | agra |
+------+----------+--------+------+
1 row in set (0.00 sec)
```

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

```
mysql> select * from supp where city !="agra";
+------+--------+--------+---------+
| sid  | sname  | status | city    |
+------+--------+--------+---------+
| s1   | sarika |      0 | nagar   |
| s3   | shweta |      0 | alibaug |
+------+--------+--------+---------+
2 rows in set (0.00 sec)
```

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

```
mysql> select city from supp;
+---------+
| city    |
+---------+
| nagar   |
| agra    |
| alibaug |
+---------+
3 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*100 grams, weight*1000 miligrams from parts;
+-------+-----------+
| grams | miligrams |
+-------+-----------+
|  4400 |     44000 |
|  6400 |     64000 |
|  8800 |     88000 |
+-------+-----------+
3 rows in set (0.01 sec)
```