HOSPITALS Management

HOSPITAL MANAGEMENT SYSTEM

HOSPITAL MANAGEMENT

Final Project for SQL Module

by Prathamesh

1. Description:

- **Hospital Management System**

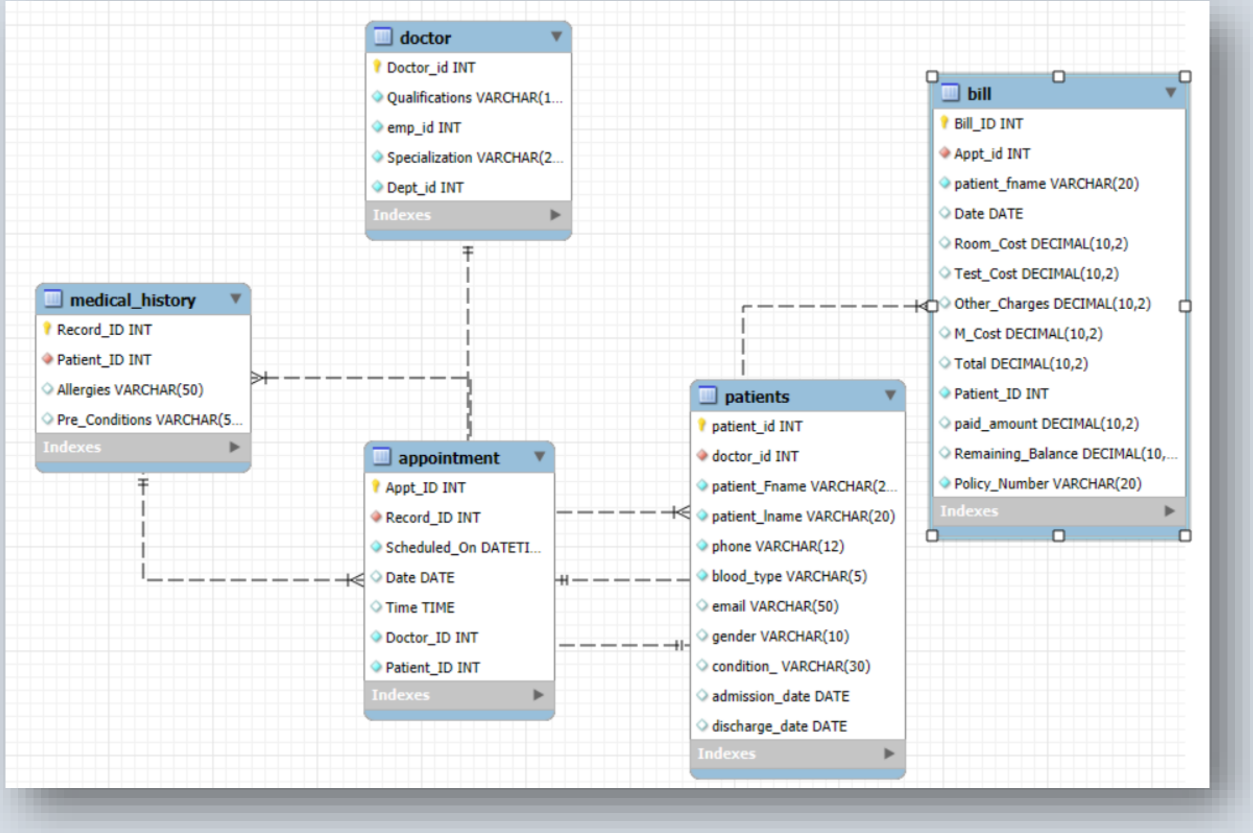
The conventional Hospital Management System has been facing challenges; information is difficult to retrieve. For instance, patients' Identification numbers are unique throughout the system for each patient, and traditionally, this process is done manually.

This database contains 5 tables:

- **Patients**
- **Medical_history**
- **Doctor**
- **Bill**
- **Appointment**
- **Room**

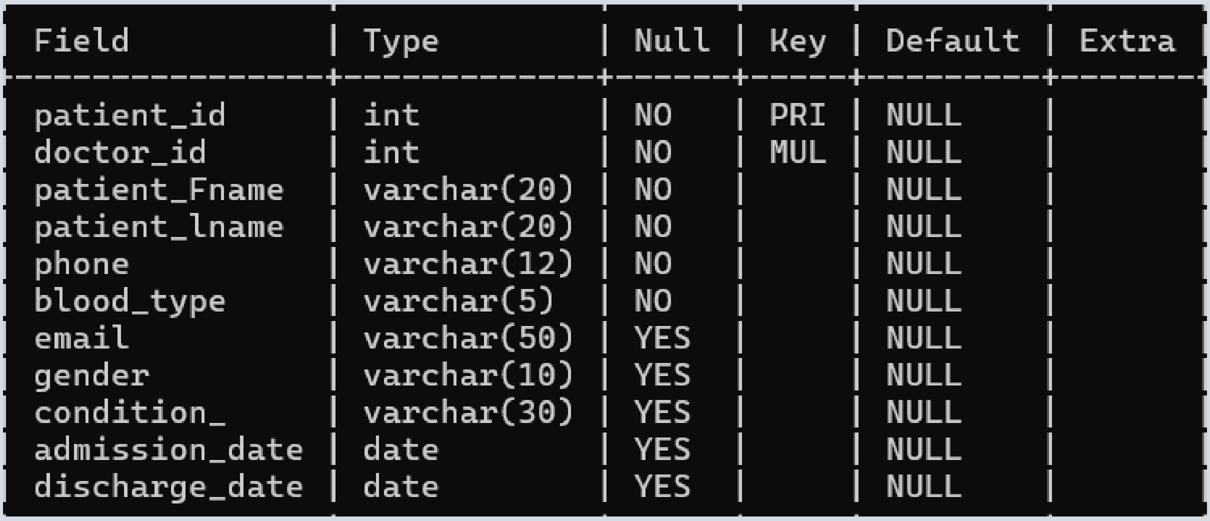
2. ER-Diagram for Hospital Management:

This ER diagram of hospital management visualizes how different entities within a clinical setup interact. This ER flow chart focuses on six entities, represented by the rectangles and their respective attributes,



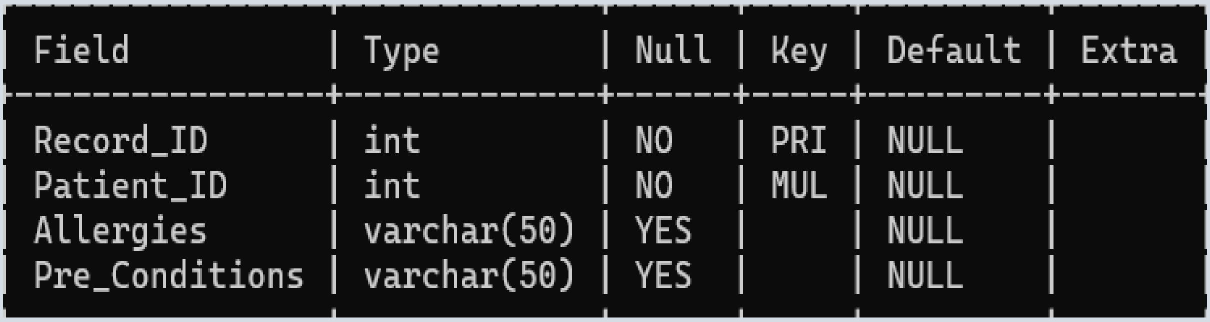
3. Table Descriptions:

➢ Patients



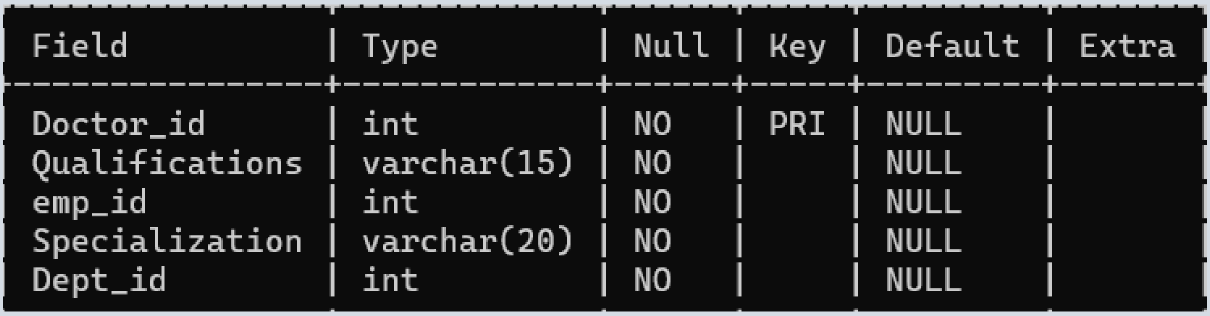
```
 Field           | Type        | Null | Key | Default | Extra |
-----------------+-------------+------+-----+---------+-------+
 patient_id      | int         | NO   | PRI | NULL    |
 doctor_id       | int         | NO   | MUL | NULL    |
 patient_Fname   | varchar(20) | NO   |     | NULL    |
 patient_lname   | varchar(20) | NO   |     | NULL    |
 phone           | varchar(12) | NO   |     | NULL    |
 blood_type      | varchar(5)  | NO   |     | NULL    |
 email           | varchar(50) | YES  |     | NULL    |
 gender          | varchar(10) | YES  |     | NULL    |
 condition_      | varchar(30) | YES  |     | NULL    |
 admission_date  | date        | YES  |     | NULL    |
 discharge_date  | date        | YES  |     | NULL    |
```

