SQL ASIGNMENT

Q1:- Create a database for the Hospital Management System based on your ER. Create appropriate tables & relationships.

Sol:- Creating tables and inserting values:-

```
MySQL 8.0 Command Line Client
ERROR 1007 (HY000): Can't create database 'hospital'; database exists
mysql> USE HOSPITAL
Database changed
mysql> CREATE TABLE DOCTOR(D_ID INT PRIMARY KEY, D_Name VARCHAR(100),Qualifications VARCHAR(20), Contact CHAR(10) );
Query OK, 0 rows affected (0.92 sec)

mysql> CREATE TABLE DEPARTMENT(Dept_ID INT PRIMARY KEY, Dept_Name VARCHAR(50));
Query OK, 0 rows affected (0.65 sec)

mysql> ALTER TABLE DOCTOR ADD Dept_ID INT;
Query OK, 0 rows affected (0.79 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE DOCTOR ADD FOREIGN KEY(Dept_ID) REFERENCES DEPARTMENT(Dept_ID);
Query OK, 0 rows affected (2.18 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> CREATE TABLE PATIENT(Pt_No INT PRIMARY KEY,Pt_Name VARCHAR(100),Pt_Age INT,Pt_Gender CHAR(1),Pt_Address VARCHAR(300),Phone_N0 CHAR(10),Admit_Date DATE, Dis_date
DATE, D_ID INT);
Query OK, 0 rows affected (0.60 sec)

mysql> ALTER TABLE PATIENT ADD FOREIGN KEY(D_ID) REFERENCES DOCTOR(D_ID);
Query OK, 0 rows affected (1.95 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> CREATE TABLE ROOMS(Room_No INT PRIMARY KEY,Floor_No INT, CHARGESPERDAY INT, Pt_No INT, FOREIGN KEY (Pt_No) REFERENCES PATIENT(Pt_No));
Query OK, 0 rows affected (1.21 sec)
```

After insertion the final database will look as follows:

MySQL 8.0 Command Line Client

```
mysql> SELECT * FROM PATIENT;
+-------+---------+--------+-----------+------------+------------+------------+------+
| Pt_No | Pt_Name | Pt_Age | Pt_Gender | Pt_Address | Phone_N0   | Admit_Date | Dis_date   | D_ID |
+-------+---------+--------+-----------+------------+------------+------------+------------+------+
|     1 | Anmol   |     23 | M         | Delhi      | 7888632410 | 2020-07-12 | 2020-07-14 |  111 |
|     2 | Anahita |     15 | F         | Gurugram   | 7789864123 | 2020-07-02 | 2020-07-05 |  112 |
|     3 | Shreya  |     30 | F         | Sonipat    | 8967453215 | 2020-07-11 | 2020-07-15 |  111 |
|     4 | Shivani |     25 | F         | Delhi      | 7892115762 | 2020-07-13 | 2020-07-18 |  113 |
|     5 | Neha    |     35 | F         | Delhi      | 8967896452 | 2020-07-15 | 2020-07-17 |  114 |
|     6 | Divya   |     50 | F         | Gurugram   | 9869753216 | 2020-07-16 | 2020-07-18 |  115 |
|     7 | Sumit   |     33 | M         | Sonipat    | 9898645321 | 2020-07-16 | 2020-07-18 |  115 |
|     8 | Parth   |     28 | M         | Delhi      | 9896400320 | 2020-07-17 | 2020-07-19 |  116 |
|     9 | Manik   |     43 | M         | Delhi      | 8458654789 | 2020-07-18 | 2020-07-19 |  112 |
|    10 | Ravi    |     60 | M         | Sonipat    | 8769541239 | 2020-07-19 | 2020-07-20 |  111 |
+-------+---------+--------+-----------+------------+------------+------------+------------+------+
10 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM DOCTOR;
+------+----------------+----------------+------------+---------+
| D_ID | D_Name         | Qualifications | Contact    | Dept_ID |
+------+----------------+----------------+------------+---------+
|  111 | Seema Dhami    | MBBS           | 9863249321 |       1 |
|  112 | Ajay Mehra     | MBBS           | 8685894047 |       2 |
|  113 | Annu Jangal    | MBBS           | 8468575123 |       2 |
|  114 | Rajni Tundawal | MBBS           | 9631478522 |       3 |
|  115 | Sanjay Singla  | MD             | 7896456354 |       3 |
|  116 | Mohan Punia    | MS             | 9868545321 |       3 |
+------+----------------+----------------+------------+---------+
6 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM DEPARTMENT;
+---------+---------------------------+
| Dept_ID | Dept_Name                 |
+---------+---------------------------+
|       1 | Pathology                 |
|       2 | Cardiology                |
|       3 | Neurology                 |
|       4 | Obstetrics and gynaecology |
|       5 | Surgery                   |
+---------+---------------------------+
5 rows in set (0.06 sec)
```

```
mysql> SELECT * FROM ROOMS;
+---------+----------+--------------+-------+
| Room_No | Floor_No | CHARGESPERDAY | Pt_No |
+---------+----------+--------------+-------+
|     101 |        1 |          500 |     1 |
|     102 |        1 |          500 |     3 |
|     103 |        1 |          500 |    10 |
|     201 |        2 |          800 |     2 |
|     202 |        2 |          800 |     9 |
|     301 |        3 |         1200 |     4 |
|     401 |        4 |         1700 |     5 |
|     501 |        5 |         2000 |     6 |
|     502 |        5 |         2000 |     7 |
|     601 |        6 |         2500 |     8 |
+---------+----------+--------------+-------+
10 rows in set (0.00 sec)
```

