

# PATIENT MANAGEMENT SYSTEM

19CSE202 DBMS Project



Team: 4

B-Tech / II Year CSE/ III Semester 19CSE202 / Database Management Systems Amrita  
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## **Abstract**

### **Introduction**

Amrita Super Specialty Hospital is a multi-specialty hospital that includes a number of departments, doctors and working staffs. Patients having different kind of ailments come to the hospital and get checked up with the doctor. The aim of this project is to design and develop a database for the hospital to maintain the records of various departments, patients, and doctors in the hospital. The admin of the hospital has the details of all patients ever treated. It also maintains the record of regular patients, patients admitted in the hospital, medical status, and prescriptions.

### **Functionalities of the System**

In a hospital there are many departments, and patients can come and meet the doctor of a particular department based on the disease the patient is suffering from. There is one type of user in this system – Administrator. Admin can access and view the patients records such as number of people getting treated at the hospital for a particular disease, doctor's details that are attending these patients.

### **Modules in the system**

This system includes the following modules

Patient information

Doctor details

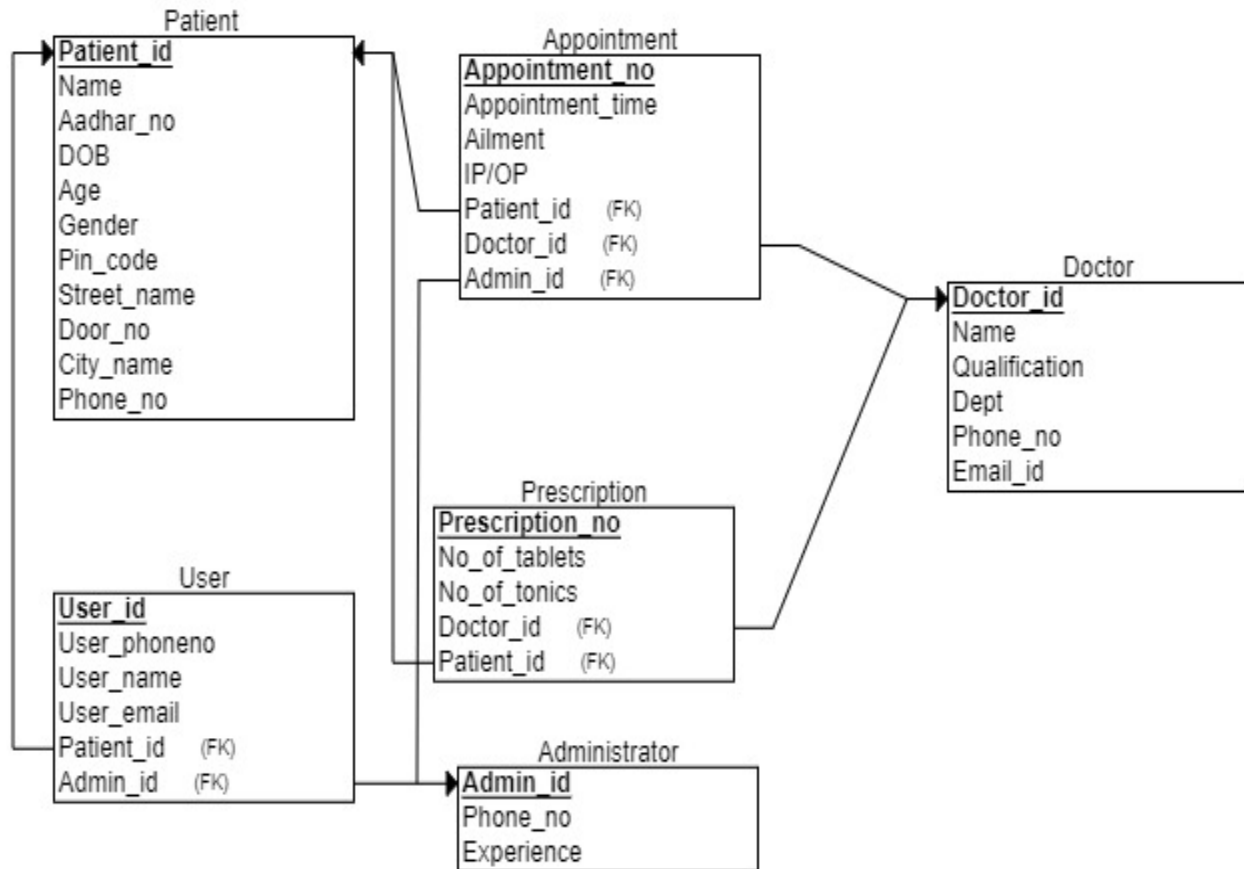
Appointment details

Prescriptions

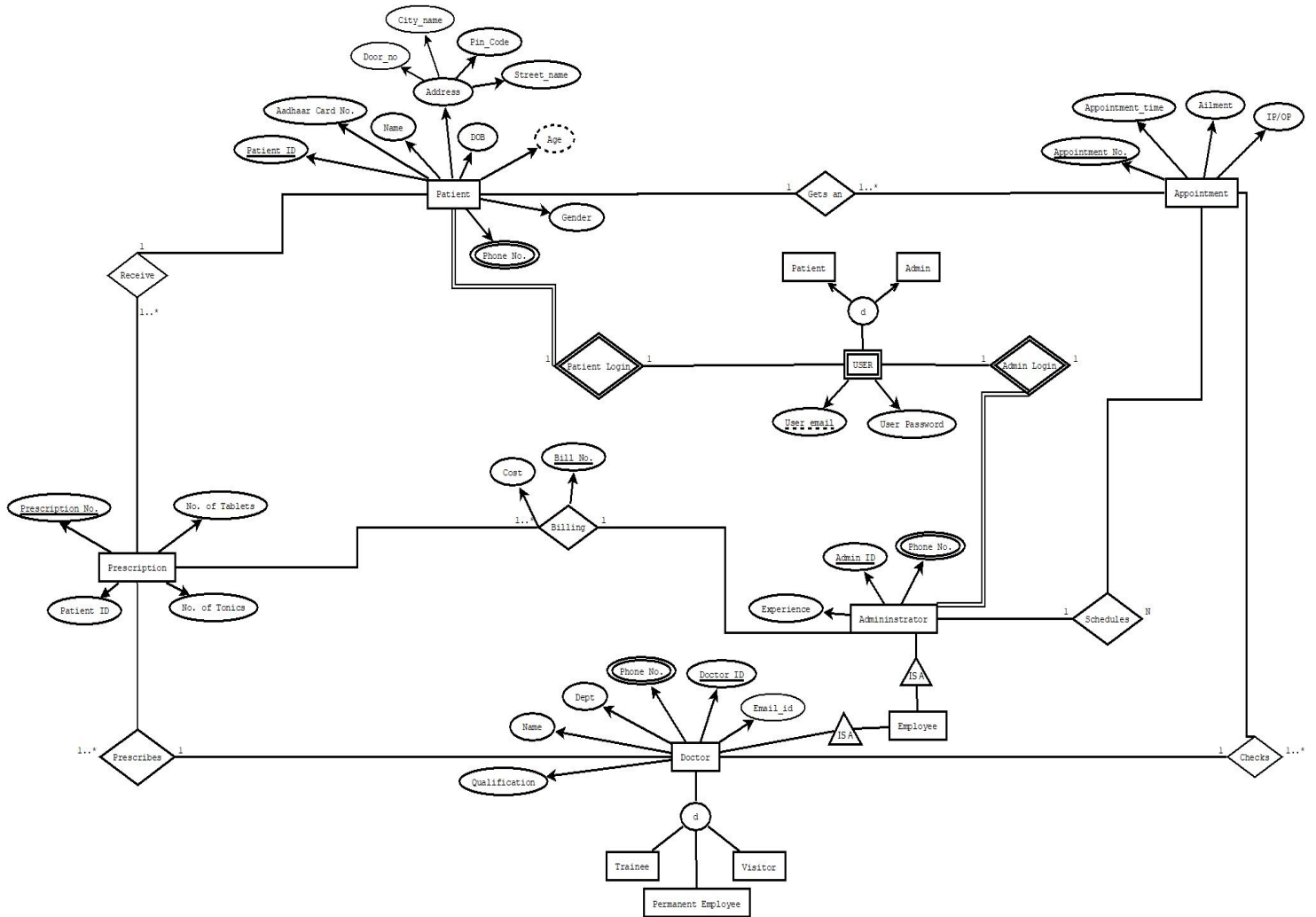
### **Benefits of the system**

This system supports information on all the patients who have visited the hospital for consulting, treatments and their prescriptions.

## Schema Diagram



## Extended ER Diagram



## NORMALIZATION

### BEFORE NORMALIZATION:

1. Administrator(admin\_id , phone\_no , Experience)
2. Patient(Patient\_id , Name , Adhar\_no , DOB , Gender , Pin\_code , Street\_name , Door\_no , City\_name , Phone\_no)
3. Doctor(Doctor\_id , Name , Qualification ,Dept , Phone\_no , Email\_id)
4. User(User\_email ,Admin\_id, Patient\_id , User\_password)
5. Appointment(Appointment\_no , Appointment\_time , Ailment , IP\_OP, Admin\_id , Patient\_id , Doctor\_id)
6. Prescription (Prescription\_no , No\_of\_tablets , No\_of\_tonics , Doctor\_id, Patient\_id )
7. Billing(Bill\_no , Admin\_id , Cost , Prescription\_no)

### FUNCTIONAL DEPENDENCIES:

1. Administrator(admin\_id , phone\_no , Experience)
  - admin\_id → phone\_no
  - admin\_id → Experience
2. Patient(Patient\_id , Name , Adhar\_no , DOB , Gender , Pin\_code , Street\_name , Door\_no , City\_name , Phone\_no)
  - Patient\_id → Name , Adhar\_no , DOB , Age , Gender , Pin\_code , Street\_name , Door\_no , City\_name
  - Patient\_id → Phone\_no
3. Doctor(Doctor\_id , Name , Qualification ,Dept , Phone\_no , Email\_id)
  - Doctor\_id → Name , Qualification ,Dept ,Email\_id
  - Doctor\_id → Phone\_no
4. User(User\_email , Admin\_id, Patient\_id , User\_password)
  - User\_email → User\_password
  - User\_email → Admin\_id
  - User\_email → Patient\_id
