



UTD- Fall 2022

CS 6360 Database Design - Database Project

Phase 2

Team members

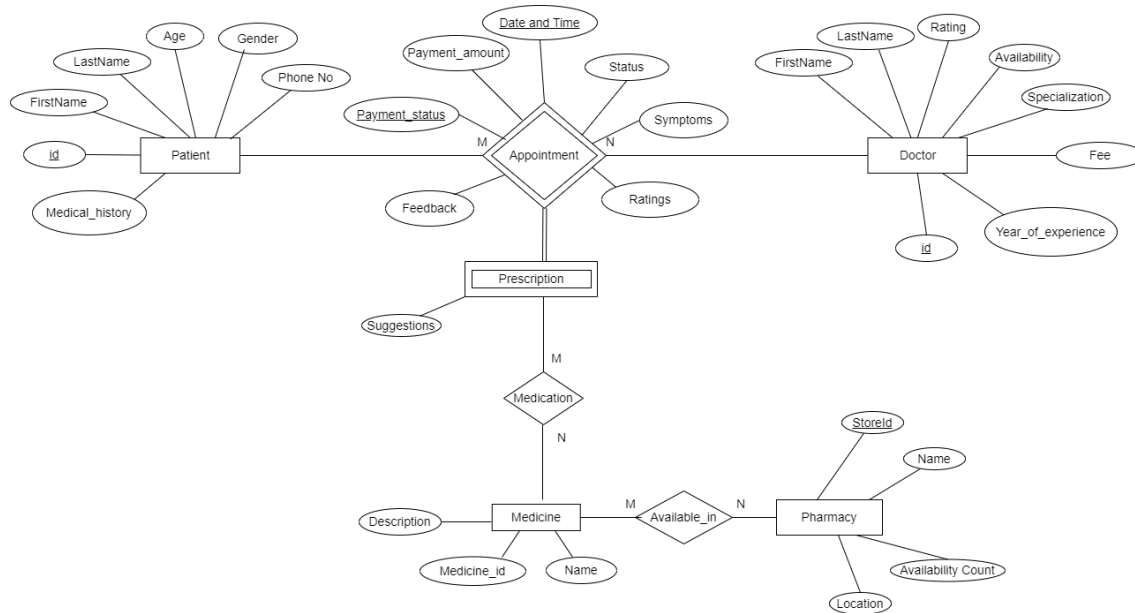
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## Phase 2: Conceptual and Logical Database Design (20%)

**a) ER Diagram (including the description of the entities, attributes, keys, cardinality, and participation constraints).**



### Patient –

Patient entity represents patients with each entity having attributes id, firstName, lastName, Age, Gender, Phone No, medical history of the patient.

### Doctor –

Doctor entity represents virtual doctor with each entity having attributes id, firstName, lastName describes the name of the doctor, rating describes the rating given to doctor by patients, specialization describes the doctor's specialization and availability describes the timings when the doctor is available.

### Appointment –

It is the relationship which bounds patient with doctor. Patients book appointments to receive doctor consultations. It has its own attributes like Date and Time representing the date and time of the appointment booked by patient, Status representing if the appointment is booked or not, Ratings and feedback given by patient after the doctor consultation, Payment status, Payment amount which represents the payment information of the appointment

### Prescription –

Prescription refers to the medication and suggestions prescribed by the doctor to the patient for an appointment. Each prescription is captured against an appointment and hence it is a weak entity.