➢ Medical_History



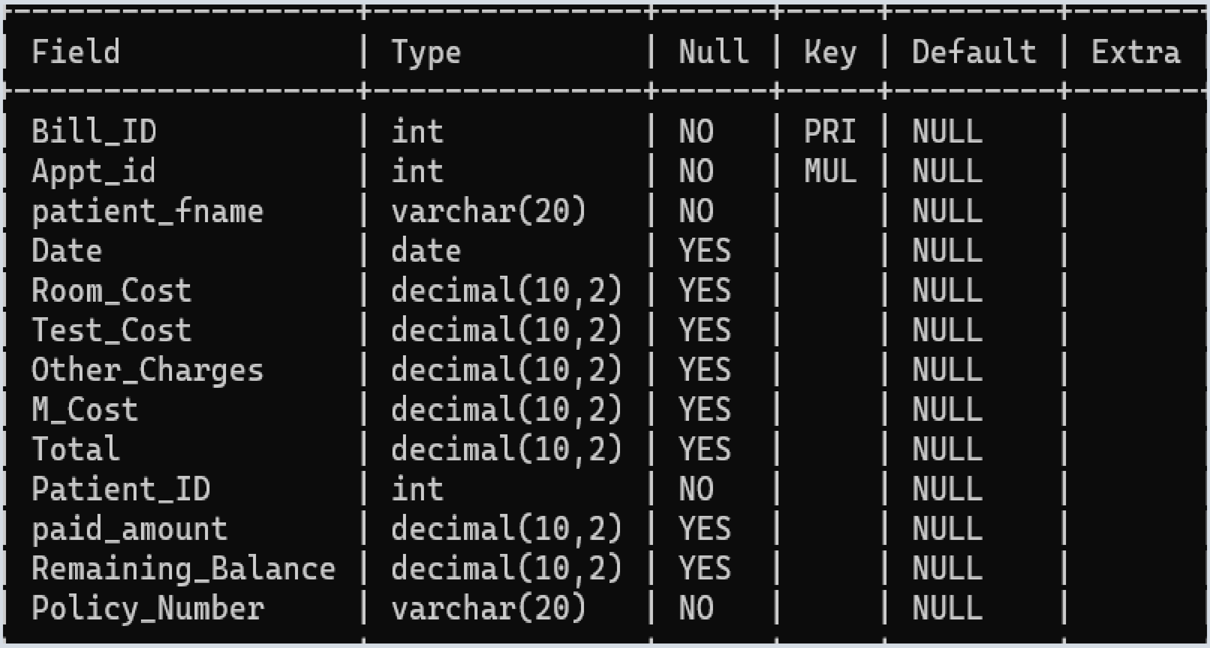
```
 Field          | Type        | Null | Key | Default | Extra
----------------+-------------+------+-----+---------+-------
 Record_ID      | int         | NO   | PRI | NULL    |
 Patient_ID     | int         | NO   | MUL | NULL    |
 Allergies      | varchar(50) | YES  |     | NULL    |
 Pre_Conditions | varchar(50) | YES  |     | NULL    |
```

➢ Doctor



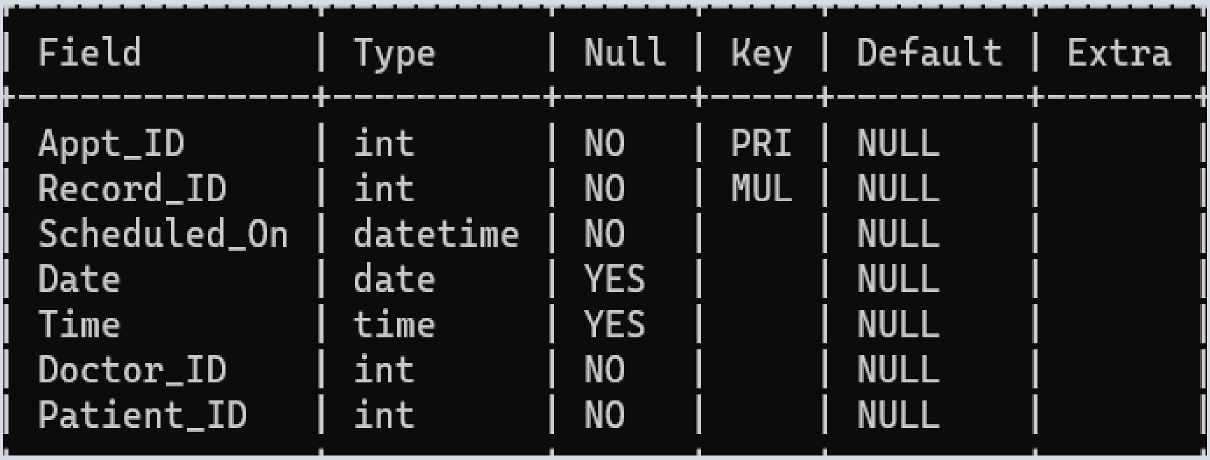
```
 Field          | Type        | Null | Key | Default | Extra
----------------+-------------+------+-----+---------+-------
 Doctor_id      | int         | NO   | PRI | NULL    |
 Qualifications | varchar(15) | NO   |     | NULL    |
 emp_id         | int         | NO   |     | NULL    |
 Specialization | varchar(20) | NO   |     | NULL    |
 Dept_id        | int         | NO   |     | NULL    |
```

➢ Bill



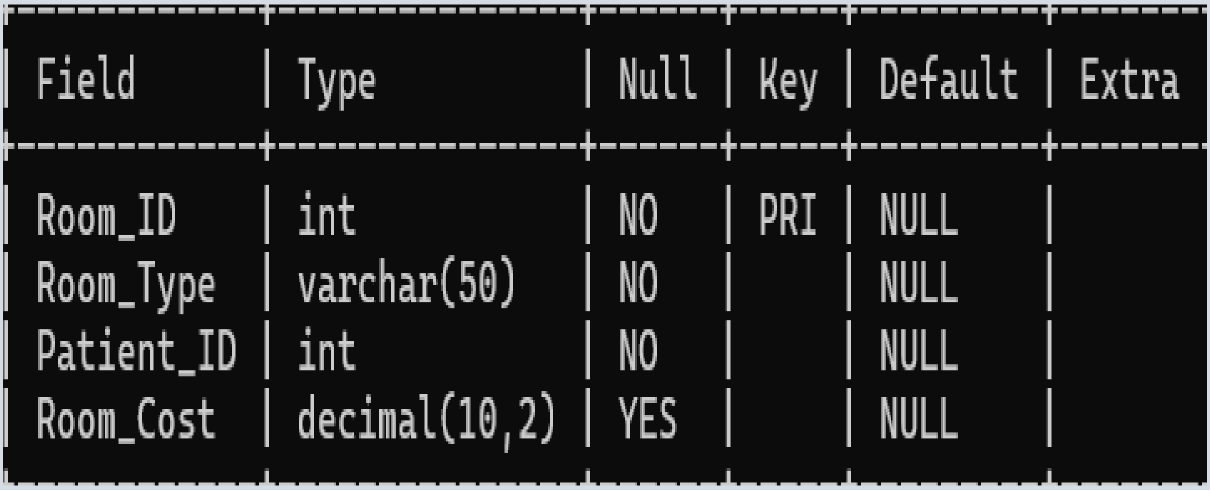
```
-------------------+----------------+------+-----+---------+-------
 Field             | Type           | Null | Key | Default | Extra
-------------------+----------------+------+-----+---------+-------
 Bill_ID           | int            | NO   | PRI | NULL    |
 Appt_id           | int            | NO   | MUL | NULL    |
 patient_fname     | varchar(20)    | NO   |     | NULL    |
 Date              | date           | YES  |     | NULL    |
 Room_Cost         | decimal(10,2)  | YES  |     | NULL    |
 Test_Cost         | decimal(10,2)  | YES  |     | NULL    |
 Other_Charges     | decimal(10,2)  | YES  |     | NULL    |
 M_Cost            | decimal(10,2)  | YES  |     | NULL    |
 Total             | decimal(10,2)  | YES  |     | NULL    |
 Patient_ID        | int            | NO   |     | NULL    |
 paid_amount       | decimal(10,2)  | YES  |     | NULL    |
 Remaining_Balance | decimal(10,2)  | YES  |     | NULL    |
 Policy_Number     | varchar(20)    | NO   |     | NULL    |
```

- **Appointment**



```
+--------------+----------+------+-----+---------+-------+
| Field        | Type     | Null | Key | Default | Extra |
+--------------+----------+------+-----+---------+-------+
| Appt_ID      | int      | NO   | PRI | NULL    |       |
| Record_ID    | int      | NO   | MUL | NULL    |       |
| Scheduled_On | datetime | NO   |     | NULL    |       |
| Date         | date     | YES  |     | NULL    |       |
| Time         | time     | YES  |     | NULL    |       |
| Doctor_ID    | int      | NO   |     | NULL    |       |
| Patient_ID   | int      | NO   |     | NULL    |       |
```

- **Room**



```
+------------+---------------+------+-----+---------+-------+
| Field      | Type          | Null | Key | Default | Extra |
+------------+---------------+------+-----+---------+-------+
| Room_ID    | int           | NO   | PRI | NULL    |       |
| Room_Type  | varchar(50)   | NO   |     | NULL    |       |
| Patient_ID | int           | NO   |     | NULL    |       |
| Room_Cost  | decimal(10,2) | YES  |     | NULL    |       |
```

4. Commands:

- **Create Database:**
  Create database hospital;

- **Select Database:**

  Use hospital;

- **Create table named patients**

```
create table patients (patient_id int not null,
doctor_id int not null,
patient_Fname varchar(20) not null,
patient_lname varchar(20) not null,
phone varchar(12) not null,
blood_type varchar(5) not null,
email varchar(50),
gender varchar(10),
condition_ varchar(30),
admission_date date,
discharge_date date,
primary key (patient_id),
constraint Fk foreign key (doctor_id) references
doctor (doctor_id)
);
```

- **Create table named Doctor**

```
create table doctor (Doctor_id int not null,
Qualifications varchar(15) not null,
emp_id int not null,
Specialization varchar(20) not null,
Dept_id int not null,
primary key (Doctor_id)
);
```

- **Create table named Medical_History**

```
CREATE TABLE Medical_History (
    Record_ID  INT NOT NULL,
    Patient_ID  INT NOT NULL,
    Allergies VARCHAR(50),
    Pre_Conditions VARCHAR(50),
    PRIMARY KEY (Record_ID),
    constraint PT foreign key (Patient_id) references
patients (patient_id)
    );
```

- **Create table named Appointment**

```
CREATE TABLE Appointment (
    Appt_ID INT  NOT NULL,
    Record_ID int not null,
    Scheduled_On  DATETIME NOT NULL,
    Date  DATE,
    Time TIME,
    Doctor_ID INT NOT NULL,
    Patient_ID  INT NOT NULL,
    PRIMARY KEY (Appt_ID),
    constraint MI foreign key (Record_ID)
references medical_History (Record_ID)
);
```