5. Appointment(Appointment\_no , Appointment\_time , Ailment , IP\_OP, Admin\_id , Patient\_id , Doctor\_id)
  - Appointment\_no → Appointment\_time , Ailment , IP\_OP , Admin\_id , Patient\_id , Doctor\_id

6. Prescription (Prescription\_no , No\_of\_tablets , No\_of\_tonics , Doctor\_id , Patient\_id)
  - Prescription\_no → , No\_of\_tablets , No\_of\_tonics , Doctor\_id , Patient\_id
7. Billing(Bill\_no , Admin\_id , Cost , Prescription\_no)
  - Bill\_no , Admin\_id → Cost , Prescription\_no

## **ANOMALIES:**

### **INSERTION ANOMALY:**

For example in table appointment when a new record has to be created and then patient\_id would be null until the patient\_id is created , but if patient\_id do not accept null values it results in insertion anomaly.

### **UPDATION ANOMALY:**

Sometimes in Prescription table the same patient\_id can have multiple Prescriptions so multiple prescription\_no under same doctor\_id , here when the particular patient\_id's doctor\_id change it might not get reflected in other prescriptions

### **DELETION ANOMALY:**

For example in the table patient , if the patient deletes his/her/their account then it deletes the patient\_id which will also delete's the patient's important information.

## **NORMALIZATION:**

In the relations there are ,

- Minimal set of attributes which can uniquely identify a record (primary key) is there in each table.
- Multivalued attributes found in tables admin , doctor , patient

### **REMOVING MULTIVALUED ATTRIBUTES: MINIMAL COVER:**

1. Administrator(admin\_id , phone\_no , Experience)
  - Admin\_exp (admin\_id , Experience)
  - Admin\_phoneno (admin\_id , phone\_no)

2. Patient(Patient\_id , Name , Adhar\_no , DOB , Gender , Pin\_code , Street\_name , Door\_no , City\_name , Phone\_no)
  - Patient\_info (Patient\_id , Name , Adhar\_no , DOB , Age , Gender , Pin\_code , Street\_name , Door\_no , City\_name)
  - Patient\_phoneno (Patient\_id ,Phone\_no)
3. Doctor(Doctor\_id , Name , Qualification ,Dept , Phone\_no , Email\_id)
  - Doctor\_info (Doctor\_id , Name , Qualification ,Dept ,Email\_id)
  - Doctor\_phoneno (Doctor\_id , Phone\_no)
4. User(User\_email , Admin\_id, Patient\_id , User\_password)

There are no repeating groups.

**HENCE THE RELATION SCHEMA IS IN 1NF**

5. Appointment(Appointment\_no , Appointment\_time , Ailment , IP\_OP , Admin\_id, Patient\_id , Doctor\_id)

There are no repeating groups.

**HENCE THE RELATION SCHEMA IS IN 1NF.**

6. Prescription (Prescription\_no , No\_of\_tablets , No\_of\_tonics , Doctor\_id, Patient\_id )

There are no repeating groups.

**HENCE THE RELATION SCHEMA IS IN 1NF**

7. Billing(Bill\_no , Admin\_id , Cost , Prescription\_no)

There are no repeating groups.

**HENCE THE RELATION SCHEMA IS IN 1NF.**

### **1NF**

1. Each table has a primary key: minimal set of attributes which can uniquely identify a record
2. The values in each column of a table are atomic (No multi-valued attributes allowed).
3. There are no repeating groups: two columns do not store similar information in the same table.