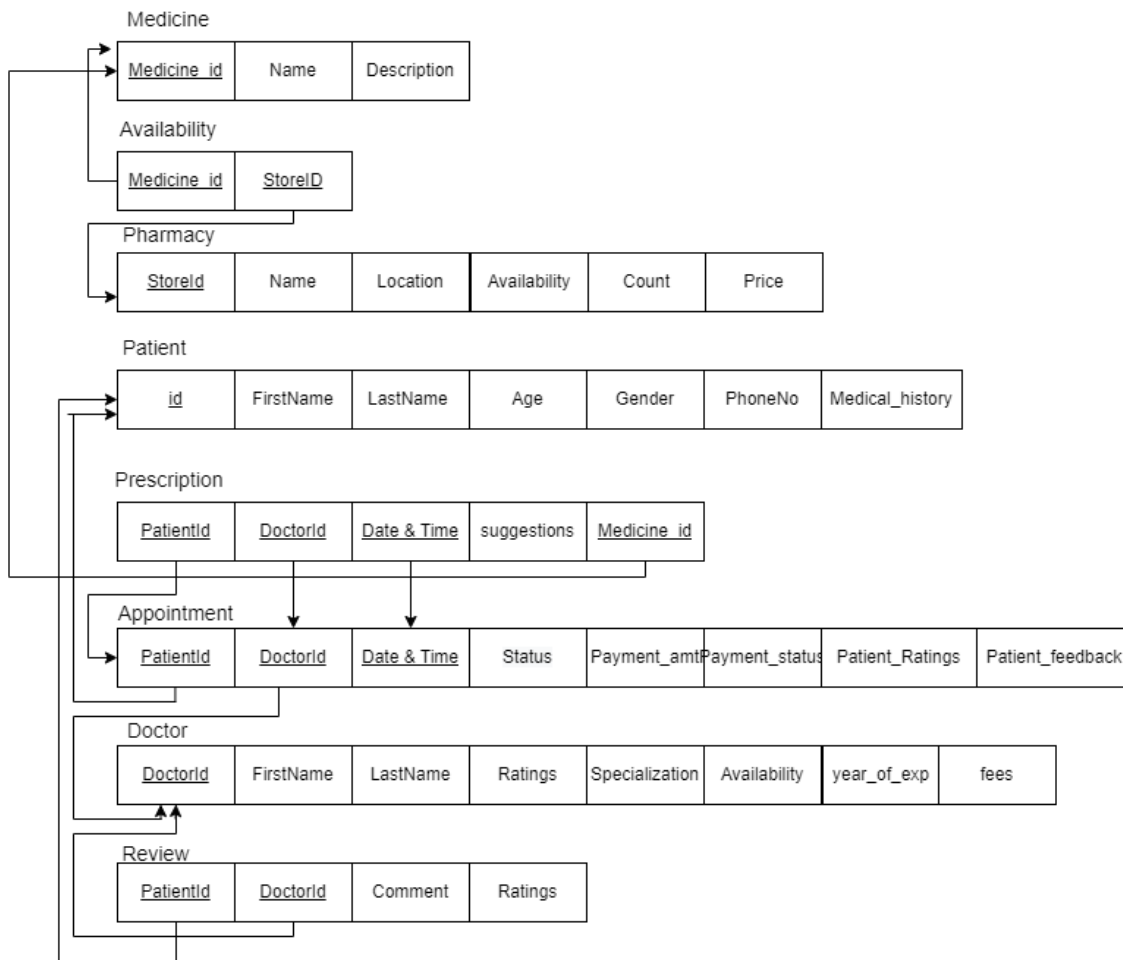
#### Medicine –

The medicines prescribed by the doctor are captured in the medicine entity represented by a unique identifier and name of the medicine.

#### Pharmacy –

It represents a store/warehouse of medicines capturing attributes like storeId, Name, Location of the store, Availability count of the medicines.

### b) Database Schema



### c) List of business rules and integrity constraints of the database.

1. Doctors must work for minimum 6 hours/week and 3 days a week.

2. Doctors cannot work for more than 40 hrs/week.
3. For regular appointments patients pay - doctor's fee + \$3
4. For late night/ early morning sessions - doctor's fee + \$5
5. On weekends patients pay - doctor's fee + \$7
6. Pharmacies with no stock of a particular medicine are not visible to the user.
7. Patients can rate multiple doctors
8. Doctors can have multiple user ratings
9. A particular user can rate a doctor only after taking at least one session
10. A doctor can not belong to more than one specialization
11. For each appointment a doctor has to prescribe medicine or lifestyle changes which can be done by adding suggestions or medicine name.
12. Ratings needs to be between 0 to 5
13. A patient can not have more than one "approved" appointment with the same doctor on the same day
14. A prescription can have many medicines and a medicine can be prescribed in many prescriptions.
15. There can be no prescription without an appointment.
16. A medicine may be available at many pharmacies and a pharmacy can have many medicines.