- **Create table named Bill**

```
CREATE TABLE Bill (
    Bill_ID INT NOT NULL,
    Appt_id int not null,
    patient_fname varchar(20) not null,
    Date  DATE,
    Room_Cost Decimal(10,2),
    Test_Cost  DECIMAL(10,2),
    Other_Charges  DECIMAL(10,2),
    M_Cost DECIMAL(10,2),
    Total  DECIMAL(10,2),
     Patient_ID INT NOT NULL,
    paid_amount decimal(10,2),
    Remaining_Balance DECIMAL(10,2),
    Policy_Number VARCHAR(20) NOT NULL,
    PRIMARY KEY (Bill_ID),
    constraint AP foreign key (Appt_ID) references
appointment (Appt_ID)
    );
```

- **Create table named Room**

```
CREATE TABLE  Room (
Room_ID INT NOT NULL,
Room_Type VARCHAR(50) NOT NULL,
Patient_ID  INT  NOT NULL,
Room_Cost  DECIMAL(10,2),
PRIMARY KEY (Room_ID));
```

Populate “Patents” tables

```
insert into patients
values(1,40,"john","deo",555-
1234,"A+","john.doe@gmail.vom","Male","injury
","2023-01-01","2023-01-10"),

(2,70,"jane","smith",555-5678,"O-
","jane.smith@gmail.com","Female","Flu","2023
-02-05","2023-02-15"),

(3,101,"Michael","Johnson",555-
8765,"B+","Michael.johnson@gmail.com","Male
","Allergies","2023-03-10","2023-03-20"),

(4,102,"Emily","Williams",55-2345,"Ab-
","emily.williams@gmail.com","Female","Heada
che","2023-04-15","2023-04-25"),

(5,130,"robert","Brown",555-5432,"A-
","robert.brown@gmail.com","Male","fracture","
2023-05-20","2023-05-30"),
(6,160,"ramesh","patil",555-5482,"O-","ramesh.patil@gmail.com","Male","injury","2023-06-21","2023-06-25"),

(7,145,"shubham","sonar",555-9848,"B+","shubham3456@gmail.com","Male","back injury","2023-06-25","2023-06-29"),

(8,150,"pratik","pawar",555-8486,"AB-","pratik.pawar@gmail.com","Male","Allergies","2023-07-02","2023-07-05"),

(9,155,"soham","dani",555-4864,"O+","soham.dani78@gmail.com","Male","fracture","2023-08-23","2023-08-24"),

(10,156,"kajal","pawar",555-8532,"A+","kajal45@gmail,com","Female","Flu","2023-08-22","2023-08-25"),

(11,158,"sharddha","pawar",555-0215,"B+","shraddha799@gmail.com","female","Headache","2023-05-20","2023-05-21"),

(12,160,"pranali","wani",555-0145,"AB-","pranali.wani@gmail.com","Female","Fracture","2023-04-21","2023-04-29"),
(13,161,"ritu","pagar",555-
0348,"B+","ritu.pagar@gmail.com","Famale","Fl
u","2023-05-24","2023-05-27"),

(14,168,"rahul","rakh",555-
0497,"A+","rahul,rakh@gmail,com","Male","Alle
rgies","2023-08-05","2023-08-09"),

(15,178,"sahil","pawar",555-6472,"AB-
","sahil.pawar@gmail.com","Male","corona","20
23-05-25","2023-06-05");
```

- Populate “Doctor” tables

```
insert into doctor values(
40,"MD",4,"General Medicine",4),

(70,"MD",7,"General Medicine",7),
(101,"MD",1,"General Medicine",1),

(102,"MD",10,"General Medicine",10),
(130,"MD",13,"General Medicine",2),

(160,"MD",16,"General Medicine",5);
(145,"MD",18,"General Medicine",10),
(150,"MD",19,"General Medicine",25),
(155,"MD",21,"General Medicine",25),

(156,"MD",17,"General Medicine",65),
(158,"MD",19,"General Medicine",47),

(162,"MD",20,"General Medicine",45),
(161,"MD",15,"General Medicine",85),

(168,"MD",54,"General Medicine",65),
(178,"MD",26,"General Medicine",39);
```

Populate “Medical_History” table

```
insert into Medical_History
values(11,1,"Pericillin","None"),

(21,2,"none","Asthma"),

(31,3,"Sulfa Drugs","High Blood Pressure"),

(41,4,"Pollen","None"),

(51,5,"Shellfish","None"),

(61,6,"None","Heart Disease"),
(71,7,"Peanuts","High Cholestero"),

(81,8,"None","Anemia"),

(86,9,"Pollen","None"),

(87,10,"Rhinitis","None")

,(90,11,"Anaphylaxis","High Cholestero"),

(92,12,"Sinusitis","None"),

(94,13,"None","infectious diseases"),

(96,14,"None","physiological diseases"),

(99,15,"Rhinitis","None");
```

Populate “Appointment” tables

```
insert into appointment values
(101,11,"2023-12-02 14:24:16","2023-12-
13","21:00:00",40,1),

(102,21,"2023-12-02 14:24:16","2023-12-
15","14:00:00",70,2),
(103,31,"2023-12-02 14:24:16","2023-12-18","10:00:00",101,3),

(104,41,"2023-12-02 14:24:16","2023-12-10","16:00:00",102,4),

 (105,51,"2023-12-02 14:24:16","2023-12-18","22:00:00",130,5),

(106,61,"2023-12-02 14:24:16","2023-12-08","19:00:00",160,6),

(107,71,"2023-12-02 14:24:16","2023-12-13","13:00:00",145,7),

(108,81,"2023-12-02 14:24:16","2023-12-25","09:00:00",150,8),

(109,86,"2023-12-02 14:24:16","2023-12-14","21:00:00",155,9),

(110,87,"2023-12-02 14:24:16","2023-12-08","19:00:00",156,10),

(111,90,"2023-12-02 14:24:16","2023-12-21","01:00:00",158,11),
(112,92,"2023-12-02 14:24:16","2023-12-25","15:00:00",162,12),
(113,94,"2023-12-02 14:24:16","2023-01-21","19:00:00",161,13),

(114,96,"2023-12-02 14:24:16","2023-01-26","05:00:00",168,14),

(115,99,"2023-12-02 14:24:16","2023-01-21","19:00:00",178,15);
```

Populate “Bill” tables

```
insert into bill values(60,101,"john","2023-12-05","150.00","75.00","20.00","5.99","250.99","1","250","150.00","A123456"),

(61,102,"jane","2023-12-06","200.00","50.00","25.00","12.75","87.75","2","350","200.00","B789012"),

(62,103,"Michael","2023-12-07","200.00","80.00","15.00","6.25","301.25","3","375","175.00","C345678")
```

```
(63,104,"Emily","2023-12-
08","250.00","60.00","20.00","9.75","339.75","4
","200","180.00","D901234"),

(64,105,"robert","2023-12-
09","200.00","70.00","25.00","14.99","309.99","
5","200","190.00","E567890"),

(65,106,"ramesh","2023-12-
10","250.00","65.00","20.00","22.50","357.50","
6","350","220.00","F123789"),

(66,107,"shubham","2023-12-
11","150.00","55.00","15.00","18.75","238.75","
7","240","160.00","G456321"),

(67,108,"pratik","2023-12-
12","200.00","60.00","20.00","12.75","292.75",'
8',"400","200.00","H987654"),

(68,109,"soham","2023-12-
13","220.00","67.00","25.00","12.75","252.55",'
9',"350","100.00","I987654"),

(69,110,"kajal","2023-12-
14","260.00","70.00","30.00","15.75","272.75",'
10',"410","250.00","J987654"),
(70,111,"shraddha","2023-12-15","340.00","75.00","40.00","13.75","202.75",'11',"100","50.00","K987654"),

(71,112,"pranali","2023-12-16","350.00","79.00","50.00","17.75","231.75",'12',"500","100.00","L987654"),

(72,113,"ritu","2023-12-17","360.00","81.00","45.00","19.75","205.75",'13',"150","70.00","M987654"),

(73,114,"rahul","2023-12-18","370.00","85.00","70.00","18.75","272.75",'14',"170","50.00","N987654"),

(74,115,"sahil","2023-12-17","375.00","90.00","98.00","13.25","207.75",'15',"100","50.00","K987654");
```

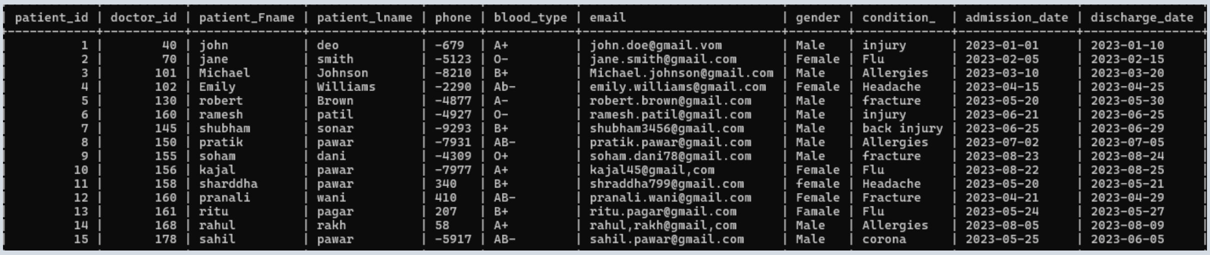
Populate “Room” tables

```
insert into room
values(101,"Premium",1,"150.00"),
(103,"Premium",10,"150.00"),
(110,"Premium",19,"150.00"),
(204,"Deluxe",11,"200.00"),
(205,"Deluxe",2,"200.00"),
(209,"Deluxe",20,"200.00"),
(301,"Executive",21,"250.00"),
(306,"Executive",12,"250.00");
```

- **Created tables**
  - **Show tables**

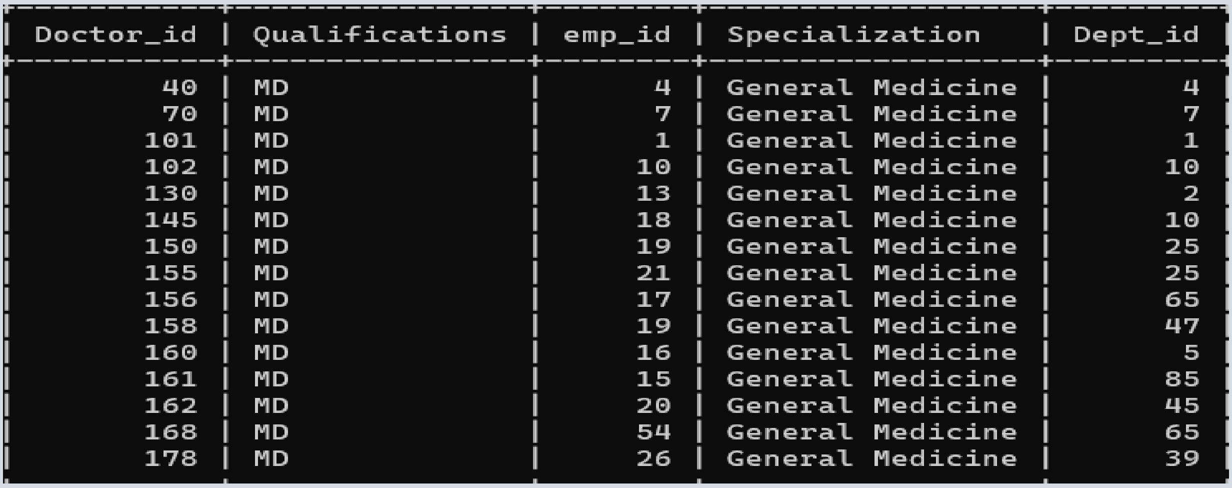
    Select * from table_name;