### **FUNCTIONAL DEPENDANCY: REMOVING PARTIAL DEPENDANCIES**



1. admin\_id -> Experience
  - New schema: Admin\_exp(admin\_id ,Experience)
2. admin\_id -> phone\_no
  - New schema: Admin\_phoneno(admin\_id ,phone\_no)
3. Patient\_id -> Name , Adhar\_no , DOB , Gender , Pin\_code , Street\_name , Door\_no , City\_name
  - New schema: Patient\_info(Patient\_id , Name , Adhar\_no , DOB , Gender , Pin\_code , Street\_name , Door\_no , City\_name)
4. Patient\_id -> Phone\_no
  - New schema: Patient\_phoneno (Patient\_id , Phone\_no)
5. Doctor\_id -> Name , Qualification ,Dept ,Email\_id
  - New schema: Doctor\_info (Doctor\_id ,Name , Qualification ,Dept ,Email\_id)
6. Doctor\_id -> Phone\_no
  - ☐ • New schema: Doctor\_phoneno(Doctor\_id ,Phone\_no)
  - ☐ • User\_email ,Admin\_id, Patient\_id , User\_password , here : User\_email is the primary key
    - User\_email → User\_password
    - User\_email → Admin\_id
    - User\_email → Patient\_id
  - New schema: User(User\_email , Admin\_id, Patient\_id, User\_password)
7. Appointment\_no → Appointment\_time , Ailment , IP\_OP , Admin\_id , Patient\_id , Doctor\_id
  - New schema: Appointment(Appointment\_no , Appointment\_time , Ailment , IP\_OP , Admin\_id , Patient\_id , Doctor\_id)
8. Prescription\_no → No\_of\_tablets , No\_of\_tonics , Doctor\_id , Patient\_id
  - New schema: Prescription (Prescription\_no , No\_of\_tablets , No\_of\_tonics , Doctor\_id , Patient\_id)
9. Attributes: Bill\_no , Admin\_id , Cost, Prescription\_no ☐
  - here : Bill\_no , Admin\_id , Prescription\_no act as a candidate key
  - Bill\_no , Prescription\_no → Cost

So cost depends on bill no and Prescription\_no which is a subset of candidate key and not on admin id

So ,moving cost data item and that part of the primary key ie Bill\_no to a new table we get New schema as

New schema : Bill(Bill\_no , Admin\_id)

New schema : Amount(Bill\_no , Prescription\_no, Cost)

## 2NF

1. The table is in 1 NF
2. Partial dependency in the table billing has been removed .

## FUNCTIONAL DEPENDANCY : REMOVING TRANSITIVE DEPENDANCIES

1. Admin\_exp(admin\_id , Experience) - NO Transitivity found
2. Admin\_phoneno(admin\_id , phone\_no) - NO Transitivity found
3. (Patient\_id , Name , Adhar\_no , DOB , Gender , Pin\_code , Street\_name , Door\_no , City\_name)
  - Patient\_id → Adhar\_no
  - Adhar\_no → DOB , Name, Gender, Pin\_code , Street\_name , Door\_no , City

Here every other non – prime key attribute in the relation is dependant on the attribute Aadhar which is also a non – prime key.

This results in transitivity dependency.

To avoid transitive dependency we create new schema

- NEW SCHEMA: Patient\_aadhar(Patient\_id , Adhar\_no)
  - NEW SCHEMA: Patient\_info(Adhar\_no , DOB , Name, Gender, Pin\_code , Street\_name , Door\_no , City\_name)
4. Patient\_phoneno(Patient\_id , Phone\_no) - NO Transitivity found
  5. Doctor\_info(Doctor\_id , Name , Qualification , Dept , Email\_id) - NO Transitivity found
  6. Doctor\_phoneno (Doctor\_id , Phone\_no) - NO Transitivity found

7. User(User\_email , Admin\_id, Patient\_id ,User\_password)- NO Transitivity found

- ☐ • User\_email
- ☐ → User\_password
- ☐ User\_email → Admin\_id
- User\_email → Patient\_id
- Schema remains same

8. Appointment(Appointment\_no , Appointment\_time , Ailment , IP\_OP , Admin\_id , Patient\_id, Doctor\_id)

- ☐ Appointment\_no → Appointment\_time , Ailment , Admin\_id , Patient\_id , Doctor\_id
- ☐ Patient\_id → IP\_OP

Here non – prime key attribute IP\_OP in the relation is dependant on the attribute Ailment which is also a non – prime key and of the form  $X \rightarrow Y$  ,  $Y \rightarrow Z$  ,  $X \rightarrow Z$  This results in transitivity dependency.

To avoid transitive dependency we create new schema

- NEW SCHEMA: Appointment\_info(Appointment\_no , Appointment\_time , Ailment , Admin\_id , Patient\_id , Doctor\_id )
- NEW SCHEMA: Appointment\_ailment(Patient\_id ,IP\_OP)

9. Prescription (Prescription\_no , No\_of\_tablets , No\_of\_tonics , Doctor\_id, Patient\_id ) - NO Transitivity found

10. Bill(Bill\_no , Admin\_id) - NO Transitivity found

11. Amount(Bill\_no ,Cost , Prescription\_no ) - NO Transitivity found

### 3NF

1. The table is in 2NF
2. Transitive dependencies in the relation are removed

### FUNCTIONAL DEPENDENCY : CHECKING IF EVERY DETERMINANT IS A CANDIDATE KEY

1. Admin\_exp(admin\_id ,Experience) - NO CHANGE
2. Admin\_phoneno(admin\_id ,phone\_no) - NO CHANGE
3. Patient\_aadhar(Patient\_id ,Adhar\_no) - NO CHANGE

4. Patient\_info(Adhar\_no , DOB , Name, Gender, Pin\_code , Street\_name , Door\_no ,City\_name)- NO CHANGE
5. Patient\_phoneno(Patient\_id , Phone\_no) - NO CHANGE
6. Doctor\_info(Doctor\_id ,Name , Qualification ,Dept ,Email\_id) - NO CHANGE
7. Doctor\_phoneno (Doctor\_id ,Phone\_no) - NO CHANGE
8. User(User\_email , Admin\_id, Patient\_id,User\_password) - NO CHANGE
9. Appointment\_info(Appointment\_no , Appointment\_time , Ailment ,Admin\_id , Patient\_id , Doctor\_id )- NO CHANGE
10. Appointment\_ailment(Patient\_id, IP\_OP)- NO CHANGE
11. Prescription (Prescription\_no , No\_of\_tablets , No\_of\_tonics , Doctor\_id, Patient\_id ) - NO CHANGE
12. Bill(Bill\_no , Admin\_id) - NO CHANGE
13. Amount(Bill\_no ,Cost , Prescription\_no ) - NO CHANGE

### **BCNF - Boyce–Codd normal form**

1. Above relations are in 3NF.
2. In the above relations, one can see that only the super key determines all the other attributes in that relation.  
So all the relations are in BCNF.

