MySQL Assignment

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Create the following tables for HMS(Hospital Management System):

The Doctor_master table contains information about doctors in the hospital.

DOCTOR_MASTER(doctor_id,doctor_name,dept)

Column Name	Data type & Data size	Description
doctor_id	Varchar(15)	doctorid must be unique and not null
doctor_name	Varchar2(15)	Doctor name should be not null
Dept	Varchar2(15)	Dept name should be not null

```
mysql> create table Doctor_master( doctor_id varchar(15) NOT NULL UNIQUE ,
    -> doctor_name varchar(15) NOT NULL , Dept varchar(15) NOT NULL) ;
Query OK, 0 rows affected (0.48 sec)

mysql> show tables;
+--------------------+
| Tables_in_hospital |
+--------------------+
| doctor_master      |
+--------------------+
1 row in set (0.00 sec)

mysql> desc Doctor_master ;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| doctor_id   | varchar(15) | NO   | PRI | NULL    |       |
| doctor_name | varchar(15) | NO   |     | NULL    |       |
| Dept        | varchar(15) | NO   |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
3 rows in set (0.15 sec)

mysql>
```

Sample Data:

doctor_id	doctor_name	dept
D0001	Ram	ENT
D0002	Rajan	ENT
D0003	Smita	Eye
D0004	Bhavan	Surgery
D0005	Sheela	Surgery
D0006	Nethra	Surgery

```
    -> values( D0003  ,  Smita  ,  Eye );
Query OK, 1 row affected (0.07 sec)

mysql> insert into Doctor_master (doctor_id , doctor_name , Dept)
    -> values('D0004' , 'Bhavan' , 'Surgery');
Query OK, 1 row affected (0.15 sec)

mysql> insert into Doctor_master (doctor_id , doctor_name , Dept)
    -> values('D0005' , 'Sheela' , 'Surgery');
Query OK, 1 row affected (0.14 sec)

mysql> insert into Doctor_master (doctor_id , doctor_name , Dept)
    -> values('D0006' , 'Nethra' , 'Surgery') ;
Query OK, 1 row affected (0.07 sec)

mysql> select * from Doctor_master ;
+-----------+-------------+---------+
| doctor_id | doctor_name | Dept    |
+-----------+-------------+---------+
| D0001     | Ram         | ENT     |
| D0002     | Rajan       | ENT     |
| D0003     | Smita       | Eye     |
| D0004     | Bhavan      | Surgery |
| D0005     | Sheela      | Surgery |
| D0006     | Nethra      | Surgery |
+-----------+-------------+---------+
6 rows in set (0.00 sec)

mysql> _
```

The room_master table contains information about room availability in the hospital.

ROOM_MASTER(room_no, room_type, status)

Column Name	Data type & Data size	Description
room_no	Varchar(15)	roomno must be unique and not null
room_type	Varchar2(15)	room type name should be not null
status	Varchar2(15)	status name should be not null

Sample Data:

room_no	room_type	status
R0001	AC	occupied
R0002	Suite	vacant
R0003	NonAC	vacant
R0004	NonAC	occupied
R0005	AC	vacant
R0006	AC	occupied

```
Query OK, 1 row affected (0.14 sec)

mysql> insert into room_master( room_no , room_type , status)
    -> values('R0004' ,'NonAC' , 'occupied');
Query OK, 1 row affected (0.14 sec)

mysql> insert into room_master( room_no , room_type , status)
    -> values('R0005' , 'AC' , 'vacant');
Query OK, 1 row affected (0.13 sec)

mysql> insert into room_master( room_no , room_type , status)
    -> values('R0006' , 'AC' , 'occupied');
Query OK, 1 row affected (0.12 sec)

mysql> select * from room_master ;
+---------+-----------+----------+
| room_no | room_type | status   |
+---------+-----------+----------+
| R0001   | AC        | occupied |
| R0002   | Suite     | vacant   |
| R0003   | NonAC     | vacant   |
| R0004   | NonAC     | occupied |
| R0005   | AC        | vacant   |
| R0006   | AC        | occupied |
+---------+-----------+----------+
6 rows in set (0.00 sec)

mysql>
```

The patient_master table contains information about patients in the hospital.