- **Patents**



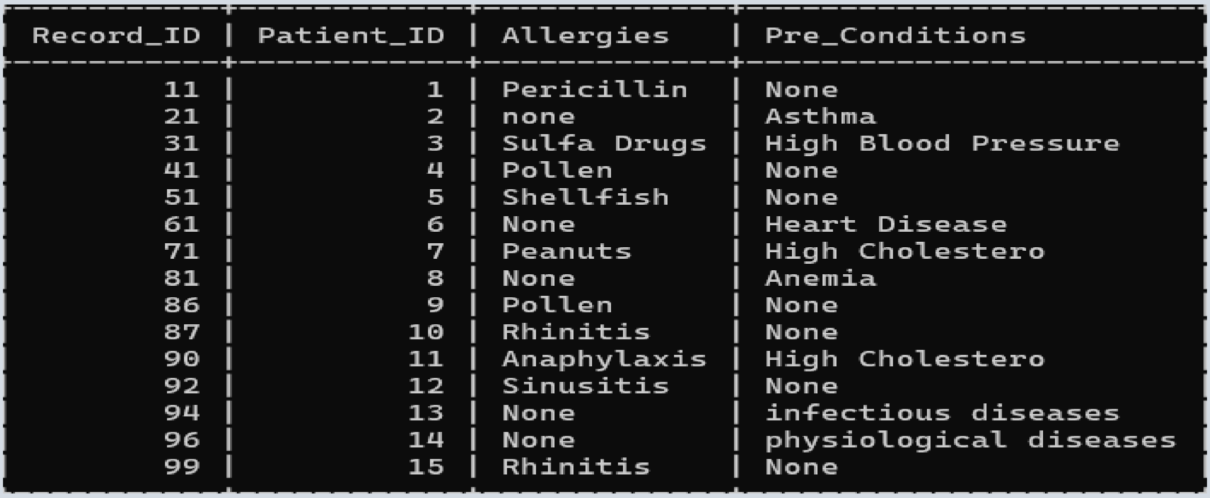
```
| patient_id | doctor_id | patient_Fname | patient_lname | phone | blood_type | email                     | gender | condition_  | admission_date | discharge_date |
+------------+-----------+---------------+---------------+-------+------------+---------------------------+--------+-------------+----------------+----------------+
|          1 |        40 | john          | deo           | -679  | A+         | john.doe@gmail.vom        | Male   | injury      | 2023-01-01     | 2023-01-10     |
|          2 |        70 | jane          | smith         | -5123 | O-         | jane.smith@gmail.com      | Female | Flu         | 2023-02-05     | 2023-02-15     |
|          3 |       101 | Michael       | Johnson       | -8210 | B+         | Michael.johnson@gmail.com | Male   | Allergies   | 2023-03-10     | 2023-03-20     |
|          4 |       102 | Emily         | Williams      | -2290 | Ab-        | emily.williams@gmail.com  | Female | Headache    | 2023-04-15     | 2023-04-25     |
|          5 |       130 | robert        | Brown         | -4877 | A-         | robert.brown@gmail.com    | Male   | fracture    | 2023-05-20     | 2023-05-30     |
|          6 |       160 | ramesh        | patil         | -4927 | O-         | ramesh.patil@gmail.com    | Male   | injury      | 2023-06-21     | 2023-06-25     |
|          7 |       145 | shubham       | sonar         | -9293 | B+         | shubham3456@gmail.com     | Male   | back injury | 2023-06-25     | 2023-06-29     |
|          8 |       150 | pratik        | pawar         | -7931 | AB-        | pratik.pawar@gmail.com    | Male   | Allergies   | 2023-07-02     | 2023-07-05     |
|          9 |       155 | soham         | dani          | -4309 | O+         | soham.dani78@gmail.com    | Male   | fracture    | 2023-08-23     | 2023-08-24     |
|         10 |       156 | kajal         | pawar         | -7977 | A+         | kajal45@gmail,com         | Female | Flu         | 2023-08-22     | 2023-08-25     |
|         11 |       158 | sharddha      | pawar         | 340   | B+         | shraddha799@gmail.com     | female | Headache    | 2023-05-20     | 2023-05-21     |
|         12 |       160 | pranali       | wani          | 410   | AB-        | pranali.wani@gmail.com    | Female | Fracture    | 2023-04-21     | 2023-04-29     |
|         13 |       161 | ritu          | pagar         | 207   | B+         | ritu.pagar@gmail.com      | Famale | Flu         | 2023-05-24     | 2023-05-27     |
|         14 |       168 | rahul         | rakh          | 58    | A+         | rahul,rakh@gmail,com      | Male   | Allergies   | 2023-08-05     | 2023-08-09     |
|         15 |       178 | sahil         | pawar         | -5917 | AB-        | sahil.pawar@gmail.com     | Male   | corona      | 2023-05-25     | 2023-06-05     |
```

- **Doctor**



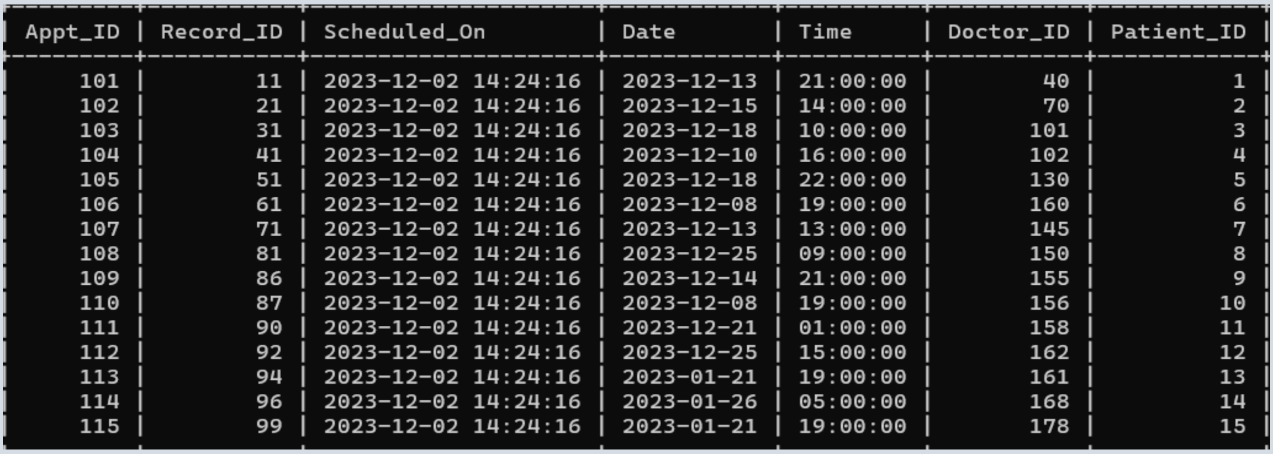
```
+-----------+----------------------+--------+------------------+---------+
| Doctor_id | Qualifications       | emp_id | Specialization   | Dept_id |
+-----------+----------------------+--------+------------------+---------+
|        40 | MD                   |      4 | General Medicine |       4 |
|        70 | MD                   |      7 | General Medicine |       7 |
|       101 | MD                   |      1 | General Medicine |       1 |
|       102 | MD                   |     10 | General Medicine |      10 |
|       130 | MD                   |     13 | General Medicine |       2 |
|       145 | MD                   |     18 | General Medicine |      10 |
|       150 | MD                   |     19 | General Medicine |      25 |
|       155 | MD                   |     21 | General Medicine |      25 |
|       156 | MD                   |     17 | General Medicine |      65 |
|       158 | MD                   |     19 | General Medicine |      47 |
|       160 | MD                   |     16 | General Medicine |       5 |
|       161 | MD                   |     15 | General Medicine |      85 |
|       162 | MD                   |     20 | General Medicine |      45 |
|       168 | MD                   |     54 | General Medicine |      65 |
|       178 | MD                   |     26 | General Medicine |      39 |
```

- **Medical_History**



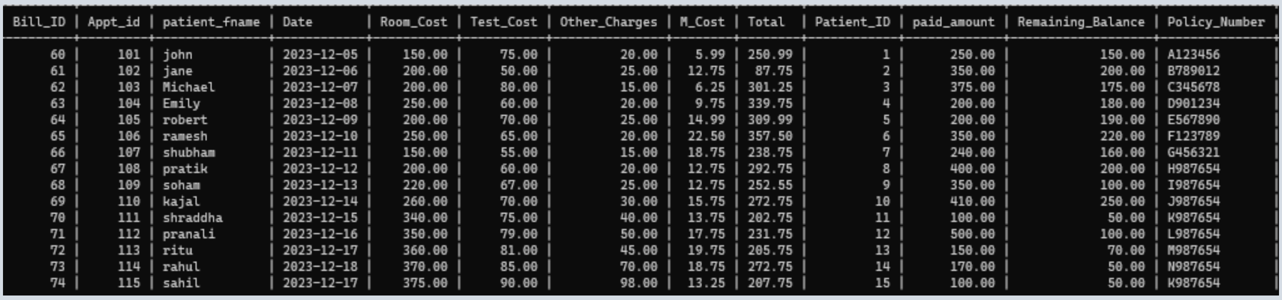
```
+-----------+------------+-------------+------------------------+
| Record_ID | Patient_ID | Allergies   | Pre_Conditions         |
+-----------+------------+-------------+------------------------+
|        11 |          1 | Pericillin  | None                   |
|        21 |          2 | none        | Asthma                 |
|        31 |          3 | Sulfa Drugs | High Blood Pressure    |
|        41 |          4 | Pollen      | None                   |
|        51 |          5 | Shellfish   | None                   |
|        61 |          6 | None        | Heart Disease          |
|        71 |          7 | Peanuts     | High Cholestero        |
|        81 |          8 | None        | Anemia                 |
|        86 |          9 | Pollen      | None                   |
|        87 |         10 | Rhinitis    | None                   |
|        90 |         11 | Anaphylaxis | High Cholestero        |
|        92 |         12 | Sinusitis   | None                   |
|        94 |         13 | None        | infectious diseases    |
|        96 |         14 | None        | physiological diseases |
|        99 |         15 | Rhinitis    | None                   |
+-----------+------------+-------------+------------------------+
```