## RELATIONS AFTER NORMALISATION:

1. Admin\_exp(admin\_id ,Experience)
2. Admin\_phoneno(admin\_id ,phone\_no)
3. Patient\_aadhar(Patient\_id ,Adhar\_no)
4. Patient\_info(Adhar\_no , DOB , Name, Gender, Pin\_code , Street\_name , Door\_no , City\_name)
5. Patient\_phoneno(Patient\_id , Phone\_no)
6. Doctor\_info(Doctor\_id ,Name , Qualification ,Dept ,Email\_id)
7. Doctor\_phoneno (Doctor\_id ,Phone\_no)
8. User(User\_email , Admin\_id, Patient\_id , User\_password)
9. Appointment\_info(Appointment\_no , Appointment\_time , Ailment , Admin\_id , Patient\_id , Doctor\_id )
10. Appointment\_ailment(Patient\_id, IP\_OP)
11. Prescription (Prescription\_no , No\_of\_tablets , No\_of\_tonics , Doctor\_id, Patient\_id)
12. Bill(Bill\_no , Admin\_id)
13. Amount(Bill\_no ,Cost , Prescription\_no )

## **Backend Design**

### **Table creation commands**

#### **1. Admin\_exp**

```
create table admin_exp(admin_id varchar2(20),Experience varchar2(50), primary key(admin_id));
```

#### **2. Admin\_phoneno**

```
create table admin_phoneno(admin_id varchar2(20),admin_phone int,primary key (admin_phone),  
foreign key(admin_id) references admin_exp(admin_id));
```

#### **3. Patient\_aadhaar**

```
create table patient_aadhaar(patient_id varchar2(10),aadhaar_no int,primary key (patient_id));
```

#### **4. Patient\_info**

```
create table patient_info(aadhaar_no int, DOB date,patient_name varchar2(100),gender  
varchar2(10),pin_code int,street_name varchar2(100),door_no varchar2(100),  
city_name varchar2(50), primary key (aadhaar_no));
```

#### **5. Patient\_phoneno**

```
create table patient_phoneno(patient_id varchar2(10),patient_phone int, foreign key(patient_id)  
references patient_aadhaar(patient_id),primary key (patient_phone));
```

#### **6. Doctor\_info**

```
create table doctor_info(doctor_id varchar2(10),doctor_name varchar2(50),qualification  
varchar2(50),department varchar2(50),doctor_email varchar2(50), primary key (doctor_id));
```

#### **7. Doctor\_phoneno**

```
create table doctor_phoneno(doctor_id varchar2(10),doctor_phone int, foreign key(doctor_id)  
references doctor_info(doctor_id), primary key (doctor_phone));
```

#### **8. User**

```
create table user_(user_email varchar2(20),admin_id varchar2(20), patient_id  
varchar2(20),user_password varchar2(10),foreign key(admin_id) references  
admin_exp(admin_id),foreign key(patient_id) references
```

```
patient_aadhaar(patient_id),primary key (user_email));
```

### **9. Appointment\_info**

```
create table appointment_info(appointment_no int , appointment_time varchar2(20) ,  
ailment varchar2(20) , admin_id varchar2(20) , patient_id varchar2(20) NOTNULL, doctor_id  
varchar2(20),foreign key(admin_id) references admin_exp(admin_id),foreign key(patient_id)  
references patient_aadhaar(patient_id),foreign key(doctor_id) references doctor_info(doctor_id),  
primary key (appointment_no),);
```

### **10.Appointment\_ailment**

```
create table appointment_ailment(patient_id varchar2(20),IP_OP varchar2(20),  
foreign key(patient_id) references patient_aadhaar(patient_id));
```

### **11. Prescription**

```
create table prescription(prescription_no int,no_of_tablets int,no_of_tonics int,  
doctor_id varchar2(20),patient_id varchar2(20), foreign key(patient_id) references  
patient_aadhaar(patient_id),foreign key(doctor_id) references doctor_info(doctor_id),  
primary key(prescription_no));
```

### **12. Bill**

```
create table bill(bill_no int, admin_id varchar2(20),primary key(bill_no),foreign key(admin_id)  
references admin_exp(admin_id));
```

### **13.Amount**

```
create table amount(bill_no int, prescription_no int,bill_cost varchar2(50),foreign key (bill_no)  
references bill(bill_no),foreign key(prescription_no) references prescription(prescription_no));
```