PATIENT_MASTER(pid, name,age,weight,gender,address,phoneno,disease,doctorid)

Column Name	Data type & Data size	Description
pid	Varchar(15)	pid must be unique and not null
name	Varchar2(15)	name should be not null
age	number(15)	age should be not null
Weight	number(15)	weight should be not null

Gender	Varchar(10)	gender should be not null
Address	Varchar(50)	address should be not null
phoneno	varchar(10)	phoneno should be not null
Disease	Varchar(50)	disease should be not null
Doctor_id	Varchar(5)	Must be an existing doctor

```
     -' at line 2
mysql> create table patient_master( pid varchar(15) UNIQUE NOT NULL ,
     ->       name varchar(15) NOT NULL ,
     ->    age int(15) NOT NULL ,
     ->    weight int(15) NOT NULL ,
     ->  gender varchar(10) NOT NULL ,
     -> Address varchar(50) NOT NULL ,
     -> phoneno varchar(10) NOT NULL ,
     ->   disease varchar(50) NOT NULL ,
     -> doctor_id varchar(5) CHECK(doctor_id in('D0001' , 'D0002' ,'D0003' , 'D0004' ,'D0005')));
Query OK, 0 rows affected, 2 warnings (0.19 sec)

mysql> desc patient_master ;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| pid       | varchar(15) | NO   | PRI | NULL    |       |
| name      | varchar(15) | NO   |     | NULL    |       |
| age       | int         | NO   |     | NULL    |       |
| weight    | int         | NO   |     | NULL    |       |
| gender    | varchar(10) | NO   |     | NULL    |       |
| Address   | varchar(50) | NO   |     | NULL    |       |
| phoneno   | varchar(10) | NO   |     | NULL    |       |
| disease   | varchar(50) | NO   |     | NULL    |       |
| doctor_id | varchar(5)  | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
9 rows in set (0.00 sec)

mysql>
```

Sample Data:

pid	name	age	weight	gender	address	phoneno	disease	Doctor_id
P0001	Gita	35	65	F	Chennai	9867145678	Eye Infection	D0003
P0002	Ashish	40	70	M	Delhi	9845675678	Asthma	D0003

P0003	Radha	25	60	F	Chennai	9867166678	Pain in heart	D0005
P0004	Chandra	28	55	F	Bangalore	9978675567	Asthma	D0001
P0005	Goyal	42	65	M	Delhi	8967533223	Pain in Stomach	D0004

```
Query OK, 1 row affected (0.10 sec)

mysql> select * from patient_master ;
+-------+---------+------+--------+--------+---------+------------+-----------------+-----------+
| pid   | name    | age  | weight | gender | Address | phoneno    | disease         | doctor_id |
+-------+---------+------+--------+--------+---------+------------+-----------------+-----------+
| P0001 | Gita    |  35  |    65  | F      | Chennai | 986714567  | Eye infection   | D0003     |
| P0002 | Ashish  |  40  |    70  | M      | Delhi   | 9845675678 | Asthma          | D0003     |
| P0003 | Radha   |  25  |    60  | F      | Chennai | 9867166678 | Pain in heart   | D0005     |
| P0004 | Chandra |  28  |    55  | F      | Banglore| 9978675567 | Asthma          | D0001     |
| P0005 | Goyal   |  42  |    65  | M      | Delhi   | 8967533223 | Pain in stomach | D0004     |
+-------+---------+------+--------+--------+---------+------------+-----------------+-----------+
5 rows in set (0.00 sec)

mysql>
```

The room_allocation table contains information about the allocation of room to the patients in the hospital.

ROOM_ALLOCATION(room_no, pid, admission_date,release_date)

Column Name	Data type & Data size	Description
room_no	Varchar(15)	Must be an existing rooms
pid	Varchar2(15)	Must be an existing patients
admission_date	date	Admission date should be not null
Release_date	date	

```
mysql> desc room_allocation ;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| room_no       | varchar(15) | YES  |     | NULL    |       |
| pid           | varchar(15) | YES  |     | NULL    |       |
| admission_date| date        | NO   |     | NULL    |       |
| Relese_date   | date        | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

Sample Data:

room_no	pid	admission_date	Release_date
R0001	P0001	15-oct-16	26-oct-16
R0002	P0002	15-nov-16	26-nov-16
R0002	P0003	01-dec-16	30-dec-16
R0004	P0001	01-jan-17	30-jan-17

