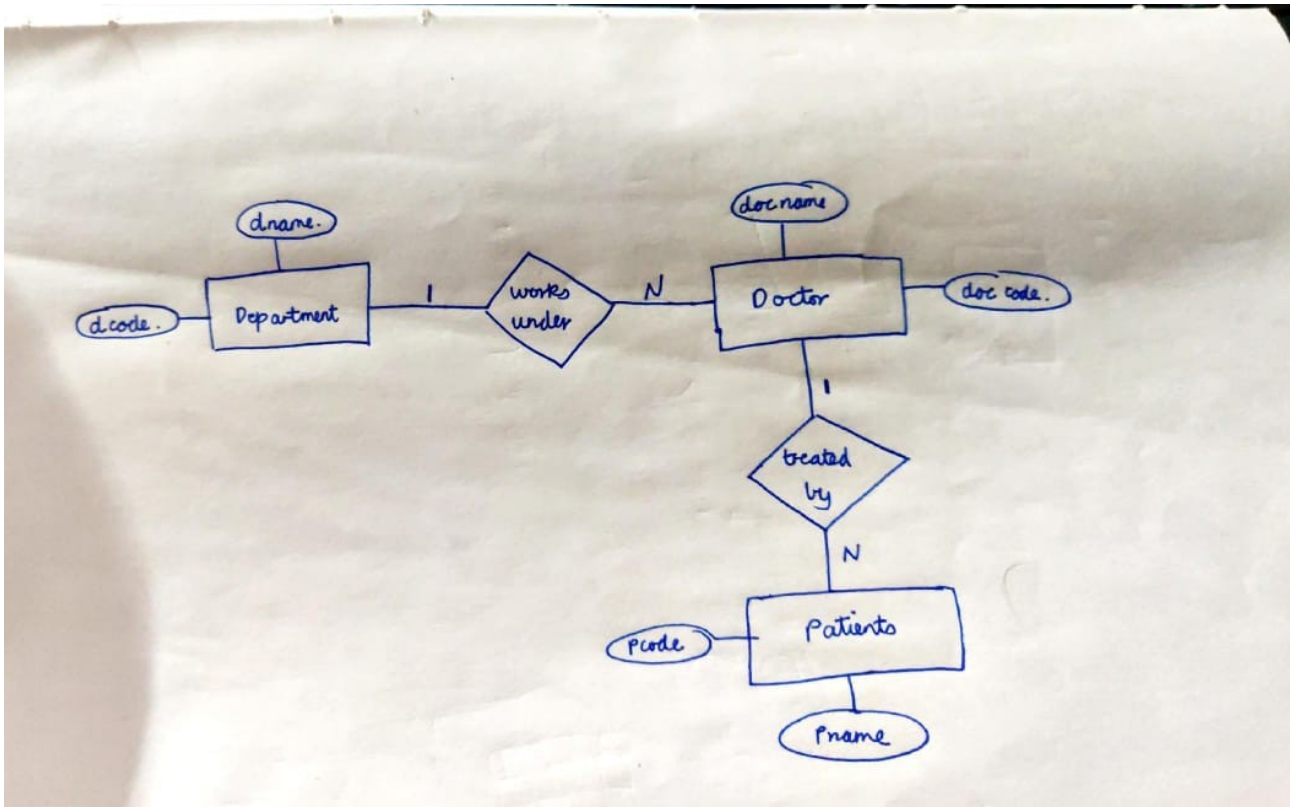
SQL Concepts & Fundamentals Assignment (13/08/2020)

1. Below is the ER diagram with entities Department, Doctors and Patients.




DDL and DML statements for creation of system-:

```
create database hospital;
```
database hopsital is created

```
use hospital;
```
databse to be used changed to hospital.

```
create table department (dcode int not null, dname varchar(100) not null,primary key(dcode));
```
table department is created where dcode is department id which is the primary key and dname is department name

```
create table doctor (doccode int not null, docname varchar(100) not null, dcode int, primary key(doccode),foreign key(dcode) references department(dcode));
```
table doctor is created where doccode is doctor id and the primary key, docname is doctor name and dcode is department code wich establsihes one to many relation between department and doctor.

```
create table patient (pcode int not null, pname varchar(100) not null, doccode int, admisson date, discharged date,primary key(pcode), foreign key(doccode) references doctor(doccode));
```
table patient is created where pcode is patient id and primary key, pname is patients name and doccode is doctor id which creates a one to many relationship between doctor and patients.

Below are data insertion statements-:

1. in department

```
insert into department values (1,"heart");
insert into department values (2,"ENT");
insert into department values (3,"mind");
```

| dcode | dname |
|---|---|
| 1 | heart |
| 2 | ENT |
| 3 | brain |

2. in doctor

```
insert into doctor values (1,"hemant",1);
insert into doctor values (2,"roshan",1);
insert into doctor values (3,"kamal khan",1);
insert into doctor values (4,"ritvik",2);
insert into doctor values (5,"rahul",3);
insert into doctor values (6,"reshama",3);
```

| doccode | docname | dcode |
|---|---|---|
| 1 | hemant | 1 |
| 2 | roshan | 1 |
| 3 | kamal khan | 1 |
| 4 | ritvik | 2 |
| 5 | rahul | 3 |
| 6 | reshama | 3 |

3. in patients

```
insert into patient values (1,"arav",1,“2020-05-10”,”2020-08-10”);
insert into patient values (2,"gaurav",1,“2020-06-11”,”2020-08-11”);
insert into patient values (3,"shubham",2,“2020-06-01”,,”2020-08-11”);
insert into patient values (4,"swati",5,“2020-06-11”,,”2020-08-15”);
insert into patient values (5,"gauri",5,“2020-06-11”,”2020-08-14”);
insert into patient values (6,"kohli",6,“2020-06-19”,”2020-08-14”);
```

| pcode | pname | doccode | admission | discharged |
|---|---|---|---|---|
| 1 | arav | 1 | 2020-05-10 | 2020-08-10 |
| 2 | gaurav | 1 | 2020-06-11 | 2020-08-11 |
| 3 | shubham | 2 | 2020-06-01 | 2020-08-11 |
| 4 | swati | 5 | 2020-06-11 | 2020-08-15 |
| 5 | gauri | 5 | 2020-06-11 | 2020-08-14 |
| 6 | kohli | 6 | 2020-06-19 | 2020-08-14 |

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

```
doctor.docname, department.dname,patient.pname from doctor, department, patient
where doctor.dcode= department.dcode and doctor.doccode= patient.doccode;
```

| docname | dname | pname |
|---|---|---|
| hemant | heart | arav |
| hemant | heart | gaurav |
| roshan | heart | shubham |
| rahul | brain | swati |
| rahul | brain | gauri |
| reshama | brain | kohli |

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

```
select  discharged ,count(discharged) as patient_count from patient where
discharged > '2020-08-10' group by discharged;
```

| discharged | patient_count |
|---|---|
| 2020-08-11 | 2 |
| 2020-08-15 | 1 |
| 2020-08-14 | 2 |