## **INSERTION OF RECORDS**

```
insert into admin_exp values('A01','10 Years');  
insert into admin_exp values('A02','11 Years');  
insert into admin_exp values('A03','12 Years');  
insert into admin_exp values('A04','13 Years');  
insert into admin_exp values('A05','14 Years');  
insert into admin_exp values('A06','15 Years');  
insert into admin_exp values('A07','16 Years');  
insert into admin_exp values('A08','17 Years');  
insert into admin_exp values('A09','18 Years');
```

```
insert into admin_exp values('A10','20 Years'); select*  
from admin_exp
```

```
insert into admin_phoneno values('A01',9734527645);  
insert into admin_phoneno values('A02',9784645326);  
insert into admin_phoneno values('A03',7344567645);  
insert into admin_phoneno values('A04',9873476553);  
insert into admin_phoneno values('A05',9934578776);  
insert into admin_phoneno values('A06',7345310023);  
insert into admin_phoneno values('A07',8098459864);  
insert into admin_phoneno values('A08',9988779876);  
insert into admin_phoneno values('A09',7798644325);  
insert into admin_phoneno values('A10',9440678730);  
select *from admin_phoneno
```

```
insert into patient_aadhaar values('P01',223245637635);  
insert into patient_aadhaar values('P02',465837526475);  
insert into patient_aadhaar values('P03',846372239654);  
insert into patient_aadhaar values('P04',927475784329);  
insert into patient_aadhaar values('P05',938465436254);  
insert into patient_aadhaar values('P06',247564837256);  
insert into patient_aadhaar values('P07',674326298573);  
insert into patient_aadhaar values('P08',623546352372);  
insert into patient_aadhaar values('P09',932823574256);  
insert into patient_aadhaar values('P10',223273645434);  
select * from patient_aadhaar
```

```
insert into patient_info values(223245637635,DATE' 2002-09-  
02','Balakrishna','Male',500049,'Gachibowli','HNO1234','Hyderabad'); insert  
into patient_info values(465837526475,DATE' 2003-08-  
13','Gopal','Male',534649,'Connaught Place','HNO7354','New Delhi'); insert  
into patient_info values(846372239654,DATE' 2004-07-  
22','Anushka','Female',518002,'Colaba causeway','HNO4567','Mumbai'); insert  
into patient_info values(927475784329,DATE' 2005-06-12','Ram  
Charan','Male',465854,'Dadabhai Naoraji Road','HNO9375','Mumbai'); insert  
into patient_info values(938465436254,DATE' 1996-05-06','Alia  
Bhatt','Female',518004,'Fontainhas','HNO2345','Goa');  
insert into patient_info values(247564837256,DATE' 1987-04-  
15','Prabhas','Male',500736,'Suchithra Circle','HNO9876','Hyderabad'); insert  
into patient_info values(674326298573,DATE' 1968-03-30','Pawan  
Kalyan','Male',501234,'Jubilee Hills','HNO5678','Hyderabad');
```



```
insert into patient_info values(623546352372,DATE' 1998-02-26','Samantha','Female',764857,'Hitex','HNO9452','Hyderabad');
insert into patient_info values(932823574256,DATE' 1999-01-23','Pooja','Female',456633,'Mall Road','HNO7634','Shimla');
insert into patient_info values(223273645434,DATE' 1978-12-31','M.S Dhoni','Male',518006,'Hazratganj','HNO2758','Lucknow');
```

```
select*from patient_info
```

```
insert into patient_phoneno values ('P01',9876543221);
insert into patient_phoneno values ('P02',8765432921);
insert into patient_phoneno values ('P03',7654356221);
insert into patient_phoneno values ('P04',7655443221);
insert into patient_phoneno values ('P05',9835543226);
insert into patient_phoneno values ('P06',9997394421);
insert into patient_phoneno values ('P07',9765542424);
insert into patient_phoneno values ('P08',8658434232);
insert into patient_phoneno values ('P09',9757363416);
insert into patient_phoneno values ('P10',7666623421);
```

```
select*from patient_phoneno
```

```
insert into doctor_info
values('D01','DR.RAMESH','MBBS','Cardiology','ramesh123@gmail.com'); insert
into doctor_info
values('D02','DR.SURESH','MS','Ophthalmology','suresh123@gmail.com'); insert
into doctor_info
values('D03','DR.MUKESH','MD','Radiology','mukesh123@gmail.com'); insert into
doctor_info values('D04','DR.ARJUN','MS','Nephrology','arjun123@gmail.com');
insert into doctor_info
values('D05','DR.TARAK','MBBS','Neurology','tarak123@gmail.com'); insert into
doctor_info
values('D06','DR.ARVINDEH','MD','Pulmonology','arvindeh123@gmail.com'); insert
into doctor_info values('D07','DR.LOKESH
KUMAR','MBBS','Pediatrics','lokes123@gmail.com');
insert into doctor_info
values('D08','DR.PUNEETH','MD','Dermatology','puneeth123@gmail.com'); insert
into doctor_info
values('D09','DR.SANJAY','MD','Psychiatry','sanjay123@gmail.com'); insert into
doctor_info values('D10','DR.RITA
BHAKSHI','MS','Oncology','rita123@gmail.com');
select *from doctor_info
```

```
insert into doctor_phoneno values('D01', 7364652345);
```

```
insert into doctor_phoneno values('D02', 9323564642);
insert into doctor_phoneno values('D03', 8234512919);
insert into doctor_phoneno values('D04', 7345391644);
insert into doctor_phoneno values('D05', 9935264533);
insert into doctor_phoneno values('D06', 9435474756);
insert into doctor_phoneno values('D07', 7734734825);
insert into doctor_phoneno values('D08', 8765343233);
insert into doctor_phoneno values('D09', 9000800763);
insert into doctor_phoneno values('D10', 8099283553);
select* from doctor_phoneno
```

```
insert into user_ values('user1@gmail.com','A01','P01','User1@01'); insert
into user_ values('user2@gmail.com','A02','P02','User2@02'); insert into
user_ values('user3@gmail.com','A03','P03','User3@03'); insert into user_
values('user4@gmail.com','A04','P04','User4@04'); insert into user_
values('user5@gmail.com','A05','P05','User5@05'); insert into user_
values('user6@gmail.com','A06','P06','User6@06'); insert into user_
values('user7@gmail.com','A07','P07','User7@07'); insert into user_
values('user8@gmail.com','A08','P08','User8@08'); insert into user_
values('user9@gmail.com','A09','P09','User9@09'); insert into user_
values('user10@gmail.com','A10','P10','User10@10'); select * from user_
```

```
insert into appointment_info values(001,'9AM','Arrhythmia','A01','P01','D01'); insert
into appointment_info values(002,'9.15AM','Malaria','A02','P02','D02'); insert into
appointment_info values(003,'9.30AM','Hepatitis','A03','P03','D03'); insert into
appointment_info values(004,'9.45AM','Dengue','A04','P04','D04'); insert into
appointment_info values(005,'9.50AM','Tuberculosis','A05','P05','D05'); insert into
appointment_info values(006,'9.55AM','Diabetes','A06','P06','D06'); insert into
appointment_info values(007,'9.20AM','Alzheimer','A07','P07','D07'); insert into
appointment_info values(008,'10AM','HIV','A08','P08','D08');
insert into appointment_info values(009,'10.20AM','Jaundice','A09','P09','D09');
insert into appointment_info values(010,'11AM','Pneumonia','A10','P10','D10');
select * from appointment_info
```

```
insert into appointment_ailment values('P01', 'IP');
insert into appointment_ailment values('P02', 'OP');
insert into appointment_ailment values('P03', 'IP');
insert into appointment_ailment values('P04', 'OP');
insert into appointment_ailment values('P05', 'IP');
insert into appointment_ailment values('P06', 'OP');
insert into appointment_ailment values('P07', 'IP');
insert into appointment_ailment values('P08', 'OP');
```

```
insert into appointment_ailment values('P09', 'OP');
insert into appointment_ailment values('P10', 'IP');
select * from appointment_ailment
```

```
insert into prescription values(1111,2,3,'D01','P01');
insert into prescription values(1112,5,6,'D02','P02');
insert into prescription values(1113,7,8,'D03','P03');
insert into prescription values(1114,4,3,'D04','P04');
insert into prescription values(1115,8,4,'D05','P05');
insert into prescription values(1116,6,4,'D06','P06');
insert into prescription values(1117,2,5,'D07','P07');
insert into prescription values(1118,3,7,'D08','P08');
insert into prescription values(1119,7,2,'D09','P09');
insert into prescription values(1110,6,8,'D10','P10');
select * from prescription
```

```
insert into bill values(1000,'A01');
insert into bill values(2000,'A02');
insert into bill values(3000,'A03');
insert into bill values(4000,'A04');
insert into bill values(5000,'A05');
insert into bill values(6000,'A06');
insert into bill values(7000,'A07');
insert into bill values(8000,'A08');
insert into bill values(9000,'A09');
insert into bill values(10001,'A10');
select * from bill
```

```
insert into amount values (1000,1111,'RS 30,000');
insert into amount values (2000,1112,'RS 35,000');
insert into amount values (3000,1113,'RS 40,000');
insert into amount values (4000,1114,'RS 45,000');
insert into amount values (5000,1115,'RS 50,000');
insert into amount values (6000,1116,'RS 55,000');
insert into amount values (7000,1117,'RS 60,000');
insert into amount values (8000,1118,'RS 65,000');
insert into amount values (9000,1119,'RS 70,000');
insert into amount values (10001,1110,'RS 75,000');
SELECT *FROM amount
```

**Sample instances of the tables:**

**Admin\_exp table:**

ADMIN_ID	EXPERIENCE
A01	10 Years
A02	11 Years
A03	12 Years
A04	13 Years
A05	14 Years
A06	15 Years
A07	16 Years
A08	17 Years
A09	18 Years
A10	20 Years

**Admin\_phoneno table:**

ADMIN_ID	ADMIN_PHONE
A01	9734527645
A02	9784645326
A03	7344567645
A04	9873476553
A05	9934578776
A06	7345310023
A07	8098459864
A08	9988779876
A09	7798644325
A10	9440678730