➢ Appointment



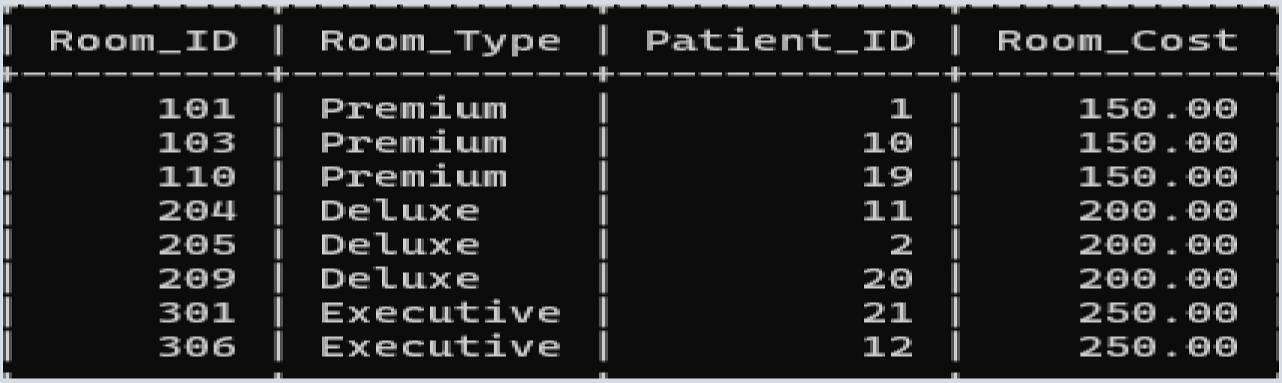
```
+---------+-----------+---------------------+------------+----------+-----------+------------+
| Appt_ID | Record_ID | Scheduled_On        | Date       | Time     | Doctor_ID | Patient_ID |
+---------+-----------+---------------------+------------+----------+-----------+------------+
|     101 |        11 | 2023-12-02 14:24:16 | 2023-12-13 | 21:00:00 |        40 |          1 |
|     102 |        21 | 2023-12-02 14:24:16 | 2023-12-15 | 14:00:00 |        70 |          2 |
|     103 |        31 | 2023-12-02 14:24:16 | 2023-12-18 | 10:00:00 |       101 |          3 |
|     104 |        41 | 2023-12-02 14:24:16 | 2023-12-10 | 16:00:00 |       102 |          4 |
|     105 |        51 | 2023-12-02 14:24:16 | 2023-12-18 | 22:00:00 |       130 |          5 |
|     106 |        61 | 2023-12-02 14:24:16 | 2023-12-08 | 19:00:00 |       160 |          6 |
|     107 |        71 | 2023-12-02 14:24:16 | 2023-12-13 | 13:00:00 |       145 |          7 |
|     108 |        81 | 2023-12-02 14:24:16 | 2023-12-25 | 09:00:00 |       150 |          8 |
|     109 |        86 | 2023-12-02 14:24:16 | 2023-12-14 | 21:00:00 |       155 |          9 |
|     110 |        87 | 2023-12-02 14:24:16 | 2023-12-08 | 19:00:00 |       156 |         10 |
|     111 |        90 | 2023-12-02 14:24:16 | 2023-12-21 | 01:00:00 |       158 |         11 |
|     112 |        92 | 2023-12-02 14:24:16 | 2023-12-25 | 15:00:00 |       162 |         12 |
|     113 |        94 | 2023-12-02 14:24:16 | 2023-01-21 | 19:00:00 |       161 |         13 |
|     114 |        96 | 2023-12-02 14:24:16 | 2023-01-26 | 05:00:00 |       168 |         14 |
|     115 |        99 | 2023-12-02 14:24:16 | 2023-01-21 | 19:00:00 |       178 |         15 |
+---------+-----------+---------------------+------------+----------+-----------+------------+
```

➢ Bill



```
+---------+---------+---------------+------------+-----------+-----------+---------------+--------+--------+------------+-------------+-------------------+---------------+
| Bill_ID | Appt_id | patient_fname | Date       | Room_Cost | Test_Cost | Other_Charges | M_Cost | Total  | Patient_ID | paid_amount | Remaining_Balance | Policy_Number |
+---------+---------+---------------+------------+-----------+-----------+---------------+--------+--------+------------+-------------+-------------------+---------------+
|      60 |     101 | john          | 2023-12-05 |    150.00 |     75.00 |         20.00 |   5.99 | 250.99 |          1 |      250.00 |            150.00 | A123456       |
|      61 |     102 | jane          | 2023-12-06 |    200.00 |     50.00 |         25.00 |  12.75 |  87.75 |          2 |      350.00 |            200.00 | B789012       |
|      62 |     103 | Michael       | 2023-12-07 |    200.00 |     80.00 |         15.00 |   6.25 | 301.25 |          3 |      375.00 |            175.00 | C345678       |
|      63 |     104 | Emily         | 2023-12-08 |    250.00 |     60.00 |         20.00 |   9.75 | 339.75 |          4 |      200.00 |            180.00 | D901234       |
|      64 |     105 | robert        | 2023-12-09 |    200.00 |     70.00 |         25.00 |  14.99 | 309.99 |          5 |      200.00 |            190.00 | E567890       |
|      65 |     106 | ramesh        | 2023-12-10 |    250.00 |     65.00 |         20.00 |  22.50 | 357.50 |          6 |      350.00 |            220.00 | F123789       |
|      66 |     107 | shubham       | 2023-12-11 |    150.00 |     55.00 |         15.00 |  18.75 | 238.75 |          7 |      240.00 |            160.00 | G456321       |
|      67 |     108 | pratik        | 2023-12-12 |    200.00 |     60.00 |         20.00 |  12.75 | 292.75 |          8 |      400.00 |            200.00 | H987654       |
|      68 |     109 | soham         | 2023-12-13 |    220.00 |     67.00 |         25.00 |  12.75 | 252.55 |          9 |      350.00 |            100.00 | I987654       |
|      69 |     110 | kajal         | 2023-12-14 |    260.00 |     70.00 |         30.00 |  15.75 | 272.75 |         10 |      410.00 |            250.00 | J987654       |
|      70 |     111 | shraddha      | 2023-12-15 |    340.00 |     75.00 |         40.00 |  13.75 | 202.75 |         11 |      100.00 |             50.00 | K987654       |
|      71 |     112 | pranali       | 2023-12-16 |    350.00 |     79.00 |         50.00 |  17.75 | 231.75 |         12 |      500.00 |            100.00 | L987654       |
|      72 |     113 | ritu          | 2023-12-17 |    360.00 |     81.00 |         45.00 |  19.75 | 205.75 |         13 |      150.00 |             70.00 | M987654       |
|      73 |     114 | rahul         | 2023-12-18 |    370.00 |     85.00 |         70.00 |  18.75 | 272.75 |         14 |      170.00 |             50.00 | N987654       |
|      74 |     115 | sahil         | 2023-12-17 |    375.00 |     90.00 |         98.00 |  13.25 | 207.75 |         15 |      100.00 |             50.00 | K987654       |
+---------+---------+---------------+------------+-----------+-----------+---------------+--------+--------+------------+-------------+-------------------+---------------+
```

➢ Room



```
+---------+-----------+------------+-----------+
| Room_ID | Room_Type | Patient_ID | Room_Cost |
+---------+-----------+------------+-----------+
|     101 | Premium   |          1 |    150.00 |
|     103 | Premium   |         10 |    150.00 |
|     110 | Premium   |         19 |    150.00 |
|     204 | Deluxe    |         11 |    200.00 |
|     205 | Deluxe    |          2 |    200.00 |
|     209 | Deluxe    |         20 |    200.00 |
|     301 | Executive |         21 |    250.00 |
|     306 | Executive |         12 |    250.00 |
```

5. Querys

1.Deleting Data from table

truncate table room;

2.drop table room

drop table room;

3.change the column name blood_type

alter table patient change blood_type blood_group varchar(20);

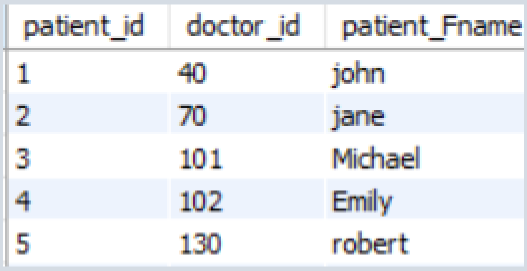
4.rename command

```
rename table patients to patient;
```

5.The Select patient id, doctor id and patient first name

```
SELECT
    patient_id, doctor_id,
patient_Fname
FROM
    patients;
```

Result;



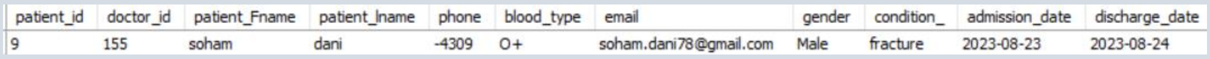
patient_id	doctor_id	patient_Fname
1	40	john
2	70	jane
3	101	Michael
4	102	Emily
5	130	robert

6.selects all the patient from the blood_type "O+" in the "patient" table

```
SELECT
    *
FROM
```

```
    patients
WHERE
    Blood_type = 'O+';
```

Result;

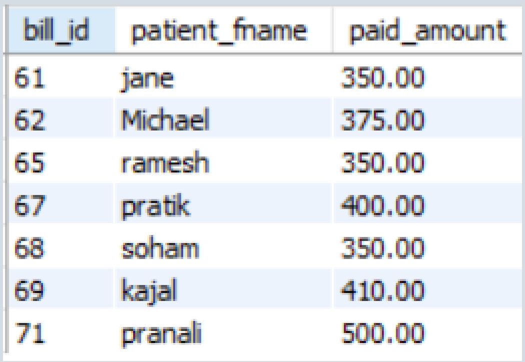


patient_id	doctor_id	patient_Fname	patient_lname	phone	blood_type	email	gender	condition_	admission_date	discharge_date
9	155	soham	dani	-4309	O+	soham.dani78@gmail.com	Male	fracture	2023-08-23	2023-08-24

