

## Relational Database: MY-SQL

Q-1) Create a database for the Hospital Management System based on your ER. Create appropriate tables & relationships

- create database hospital;
- use hospital;
- Create table patient(pat\_id INT PRIMARY KEY NOT NULL, pat\_name VARCHAR(40), pat\_address VARCHAR(100) , pat\_contact CHAR(10) );
- create table department (dep\_id INT PRIMARY KEY NOT NULL , dep\_name VARCHAR(40) );
- create table doctor( doc\_id INT PRIMARY KEY NOT NULL, doc\_name VARCHAR(40), dep\_id INT, FOREIGN KEY (dep\_id) REFERENCES department(dep\_id));
- alter table patient add admit\_date DATE;
- alter table patient add discharge\_date DATE;
- alter table patient add doc\_id INT;
- alter table patient add FOREIGN KEY(doc\_id) REFERENCES doctor(doc\_id);

Inserting data into tables;

- insert into department(dep\_id, dep\_name) values(001, "neurology");
- insert into department values(002, 'cardiology');
- insert into doctor values(001, 'Rakesh Singh', 001);
- insert into doctor values(002, 'Mandeep Singh', 001);
- insert into doctor values(003, 'Virat Kohli', 002);
- Insert into patient values(001, "Jatin Faujdar", "Agra", 9876543211, 002, '2020-07-02','2020-07-09');
- Insert into patient values(002, "Lakshya Malhotra", "delhi", 9876543411, 002,'2020-07-03','2020-07-08');
- Insert into patient values(003, "Jasmeet Singh", "delhi", 9875543411, 001,'2020-07-01','2020-07-09');
- Insert into patient values(004, "divya Singh", "delhi", 9975543411, 003, '2020-07-08','2020-07-11');
- Insert into patient values(005, "Mehrab Singh", "delhi", 9975543411, 003, '2020-07-08','2020-07-15');

```
[mysql> select * from department;
+-----+-----+
| dep_id | dep_name |
+-----+-----+
|      1 | neurology |
|      2 | gynaecology |
+-----+-----+
2 rows in set (0.00 sec)
```

## SQL Concepts - Afternoon Session

```
[mysql> select * from doctor;
```

| doc_id | doc_name      | dep_id |
|--------|---------------|--------|
| 1      | Rakesh Singh  | 1      |
| 2      | Mandeep Singh | 1      |
| 3      | Virat Kohli   | 2      |

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

```
[mysql> select * from patient;
```

| pat_id | pat_name         | pat_address | pat_contact | doc_id | admit_date | discharge_date |
|--------|------------------|-------------|-------------|--------|------------|----------------|
| 1      | Jatin Faujdar    | Agra        | 9876543211  | 2      | 2020-07-02 | 2020-07-09     |
| 2      | Lakshya Malhotra | delhi       | 9876543411  | 2      | 2020-07-03 | 2020-07-08     |
| 3      | Jasmeet Singh    | delhi       | 9875543411  | 1      | 2020-07-01 | 2020-07-09     |
| 4      | divya Singh      | delhi       | 9975543411  | 3      | 2020-07-08 | 2020-07-11     |
| 5      | Mehrab Singh     | delhi       | 9975543411  | 3      | 2020-07-08 | 2020-07-15     |

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

Q-2) Design a query to provide a list of doctors, which department they belong to and patients treated by them (if any).

Ans) Select doc\_name, dep.dep\_name, pat.pat\_name from doctor as doc inner join department as dep on dep.dep\_id = doc.dep\_id inner join patient as pat on pat.doc\_id = doc.doc\_id;

```
[mysql> Select doc_name, dep.dep_name, pat.pat_name from doctor as doc inner join department as dep on dep.dep_id = doc.dep_id inner join patient as pat on pat.doc_id = doc.doc_id;
```

| doc_name      | dep_name    | pat_name         |
|---------------|-------------|------------------|
| Rakesh Singh  | neurology   | Jasmeet Singh    |
| Rakesh Singh  | neurology   | Rituraj Singh    |
| Mandeep Singh | neurology   | Jatin Faujdar    |
| Mandeep Singh | neurology   | Lakshya Malhotra |
| Virat Kohli   | gynaecology | Mehrab Singh     |

```
5 rows in set (0.01 sec)
```

## SQL Concepts - Afternoon Session

Q-3) Query to provide the count of patients discharged per day in the last week.

Ans) select count(\*) as average from patients where DATE(discharge\_date) between "2020-07-07" and "2020-07-14" group by discharge\_date;

```
mysql> select count(*) as average, discharge_date from patient where DATE(discharge_date) between "2020-07-07" and "2020-07-14" group by discharge_date;
```

| average | discharge_date |
|---------|----------------|
| 1       | 2020-07-08     |
| 2       | 2020-07-09     |
| 1       | 2020-07-11     |

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