Patient\_aadhaar table:

PATIENT_ID	AADHAAR_NO
P01	223245637635
P02	465837526475
P03	846372239654
P04	927475784329
P05	938465436254
P06	247564837256
P07	674326298573
P08	623546352372
P09	932823574256
P10	223273645434

Patient\_info table:

AADHAAR_NO	DOB	PATIENT_NAME	GENDER	PIN_CODE	STREET_NAME	DOOR_NO	CITY_NAME
223245637635	02-SEP-02	Balakrishna	Male	500049	Gachibowli	HN01234	Hyderabad
465837526475	13-AUG-03	Gopal	Male	534649	Connaught Place	HN07354	New Delhi
846372239654	22-JUL-04	Anushka	Female	518002	Colaba causeway	HN04567	Mumbai
927475784329	12-JUN-05	Ram Charan	Male	465854	Dadabhai Naoroji Road	HN09375	Mumbai
938465436254	06-MAY-96	Alia Bhatt	Female	518004	Fontainhas	HN02345	Goa
247564837256	15-APR-87	Prabhas	Male	500736	Suchithra Circle	HN09876	Hyderabad
674326298573	30-MAR-68	Pawan Kalyan	Male	501234	Jubilee Hills	HN05678	Hyderabad
623546352372	26-FEB-98	Samantha	Female	764857	Hitex	HN09452	Hyderabad
932823574256	23-JAN-99	Pooja	Female	456633	Mall Road	HN07634	Shimla
223273645434	31-DEC-78	M.S Dhoni	Male	518006	Hazratganj	HN02758	Lucknow

**Patient\_phoneno table:**

PATIENT_ID	PATIENT_PHONE
P01	9876543221
P02	8765432921
P03	7654356221
P04	7655443221
P05	9835543226
P06	9997394421
P07	9765542424
P08	8658434232
P09	9757363416
P10	7666623421

**Doctor\_info table:**

DOCTOR_ID	DOCTOR_NAME	QUALIFICATION	DEPARTMENT	DOCTOR_EMAIL
D01	DR.RAMESH	MBBS	Cardiology	ramesh123@gmail.com
D02	DR.SURESH	MS	Ophthalmology	suresh123@gmail.com
D03	DR.MUKESH	MD	Radiology	mukesh123@gmail.com
D04	DR.ARJUN	MS	Nephrology	arjun123@gmail.com
D05	DR.TARAK	MBBS	Neurology	tarak123@gmail.com
D06	DR.ARVINDH	MD	Pulmonology	arvin dh123@gmail.com
D07	DR.LOKESH KUMAR	MBBS	Pediatrics	lokesh123@gmail.com
D08	DR.PUNEETH	MD	Dermatology	puneeth123@gmail.com
D09	DR.SANJAY	MD	Psychiatry	sanjay123@gmail.com
D10	DR.RITA BHAKSHI	MS	Oncology	rita123@gmail.com

**Doctor\_phoneno table:**

DOCTOR_ID	DOCTOR_PHONE
D01	7364652345
D02	9323564642
D03	8234512919
D04	7345391644
D05	9935264533
D06	9435474756
D07	7734734825
D08	8765343233
D09	9000800763
D10	8099283553

**User table:**

USER_EMAIL	ADMIN_ID	PATIENT_ID	USER_PASSWORD
user1@gmail.com	A01	P01	User1@01
user2@gmail.com	A02	P02	User2@02
user3@gmail.com	A03	P03	User3@03
user4@gmail.com	A04	P04	User4@04
user5@gmail.com	A05	P05	User5@05
user6@gmail.com	A06	P06	User6@06
user7@gmail.com	A07	P07	User7@07
user8@gmail.com	A08	P08	User8@08
user9@gmail.com	A09	P09	User9@09
user10@gmail.com	A10	P10	User10@10

**Appointment\_info table:**

APPOINTMENT_NO	APPOINTMENT_TIME	AILMENT	ADMIN_ID	PATIENT_ID	DOCTOR_ID
1	9AM	Arrhythmia	A01	P01	D01
2	9.15AM	Malaria	A02	P02	D02
3	9.30AM	Hepatitis	A03	P03	D03
4	9.45AM	Dengue	A04	P04	D04
5	9.50AM	Tuberculosis	A05	P05	D05
6	9.55AM	Diabetes	A06	P06	D06
7	9.20AM	Alzheimer	A07	P07	D07
8	10AM	HIV	A08	P08	D08
9	10.20AM	Jaundice	A09	P09	D09
10	11AM	Pneumonia	A10	P10	D10

**Appointment\_ailment table:**

PATIENT_ID	IP_OP
P01	IP
P02	OP
P03	IP
P04	OP
P05	IP
P06	OP
P07	IP
P08	OP
P09	OP
P10	IP



**Prescription table:**

PRESCRIPTION_NO	NO_OF_TABLETS	NO_OF_TONICS	DOCTOR_ID	PATIENT_ID
1111	2	3	D01	P01
1112	5	6	D02	P02
1113	7	8	D03	P03
1114	4	3	D04	P04
1115	8	4	D05	P05
1116	6	4	D06	P06
1117	2	5	D07	P07
1118	3	7	D08	P08
1119	7	2	D09	P09
1110	6	8	D10	P10