7.retrieve bill_id, patient_fname and Paid_amount of bill where patient paid amount is greater than 250

```
select
bill_id,patient_fname,paid_amount
from bill where paid_amount > 250;
```

Result:

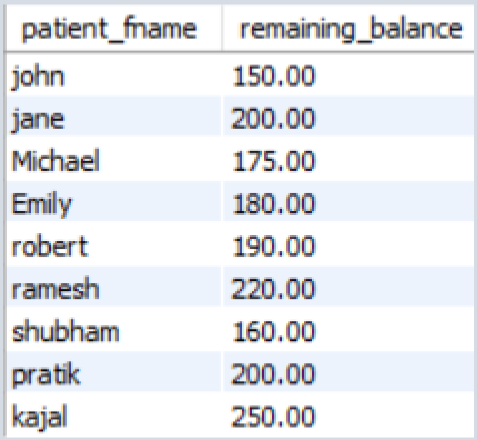


bill_id	patient_fname	paid_amount
61	jane	350.00
62	Michael	375.00
65	ramesh	350.00
67	pratik	400.00
68	soham	350.00
69	kajal	410.00
71	pranali	500.00

8.display the patient_fname whose Remaining_Balance are in between 150 and 450

```
SELECT
    patient_fname, remaining_balance
FROM
    bill
WHERE
    Remaining_Balance BETWEEN 150
AND 450;
```

Result:

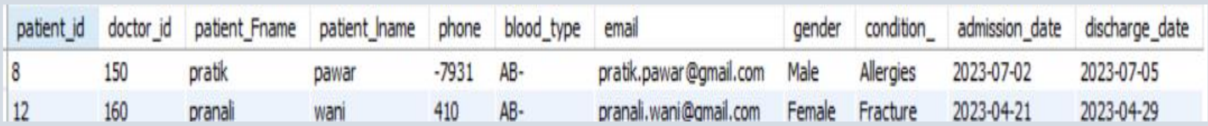


patient_fname	remaining_balance
john	150.00
jane	200.00
Michael	175.00
Emily	180.00
robert	190.00
ramesh	220.00
shubham	160.00
pratik	200.00
kajal	250.00

9.fatech the detils of patients whose name start with "P"

```
SELECT * FROM
    patients
WHERE
    patient_fname LIKE 'p%';
```

Result:

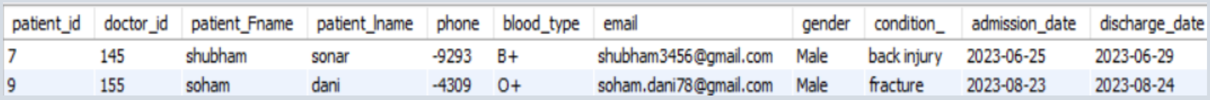


patient_id	doctor_id	patient_Fname	patient_lname	phone	blood_type	email	gender	condition_	admission_date	discharge_date
8	150	pratik	pawar	-7931	AB-	pratik.pawar@gmail.com	Male	Allergies	2023-07-02	2023-07-05
12	160	pranali	wani	410	AB-	pranali.wani@gmail.com	Female	Fracture	2023-04-21	2023-04-29

10. fatech the detils of patients whose name end with "am"

```
SELECT * FROM
  patients
WHERE
  patient_Fname LIKE '%am';
```

Result:



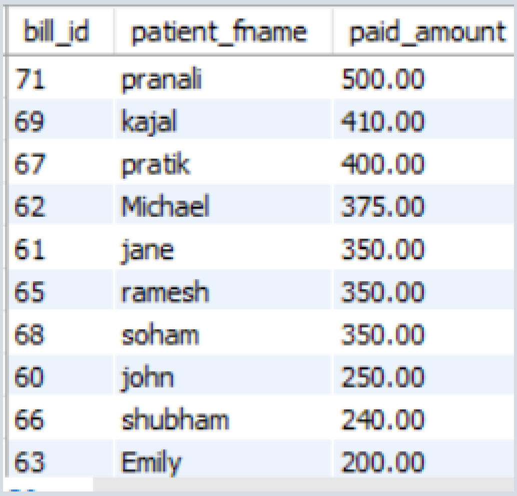
patient_id	doctor_id	patient_Fname	patient_lname	phone	blood_type	email	gender	condition_	admission_date	discharge_date
7	145	shubham	sonar	-9293	B+	shubham3456@gmail.com	Male	back injury	2023-06-25	2023-06-29
9	155	soham	dani	-4309	O+	soham.dani78@gmail.com	Male	fracture	2023-08-23	2023-08-24

11.query which will show the bill_id,Patient_id, paid_amount according to the descending order.

```
        SELECT
bill_id, patient_fname, paid_amount
        FROM bill
```

```
    ORDER BY paid_amount DESC;
```

Result:

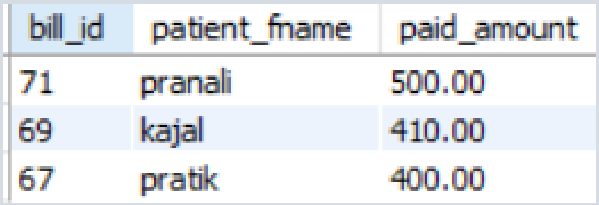


bill_id	patient_fname	paid_amount
71	pranali	500.00
69	kajal	410.00
67	pratik	400.00
62	Michael	375.00
61	jane	350.00
65	ramesh	350.00
68	soham	350.00
60	john	250.00
66	shubham	240.00
63	Emily	200.00

11. query which will show the bill_id,Patient_id, paid_amount according to the descending order row limit 3

```
        SELECT
  bill_id, patient_fname, paid_amount
        FROM bill
    ORDER BY paid_amount DESC limit 3;
```

Result:



bill_id	patient_fname	paid_amount
71	pranali	500.00
69	kajal	410.00
67	pratik	400.00

13. count of the total patients

sum of the paid_amount

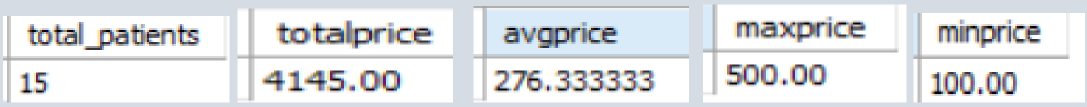
avg of the paid_amount

max of the paid_amount

min of the paid_amount

```
select count(patient_id) as total_patients
from patients;
select sum(paid_amount) as totalprice
from bill;
select avg(paid_amount) as avgprice from
bill;
select max(paid_amount) as maxprice
from bill;
select min(paid_amount) as minprice from
bill;
```

Result:

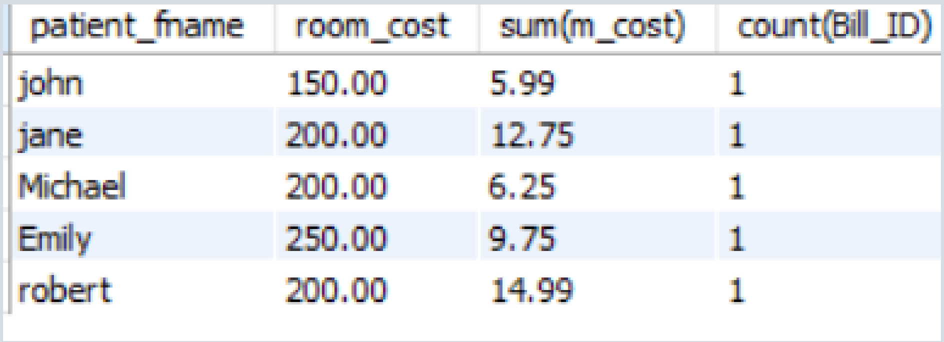


total_patients	totalprice	avgprice	maxprice	minprice
15	4145.00	276.333333	500.00	100.00

14. ind the count bill id and tatal of m cost by patient first name by room cost only 5 record

```
SELECT
    patient_fname, room_cost,
SUM(m_cost), COUNT(Bill_ID)
FROM
    bill
GROUP BY Patient_fname , room_cost
LIMIT 5;
```

Result:



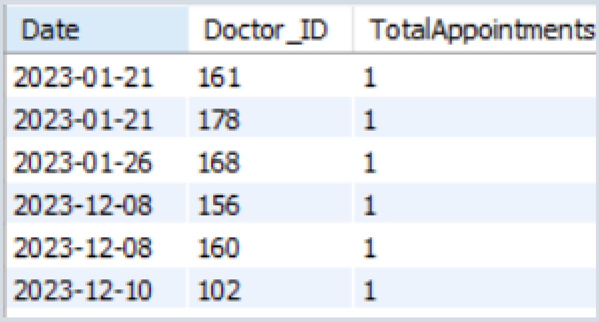
patient_fname	room_cost	sum(m_cost)	count(Bill_ID)
john	150.00	5.99	1
jane	200.00	12.75	1
Michael	200.00	6.25	1
Emily	250.00	9.75	1
robert	200.00	14.99	1

15. Retrieve the total number of appointments for each doctor by date.

```
            SELECT A.Date, A.Doctor_ID,
COUNT(*) AS TotalAppointments
            FROM Appointment A
```

```
    GROUP BY A.Date, A.Doctor_ID
        ORDER BY A.Date, A.Doctor_ID;
```

Result:

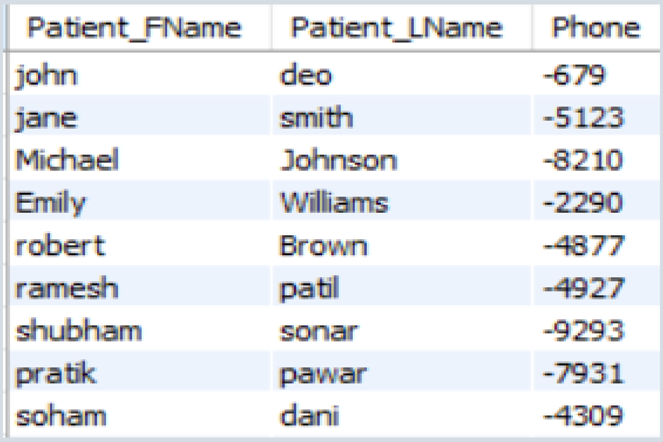


Date	Doctor_ID	TotalAppointments
2023-01-21	161	1
2023-01-21	178	1
2023-01-26	168	1
2023-12-08	156	1
2023-12-08	160	1
2023-12-10	102	1