Q2:-Design a query to provide a list of doctors, which department they belong to and patients treated by them (if any).

Sol:- SELECT d.D_ID,d.D_Name,d.Dept_Name,Pt_Name FROM
(SELECT D_ID,D_Name,Dept_Name FROM DOCTOR, DEPARTMENT WHERE
DOCTOR.Dept_ID=DEPARTMENT.Dept_ID) AS d
LEFT JOIN PATIENT ON d.D_ID=PATIENT.D_ID;

```
mysql> SELECT d.D_ID,d.D_Name,d.Dept_Name,Pt_Name FROM (SELECT D_ID,D_Name,Dept_Name FROM DOCTOR, DEPARTMENT WHERE DOCTOR.Dept_ID=DEPARTMENT.Dept_ID) AS d LEFT JOIN PAT
IENT ON d.D_ID=PATIENT.D_ID;
+------+---------------+------------+---------+
| D_ID | D_Name        | Dept_Name  | Pt_Name |
+------+---------------+------------+---------+
|  111 | Seema Dhami   | Pathology  | Anmol   |
|  111 | Seema Dhami   | Pathology  | Shreya  |
|  111 | Seema Dhami   | Pathology  | Ravi    |
|  112 | Ajay Mehra    | Cardiology | Anahita |
|  112 | Ajay Mehra    | Cardiology | Manik   |
|  113 | Annu Jangal   | Cardiology | Shivani |
|  114 | Rajni Tundawal| Neurology  | Neha    |
|  115 | Sanjay Singla | Neurology  | Divya   |
|  115 | Sanjay Singla | Neurology  | Sumit   |
|  116 | Mohan Punia   | Neurology  | Parth   |
+------+---------------+------------+---------+
10 rows in set (0.00 sec)
```

Q3:- Query to provide the count of patients discharged per day in the last week.

Sol:- SELECT Dis_date,COUNT(Pt_Name) AS Patients_Treated FROM PATIENT WHERE DATE(Dis_date) BETWEEN '2020-07-13' AND '2020-07-20' GROUP BY Dis_date;

```
mysql> SELECT Dis_date,COUNT(Pt_Name) AS Patients_Treated FROM PATIENT WHERE DATE(Dis_date) BETWEEN '2020-07-13' AND '2020-07-20' GROUP BY Dis_date;
+------------+-----------------+
| Dis_date   | Patients_Treated |
+------------+-----------------+
| 2020-07-14 |               1 |
| 2020-07-15 |               1 |
| 2020-07-18 |               3 |
| 2020-07-17 |               1 |
| 2020-07-19 |               2 |
| 2020-07-20 |               1 |
+------------+-----------------+
6 rows in set (0.08 sec)
```