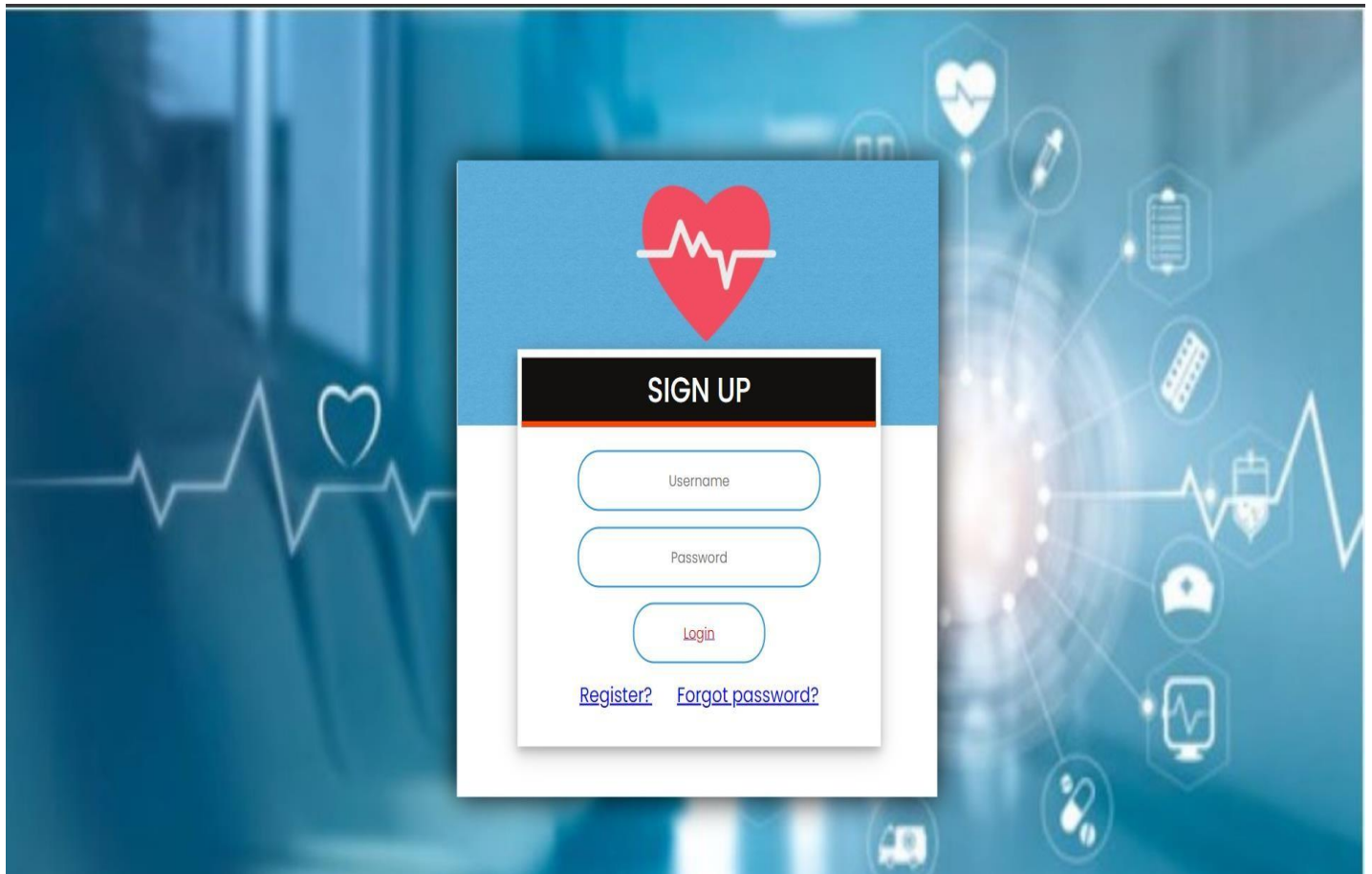
**Bill table:**

BILL_NO	ADMIN_ID
1000	A01
2000	A02
3000	A03
4000	A04
5000	A05
6000	A06
7000	A07
8000	A08
9000	A09
10001	A10

**Amount table:**

BILL_NO	PRESCRIPTION_NO	BILL_COST
1000	1111	RS 30,000
2000	1112	RS 35,000
3000	1113	RS 40,000
4000	1114	RS 45,000
5000	1115	RS 50,000
6000	1116	RS 55,000
7000	1117	RS 60,000
8000	1118	RS 65,000
9000	1119	RS 70,000
10001	1110	RS 75,000

## User Interface Design Screens:



## USER REGISTRATION FORM

### User Registration

Full Name

Enter your name

Username

Enter your username

Email

xyz@gmail.com

Phone Number

Enter your number

DOB

dd-mm-yyyy



Address

Enter your Address

Password

Enter your password

Confirm Password

Confirm your password

Gender

☐ Male

☐ Female



Enter your name

Enter your username

Email

xyz@gmail.com

Phone Number

Enter your number

DOB

dd-mm-yyyy



Address

Enter your Address

Password

Enter your password

Confirm Password

Confirm your password

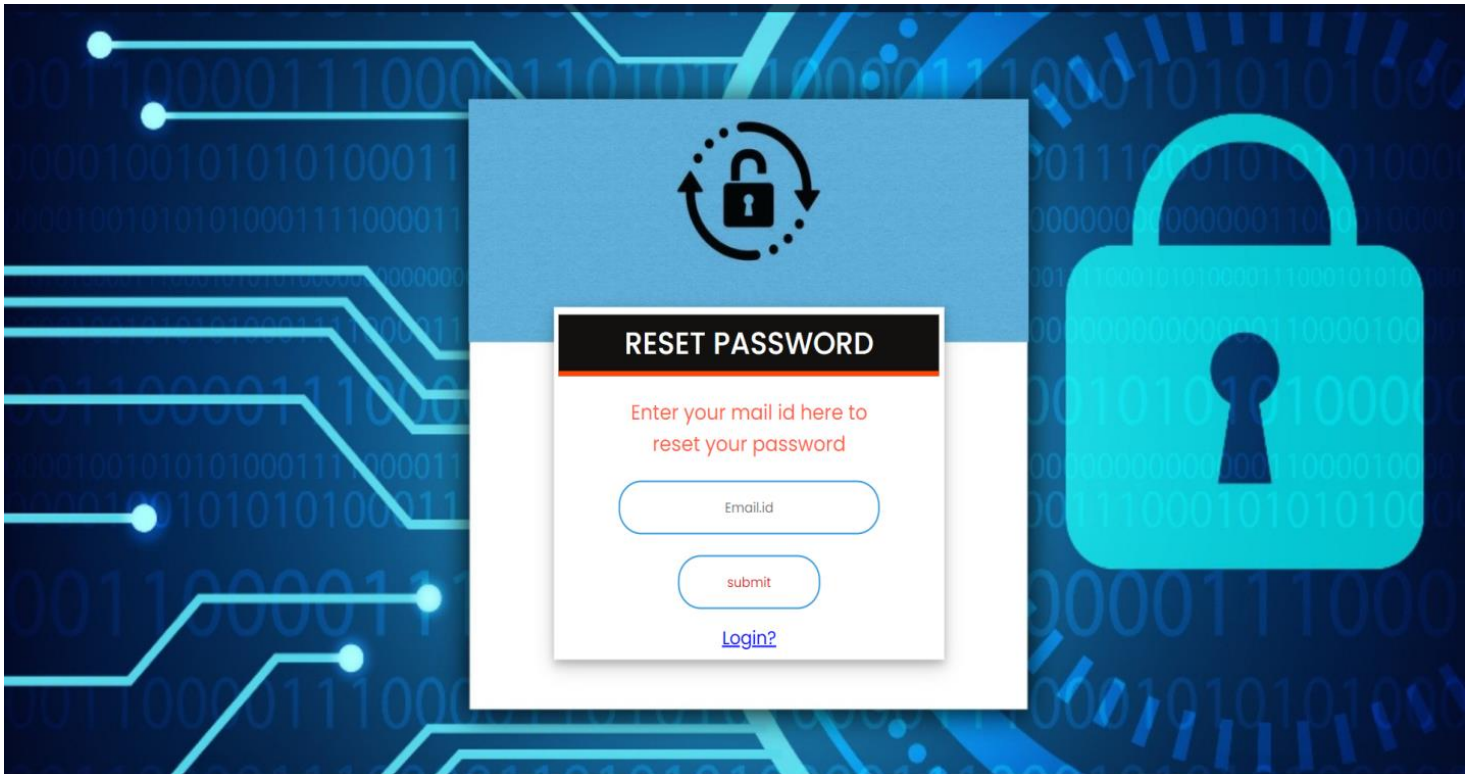
Gender

☐ Male

☐ Female

Reset Page

Register



## WHAT DO YOU WANT TO DO?





## WHICH SHOULD BE DISPLAYED?

admin\_exp

admin\_phoneno

patient\_aadhaar

patient\_info

patient\_phoneno

doctor\_info

doctor\_phoneno

user\_

appointment\_info

appointment\_ailment

prescription

bill

amount

Appointment_no	Appointment_time	Ailment	Admin_id	Patient_id	Doctor_id
1	9AM	Arrhythmia	A01	P01	D01
2	9.15AM	Malaria	A02	P02	D02
3	9.30AM	Hepatitis	A03	P03	D03
4	9.45AM	Dengue	A04	P04	D04
5	9.50AM	Tuberculosis	A05	P05	D05
6	9.55AM	Diabetes	A06	P06	D06
7	9.20AM	Alzheimer	A07	P07	D07
8	10AM	HIV	A08	P08	D08
9	10.20AM	Jaundice	A09	P09	D09
10	11AM	Pneumonia	A10	P10	D10