16. Retrieve the names and contact information of patients with a medical history

```
    SELECT
    Patient_FName,Patient_LName,Phone
        FROM Patients
JOIN
    Medical_History ON Patients.Patient_ID =
    Medical_History.Patient_ID;
```

Result:



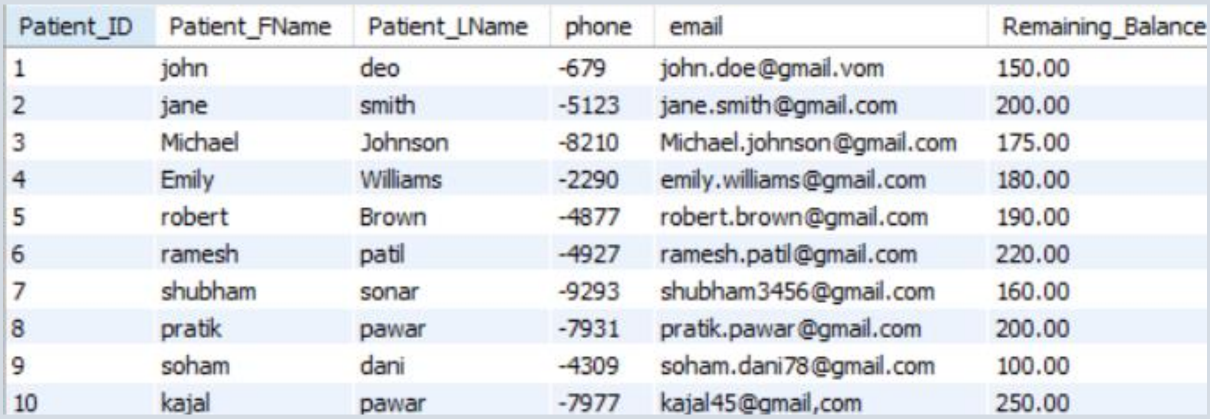
Patient_FName	Patient_LName	Phone
john	deo	-679
jane	smith	-5123
Michael	Johnson	-8210
Emily	Williams	-2290
robert	Brown	-4877
ramesh	patil	-4927
shubham	sonar	-9293
pratik	pawar	-7931
soham	dani	-4309

17. Retrieve the information of the patients who have an outstanding bill balance to notify them.

```
              SELECT DISTINCT
  pt.Patient_ID,pt.Patient_FName,
  pt.Patient_LName,pt.phone,
  pt.email,bill.Remaining_Balance
FROM patients pt
    JOIN
  appointment apt ON pt.patient_id =
apt.Patient_ID
    JOIN
  bill ON bill.Patient_ID = pt.patient_id
```

```
WHERE
    bill.Remaining_Balance > 0;
```

Result:



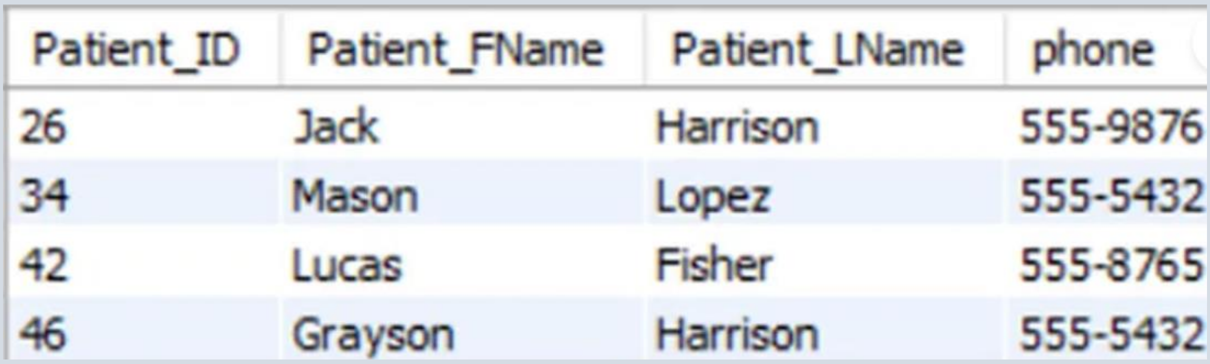
Patient_ID	Patient_FName	Patient_LName	phone	email	Remaining_Balance
1	john	deo	-679	john.doe@gmail.vom	150.00
2	jane	smith	-5123	jane.smith@gmail.com	200.00
3	Michael	Johnson	-8210	Michael.johnson@gmail.com	175.00
4	Emily	Williams	-2290	emily.williams@gmail.com	180.00
5	robert	Brown	-4877	robert.brown@gmail.com	190.00
6	ramesh	patil	-4927	ramesh.patil@gmail.com	220.00
7	shubham	sonar	-9293	shubham3456@gmail.com	160.00
8	pratik	pawar	-7931	pratik.pawar@gmail.com	200.00
9	soham	dani	-4309	soham.dani78@gmail.com	100.00
10	kajal	pawar	-7977	kajal45@gmail,com	250.00

18. Retrieve the phone number of the male patients who are O+ and are free from allergies for future blood donation.

```
SELECT
    pt.Patient_ID, pt.Patient_FName,
pt.Patient_LName, pt.phone
FROM
    patients pt
        JOIN
    medical_history mh ON pt.Patient_ID =
mh.Patient_ID
```

```
WHERE
    Gender = 'Male' AND allergies = 'None'
        AND Blood_Type = 'O+';
```

Result:



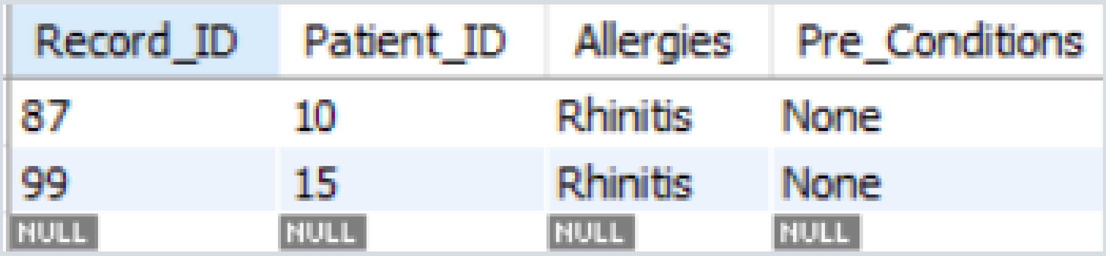
Patient_ID	Patient_FName	Patient_LName	phone
26	Jack	Harrison	555-9876
34	Mason	Lopez	555-5432
42	Lucas	Fisher	555-8765
46	Grayson	Harrison	555-5432

19. find the details of medical history including Allergies

```
      SELECT
              *
          FROM
              medical_history
          WHERE
              Allergies IN (SELECT
                      Allergies
                  FROM
```

```
            medical_history
        WHERE
            Allergies = 'Rhinitis');
```

Result:



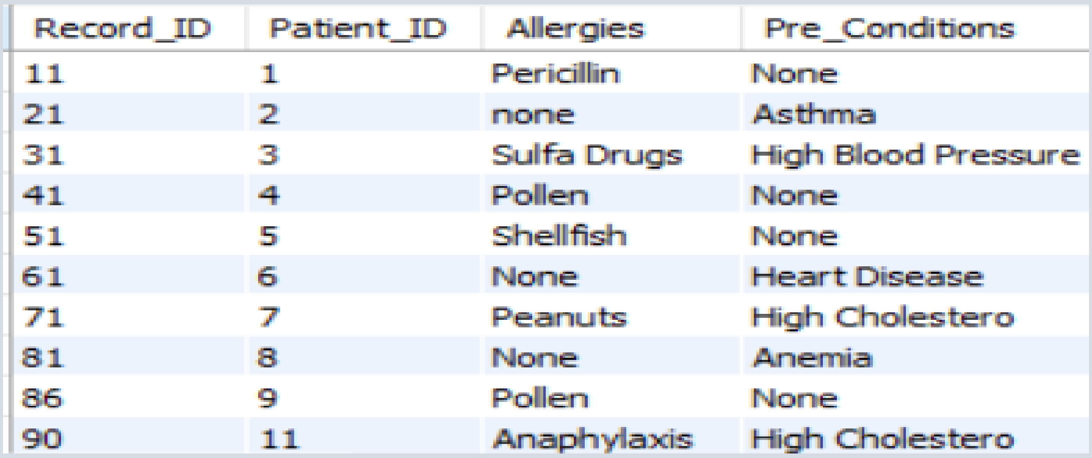
Record_ID	Patient_ID	Allergies	Pre_Conditions
87	10	Rhinitis	None
99	15	Rhinitis	None
NULL	NULL	NULL	NULL

20. .find the details of medical history excluding Allergies

```
SELECT
    *
FROM
    medical_history
WHERE
    Allergies not IN (SELECT
            Allergies
        FROM
            medical_history
        WHERE
```

```
                    Allergies = 'Rhinitis');
```

Result:

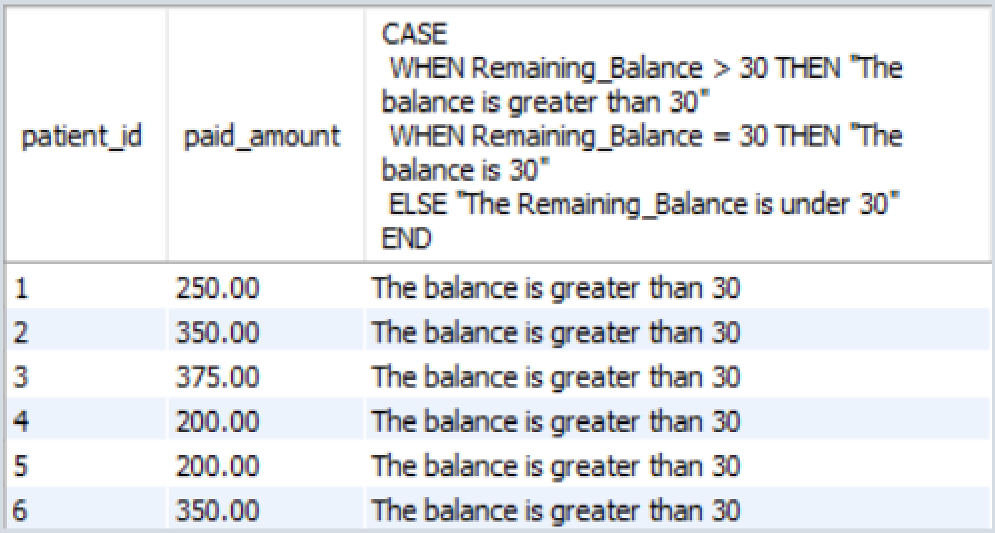


Record_ID	Patient_ID	Allergies	Pre_Conditions
11	1	Pericillin	None
21	2	none	Asthma
31	3	Sulfa Drugs	High Blood Pressure
41	4	Pollen	None
51	5	Shellfish	None
61	6	None	Heart Disease
71	7	Peanuts	High Cholestero
81	8	None	Anemia
86	9	Pollen	None
90	11	Anaphylaxis	High Cholestero

