Tasks :

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

-----Doctor Table-------

```
create table Doctor (
   Doc_ID int NOT NULL,
   Doc_Name varchar(255),
   Speciality varchar(255),
   Dept_ID int,
   PRIMARY KEY(Doc_ID),
   FOREIGN KEY (Dept_ID) REFERENCES Department(Dept_ID)
);
```

insert into doctor values(1001, “Dr. Aman”, “Heart Specialist”, 1);

Select * from Doctor;

Number of Records: 10

Doc_ID	Doc_Name	Speciality	Dept_ID
1002	Dr. Sourav	Heart Specialist	1
1003	Dr. Rohit	Heart Specialist	1
2001	Dr. Rohit M	Dentist	2
5001	Dr. Mary	Brain Specialist	5
5002	Dr. Richard	Brain Specialist	5
6001	Dr. Ram	ENT Specialist	6
7001	Dr. Rao	Nutritionist	7
8001	Dr. Tony	Physiologist	8
1001	Dr. Aman	Heart Specialist	1
4001	Dr. Amit	Women Specialist	4

------Department Table---------

```
create table Department (
   Dept_ID int NOT NULL,
   Dept_Name varchar(255),
   PRIMARY KEY(Dept_ID)
);
```

```
insert into Department values(1, “Cardiologist”);
```

```
Select * from Departments;
```

Number of Records: 8

Dept_ID	Dept_Name
1	Cardiologist
2	Dentist
3	Urologist
4	Gynaecologist
5	Neurologist
6	ENT Specialist
7	Paediatrician
8	Physiologist

--------Patient Table------

```
create table Patient (
   Pat_ID int NOT NULL,
   Pat_Name varchar(255),
   Disease varchar(255),
   Doc_ID int,
   Ward_ID int,
   PRIMARY KEY(Pat_ID),
   FOREIGN KEY (Doc_ID) REFERENCES Doctor(Doc_ID),
   FOREIGN KEY (Ward_ID) REFERENCES Ward(Ward_ID)
);
```

```
insert into Patient values(101, “Will”, “Brain Surgery”, 5001, 35);
```

```
Select * from Patient;
```

Number of Records: 10

Pat_ID	Pat_Name	Disease	Doc_ID	Ward_ID
101	Will	Brain Surgery	5001	35
102	Jake	Cardiac Arrest	1002	12
103	Jim	Heart Surgery	1001	24
104	Tina	Pregnancy	4001	13
105	Kim	Brain Transplant	5002	32
106	Krish	Fracture	8001	23
107	Minu	Nutritionist	7001	*null*
108	Nisha	Hearing Problem	6001	*null*
109	Bob	Fever	6001	*null*
110	Alice	Toothache	2001	*null*

-------Ward Table-------

```
create table Ward (
    Ward_ID int NOT NULL,
    Ward_Type varchar(255),
    In_Date DATE,
    Out_Date DATE,
    PRIMARY KEY(Ward_ID)
);
```

insert into Ward values(11, “Operation Theater”, NULL, NULL);

Select * from Ward;

Number of Records: 15

Ward_ID	Ward_Type	In_Date	Out_Date
11	Operation Theater	*null*	*null*
21	Operation Theater	*null*	*null*
31	Operation Theater	*null*	*null*
12	Emergency Department	10/7/2020	17/7/2020
32	Emergency Department	12/7/2020	14/7/2020
22	Emergency Department	*null*	*null*
13	General Ward	15/6/2020	14/7/2020
23	General Ward	15/7/2020	18/7/2020
33	General Ward	*null*	*null*
14	Cardiology	*null*	*null*
24	Cardiology	10/7/2020	18/7/2020
34	Cardiology	*null*	*null*
15	Neurology	*null*	*null*
25	Neurology	*null*	*null*
35	Neurology	2/7/2020	17/7/2020

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

```
select d.doc_id
        ,d.doc_name
        ,b.dept_name
        ,p.pat_id
        ,p.pat_name
    from doctor d
    join department b
    on d.dept_id = b.dept_id
    join patient p
    on d.doc_id = p.doc_id;
```

Number of Records: 10

Doc_ID	Doc_Name	Dept_Name	Pat_ID	Pat_Name
5001	Dr. Mary	Neurologist	101	Will
1002	Dr. Sourav	Cardiologist	102	Jake
1001	Dr. Aman	Cardiologist	103	Jim
4001	Dr. Amit	Gynaecologist	104	Tina
5002	Dr. Richard	Neurologist	105	Kim
8001	Dr. Tony	Physiologist	106	Krish
7001	Dr. Rao	Paediatrician	107	Minu
6001	Dr. Ram	ENT Specialist	108	Nisha
6001	Dr. Ram	ENT Specialist	109	Bob
2001	Dr. Rohit M	Dentist	110	Alice

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

```
select out_date as release_date
        ,count(1) as count_patient
   from patient p
   join ward w
   on p.ward_id = w.ward_id
   where out_date > getdate() - 7
   group by out_date;
```

Number of Records: 3

release_date	count_patient
14/7/2020	2
17/7/2020	2
18/7/2020	2