```
mysql> select * from room_allocation ;
+---------+-------+----------------+-------------+
| room_no | pid   | admission_date | Relese_date |
+---------+-------+----------------+-------------+
| R0001   | P0001 | 2016-10-15     | 2016-10-26  |
| R0002   | P0002 | 2016-11-15     | 2016-11-26  |
| R0002   | P0003 | 2016-12-01     | 2016-12-30  |
| R0004   | P0001 | 2017-01-01     | 2017-01-30  |
+---------+-------+----------------+-------------+
4 rows in set (0.00 sec)

mysql>
```

NOTE:

You are supposed to fill in the given records in DOCTOR_MASTER, ROOM_MASTER, PATIENT_MASTER and ROOM_ALLOCATION tables following these rules:

1. Identify the primary key and foreign key (if applicable) in each table.

2. Take care of the constraints and the relationships among the tables.

QUERIES

Query #1: Display the patients who were admitted in the month of january.

```
mysql> select * from room_allocation where MONTH(Relese_date) = 1 ;
+----------+--------+----------------+--------------+
| room_no  | pid    | admission_date | Relese_date  |
+----------+--------+----------------+--------------+
| R0004    | P0001  | 2017-01-01     | 2017-01-30   |
+----------+--------+----------------+--------------+
1 row in set (0.11 sec)

mysql>
```

Query #2: Display the female patient who is not suffering from asthma

```
mysql> select * from patient_master where gender = 'F' and disease <> 'Asthma' ;
+-------+-------+-----+--------+--------+---------+------------+---------------+----------+
| pid   | name  | age | weight | gender | Address | phoneno    | disease       | doctor_id |
+-------+-------+-----+--------+--------+---------+------------+---------------+----------+
| P0001 | Gita  |  35 |    65  | F      | Chennai | 986714567  | Eye infection | D0003    |
| P0003 | Radha |  25 |    60  | F      | Chennai | 9867166678 | Pain in heart | D0005    |
+-------+-------+-----+--------+--------+---------+------------+---------------+----------+
2 rows in set (0.00 sec)

mysql>
```

Query #3: Count the number of male and female patients.

```
mysql> select count(*) from patient_master where gender ='M' ;
+----------+
| count(*) |
+----------+
|        2 |
+----------+
1 row in set (0.04 sec)

mysql> select count(*) from patient_master where gender ='F' ;
+----------+
| count(*) |
+----------+
|        3 |
+----------+
1 row in set (0.00 sec)

mysql>
```

Query #4: Display the patient_id,patient_name, doctor_id, doctor_name, room_no, room_type and admission_date.

```
mysql>  select distinct pid,name, doctor_id, doctor_name, room_no, room_type  ,  admission_date from room_master NATURAL join doctor_m
aster natural join patient_master natural join room_allocation ;
+-------+--------+-----------+-------------+---------+-----------+----------------+
| pid   | name   | doctor_id | doctor_name | room_no | room_type | admission_date |
+-------+--------+-----------+-------------+---------+-----------+----------------+
| P0001 | Gita   | D0003     | Smita       | R0001   | AC        | 2016-10-15     |
| P0002 | Ashish | D0003     | Smita       | R0002   | Suite     | 2016-11-15     |
| P0003 | Radha  | D0005     | Sheela      | R0002   | Suite     | 2016-12-01     |
| P0001 | Gita   | D0003     | Smita       | R0004   | NonAC     | 2017-01-01     |
+-------+--------+-----------+-------------+---------+-----------+----------------+
4 rows in set (0.00 sec)
```

Query #5: Display the room_no which was never allocated to any patient.

```
mysql> select room_no from room_master where room_no not in (select room_master.room_no from room_master NATURAL JOIN room_allocation)
;
+---------+
| room_no |
+---------+
| R0003   |
| R0005   |
| R0006   |
+---------+
3 rows in set (0.02 sec)

mysql>
```

Query #6: Display the room_no, room_type which are allocated more than once.

```
mysql> select room_master.room_no  ,room_master.room_type from room_master NATURAL JOIN room_allocation where room_master.room_no not
in( select room_no from room_allocation group by room_no having count(room_no) > 1) ;
+---------+-----------+
| room_no | room_type |
+---------+-----------+
| R0001   | AC        |
| R0004   | NonAC     |
+---------+-----------+
2 rows in set (0.00 sec)

mysql>
```

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