Doctor_id	Doctor_name	Qualification	Department	Doctor_email
D01	DR.RAMESH	MBBS	Cardiology	ramesh123@gmail.com
D02	DR.SURESH	MS	Ophthalmology	suresh123@gmail.com
D03	DR.MUKESH	MD	Radiology	mukesh123@gmail.com
D04	DR.ARJUN	MS	Nephrology	arjun123@gmail.com
D05	DR.TARAK	MBBS	Neurology	tarak123@gmail.com
D06	DR.ARVINDH	MD	Pulmonology	arvindh123@gmail.com
D07	DR.LOKESH KUMAR	MBBS	Pediatrics	lokesh123@gmail.com
D08	DR.PUNEETH	MD	Dermatology	puneeth123@gmail.com
D09	DR.SANJAY	MD	Psychiatry	sanjay123@gmail.com
D10	DR.RITA BHAKSHI	MS	Oncology	rita123@gmail.com
D11	Dr.Ramkumar	MBBS	Neurology	ram1996@gmail.com
D12	Dr.Ramya	MBBS	Neurology	ramya1996@gmail.com
D15	Dr.Rishik	MDS	Dentist	rishik1996@gmail.com



Prescription_no	No_of_tablets	No_of_tonics	Doctor_id	Patient_id
12	3	3	D04	P04
1110	6	8	D10	P10
1111	2	3	D01	P01
1112	5	6	D02	P02
1113	7	8	D03	P03
1114	4	3	D04	P04
1115	8	4	D05	P05
1116	6	4	D06	P06
1117	2	5	D07	P07
1118	3	7	D08	P08
1119	7	2	D09	P09
1222	4	4	D01	P03
1223	4	4	D01	P03
1333	3	3	D11	P02



Insert Data in prescription table

prescription\_no:

19

patient\_id:

P04

no\_of\_tablets:

3

no\_of\_tonics:

3

doctor\_id:

D12

Submit

data stored in the database successfully.

19  
P04  
3  
3  
D12



## WHICH SHOULD BE SEARCHED?

APPOINTMENT  
INFO

DOCTOR INFO

PRESCRIPTION  
INFO

USER INFO

PATIENT INFO

RETRIEVING DATA FROM APPOINTMENT TABLE BY PATIENT ID:

P02

Search

appointment_no	appointment_time	ailment	admin_id	patient_id	doctor_id
2	9.15AM	Malaria	A02	P02	D02

RETRIEVING DATA FROM PATIENT TABLE BY PATIENT NAME :

Aadhaar_no	DOB	Patient_name	Gender	Pin_code	Street_name	Door_no	City_name
223273645434	1978-12-31	M.S Dhoni	Male	518006	Hazratganj	HNO2758	Lucknow

RETRIEVING DATA FROM USER TABLE BY USER ID :

user_id	user_name	password	user_email	phone_no	DOB	Gender	Address
1	prakash	prak6703	'user1@gmail.com	38458345738	2002-01-05	male	xyz nagar 37 , cbe

## CONNECTIVITY CODE:

Insertion of patient details in patient\_info table :

```
<?php
$conn = mysqli_connect("localhost", "root", "", "patient_management");

// Check connection
if($conn === false){
    die("ERROR: Could not connect. "
        . mysqli_connect_error());
}

$aadhar_no = $_POST['aadhar_no'];
$DOB = $_POST['DOB'];
$patient_name = $_POST['patient_name'];
$gender = $_POST['gender'];
$pin_code = $_POST['pin_code'];
$street_name = $_POST['street_name'];
$door_no = $_POST['door_no'];
$city_name = $_POST['city_name'];

// Performing insert query execution
// here our table name is college
$sql = "INSERT INTO patient_info VALUES ('$aadhar_no',
    '$DOB','$patient_name','$gender','$pin_code','$street_name','$door_no','$city_name')";

if(mysqli_query($conn, $sql)){
    echo "<h3>data stored in the database successfully."
        . "</h3>";
} else {
    echo nl2br("\n$aadhar_no\n $DOB\n "
        . "$patient_name\n $gender\n $pin_code\n $street_name\n $door_no\n $city_name");
}
echo "ERROR: Hush! Sorry $sql. "
    . mysqli_error($conn);
}
// Close connection
mysqli_close($conn);
?>
```

Searching appointment details based on patient id :

```
<?php
$con = mysqli_connect("localhost","root","","patient_management");

if(isset($_GET['search']))
{
    $filtervalues = $_GET['search'];
    $query = "SELECT * FROM appointment_info WHERE CONCAT(patient_id) LIKE '%$filtervalues%' ";
    $query_run = mysqli_query($con, $query);

    if(mysqli_num_rows($query_run) > 0)
    {
        foreach($query_run as $items)
        {
            ?>
            <tr>
                <td><?= $items['appointment_no']; ?></td>
                <td><?= $items['appointment_time']; ?></td>
                <td><?= $items['ailment']; ?></td>
                <td><?= $items['admin_id']; ?></td>
                <td><?= $items['patient_id']; ?></td>
                <td><?= $items['doctor_id']; ?></td>
            </tr>
            <?php
        }
    }
    else
    {
        ?>
        <tr>
            <td colspan="4">No Record Found</td>
        </tr>
        <?php
    }
}
?>
```

## Searching doctor info based on doctor's department

```
<?php
$con = mysqli_connect("localhost","root","","patient_management");

if(isset($_GET['search']))
{
    $filtervalues = $_GET['search'];
    $query = "SELECT * FROM doctor_info WHERE CONCAT(department) LIKE '%$filtervalues%' ";
    $query_run = mysqli_query($con, $query);

    if(mysqli_num_rows($query_run) > 0)
    {
        foreach($query_run as $items)
        {
            ?>
            <tr>
                <td><?= $items['doctor_id']; ?></td>
                <td><?= $items['doctor_name']; ?></td>
                <td><?= $items['qualification']; ?></td>
                <td><?= $items['department']; ?></td>
                <td><?= $items['doctor_email']; ?></td>

            </tr>
            <?php
        }
    }
    else
    {
        ?>
        <tr>
            <td colspan="4">No Record Found</td>
        </tr>
        <?php
    }
}
?>
```