21. case the Remaining_Balance is greater than 30 and equal 30

```
        SELECT patient_id, paid_amount,
        CASE
         WHEN Remaining_Balance > 30 THEN "The
    balance is greater than 30"
 WHEN Remaining_Balance = 30 THEN "The balance is 30"
         ELSE "The Remaining_Balance is under 30"
    END
        FROM bill;
```

Result:

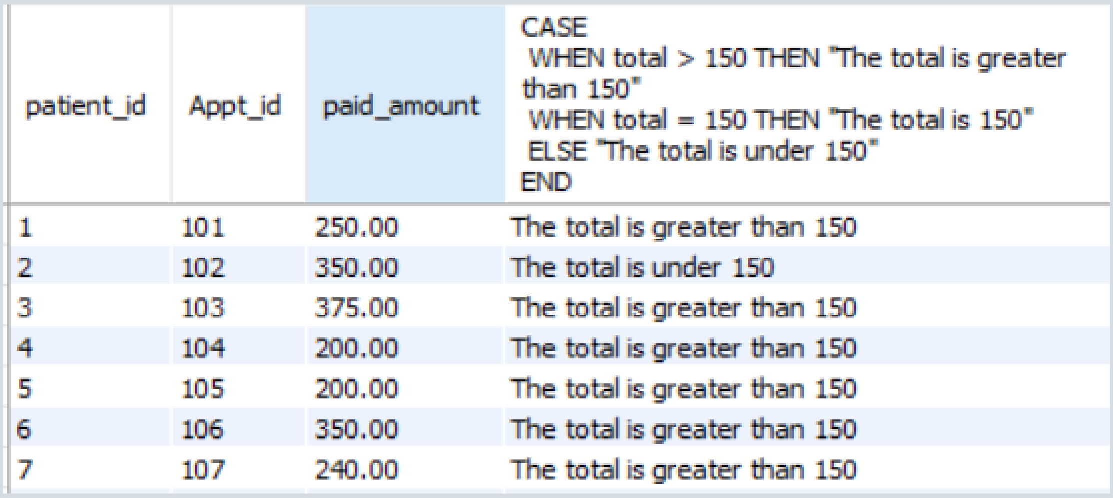


patient_id	paid_amount	CASE WHEN Remaining_Balance > 30 THEN "The balance is greater than 30" WHEN Remaining_Balance = 30 THEN "The balance is 30" ELSE "The Remaining_Balance is under 30" END
1	250.00	The balance is greater than 30
2	350.00	The balance is greater than 30
3	375.00	The balance is greater than 30
4	200.00	The balance is greater than 30
5	200.00	The balance is greater than 30
6	350.00	The balance is greater than 30

22. case the total is greater than 150 and equal 150

```
           SELECT patient_id,Appt_id,paid_amount,
CASE
            WHEN total > 150 THEN "The total is
      greater than 150"
       WHEN total = 150 THEN "The total is 150"
 ELSE "The total is under 150"
           END
                 FROM bill;
```

Result:



patient_id	Appt_id	paid_amount	CASE WHEN total > 150 THEN "The total is greater than 150" WHEN total = 150 THEN "The total is 150" ELSE "The total is under 150" END
1	101	250.00	The total is greater than 150
2	102	350.00	The total is under 150
3	103	375.00	The total is greater than 150
4	104	200.00	The total is greater than 150
5	105	200.00	The total is greater than 150
6	106	350.00	The total is greater than 150
7	107	240.00	The total is greater than 150

23. Retrieve Patient Information for those medical history

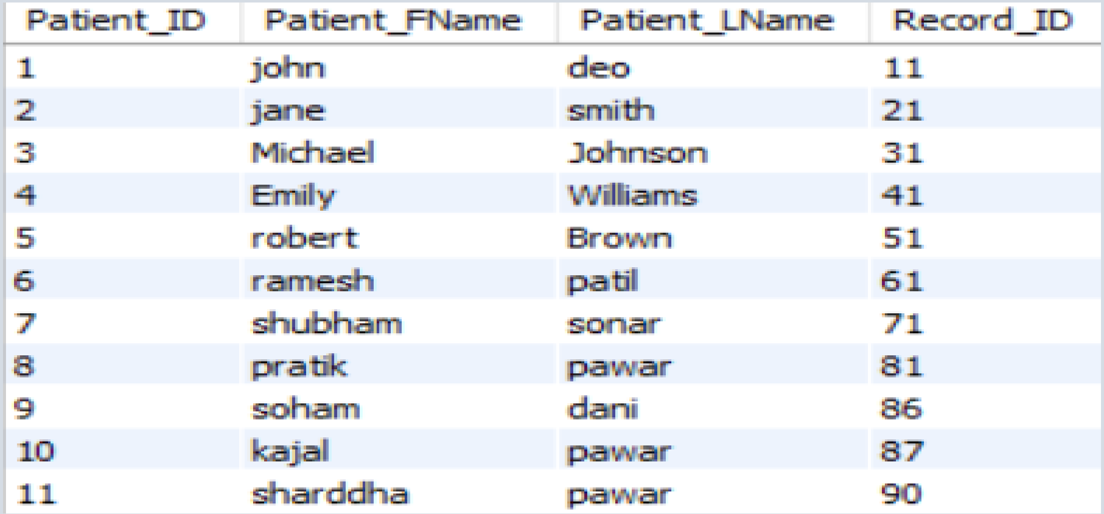
SELECT DISTINCT P.Patient_ID, P.Patient_FName, P.Patient_LName, Pre.Record_ID

FROM Patients P

INNER JOIN medical_history Pre

ON P.Patient_ID = Pre.Patient_ID;

Result:



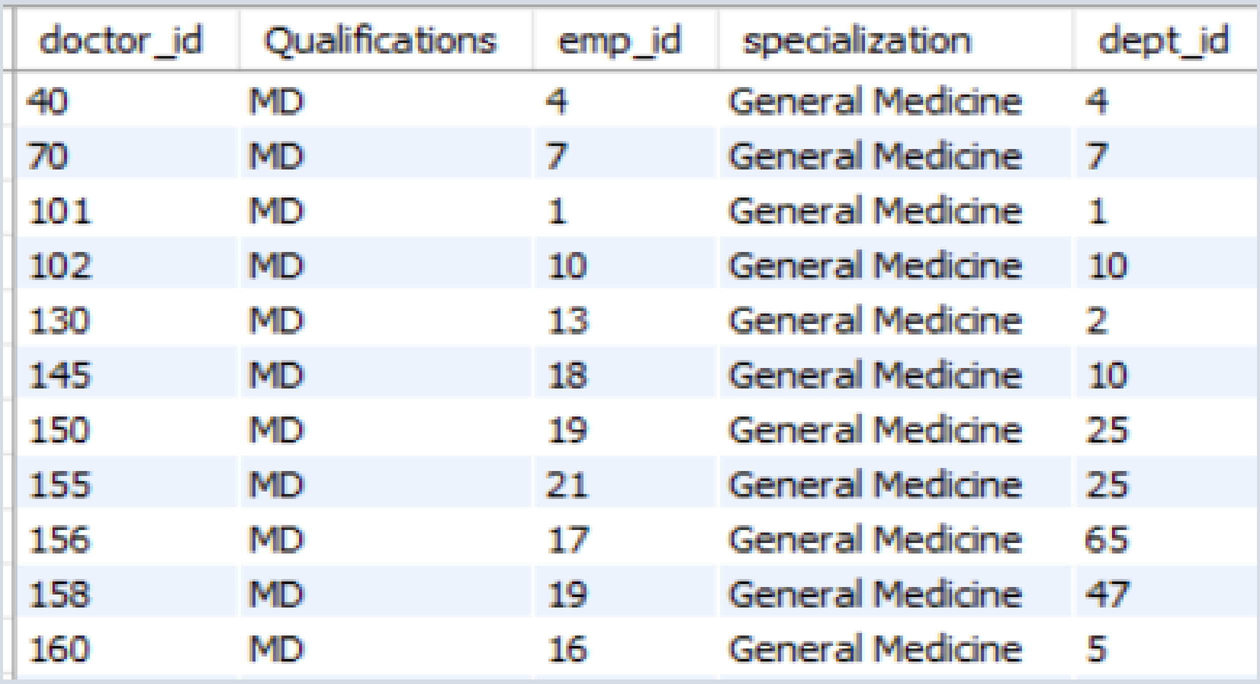
Patient_ID	Patient_FName	Patient_LName	Record_ID
1	john	deo	11
2	jane	smith	21
3	Michael	Johnson	31
4	Emily	Williams	41
5	robert	Brown	51
6	ramesh	patil	61
7	shubham	sonar	71
8	pratik	pawar	81
9	soham	dani	86
10	kajal	pawar	87
11	sharddha	pawar	90

24. view doctor_id qualification emp_id specialization and dept_id

```
            CREATE VIEW doctor_id AS
    SELECT
        doctor_id, Qualifications, emp_id,
specialization, dept_id
         FROM
                 patients
                            INNER JOIN
                                       doctor USING (doctor_id);
```

Result:

```
                          select * from doctor_id;
```



doctor_id	Qualifications	emp_id	specialization	dept_id
40	MD	4	General Medicine	4
70	MD	7	General Medicine	7
101	MD	1	General Medicine	1
102	MD	10	General Medicine	10
130	MD	13	General Medicine	2
145	MD	18	General Medicine	10
150	MD	19	General Medicine	25
155	MD	21	General Medicine	25
156	MD	17	General Medicine	65
158	MD	19	General Medicine	47
160	MD	16	General Medicine	5