#### **d) Interface requirements**

Each expected user interface of the project is defined as follows (one in each page) –

##### **i) Website Startup Page**

SUSHRUTA  
MEDICARE FOR ALL  
LOGO

**Welcome to the Sushruta**  
**Medicare For All**

Brief Text Description of Sushruta

**Why Sushruta is the best Telemedicine App**

Image of Appointment  
booking

Image of Doctor

Image of Pharmacy

Description of how to book  
appointment by patient in  
SUSHRUTA

Description of how convenient  
and hassle free it is for  
doctors

Description of how Pharmacy  
benefits from it

**Statistics**

No. of Patients  
Registered

No. of Doctors  
Registered

No. of Pharmacy  
Onboard

No. of  
Appointments  
scheduled

**Services Offered By Sushruta**

Services Image  
No 1

Services Image  
No 2

Services Image  
No 3

Services Image  
No 4

Description of  
Service Image No  
1

Description of  
Service Image No 2

Description of  
Service Image No 3

Description of  
Service Image No 4

Services Image  
No 5

Services Image  
No 6

Services Image  
No 7

Services Image  
No 8

Description of  
Service Image No 5

Description of  
Service Image No 6

Description of  
Service Image No 7

Description of  
Service Image No 8

**Contact Us**


Email Us at : *EMAIL ID*

Call Us at : *Phone Number*

Business Hours: Monday - Friday 800 am - 5: 00 pm (CDT)

\* SUSHRUTA MEDICARE FOR ALL \*

## ii) Login Page

Login Page	
SUSHRUTA MEDICARE FOR ALL	
Welcome to the Login Page	
	EMAIL ID
	<input type="text"/>
	PASSWORD
	<input type="password"/>
<input type="button" value="LOGIN"/>	
<hr/>	
<b><u>Contact Us</u></b>	
Email Us at : <i>EMAIL ID</i>	Call Us at : <i>Phone Number</i>
Business Hours: Monday - Friday 800 am - 5: 00 pm (CDT)	
* SUSHRUTA MEDICARE FOR ALL *	

iii) User Dashboard post login

User Dashboard					
SUSHRUTA MEDICARE FOR ALL					
Raise an Issue	Past Appointments	Medical History	My Profile	Raise an Issue	Logout

### Search Doctors

By Category ▼ Search

Doctor No. 1

Image of Doctor

Description of Doctor No.1

Rating of 1st Doctor

Book Appointment

Doctor No. N

Image of Doctor

Description of Doctor No.N

Rating of Nth Doctor

Book Appointment

### Medicine & Pharmacy

Search Medicine

Enter Medicine Name Search

Pharmacy Near you

Enter Zipcode Search

Medicine No. 1

Description of Medicine No. 1

Available at Pharmacies & their quantities

Contact Pharmacies

Medicine No. N

Description of Medicine No. N

Available at Pharmacies & their quantities

Contact Pharmacies

Pharmacy No. 1

Details of Pharmacy

Pharmacy No. 2

Details of Pharmacy

### Medical History

Confidential Health Information of User

### Past Appointments

Latest Appointment

Appointment Date and Time	Doctor Name and Profile	Medication Suggested	Edit Rating
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First Appointment

Appointment Date and Time	Doctor Name and Profile	Medication Suggested	Edit Rating
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iv)Raise an issue page

Raise an Issue Page
SUSHRUTA MEDICARE FOR ALL
<p><b><u>Raise an Issue</u></b></p> <div><p>Give Text Description of the Issue</p></div> <p>SUBMIT</p>
<hr/>
<p><b><u>Contact Us</u></b></p> <p>Email Us at : <i>EMAIL ID</i>                      Call Us at : <i>Phone Number</i></p> <p>Business Hours: Monday - Friday 800 am - 5: 00 pm (CDT)</p>
* SUSHRUTA MEDICARE FOR ALL *

v) Doctors Dashboard

Doctors Dashboard			
SUSHRUTA MEDICARE FOR ALL			
My Schedule	My Profile	Raise an Issue	Logout
<b><u>My Schedule</u></b>			
First Appointment			
Appointment Date and Time	Patient Name and Profile	Medication Suggestion	<div>Accept</div> <div>Reschedule</div> <div>Cancel</div>
Last Appointment			
Appointment Date and Time	Patient Name and Profile	Medication Suggestion	<div>Accept</div> <div>Reschedule</div> <div>Cancel</div>
<b><u>Past Appointments</u></b>			
Latest Appointment			
Appointment Date and Time	Patient Name and Profile	Medication Suggestion	
First Appointment			
Appointment Date and Time	Patient Name and Profile	Medication Suggestion	
<hr/>			
<b><u>Contact Us</u></b>			
Email Us at : <i>EMAIL ID</i>		Call Us at : <i>Phone Number</i>	
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## vi)Pharmacist Dashboard

Pharmacist Dabsboard			
SUSHRUTA MEDICARE FOR ALL			
My Inventory	My Profile	Raise an Issue	Logout
<b><u>My Inventory.</u></b>			
Medicine No. 1			
Description of Medicine No. 1	Quantity Available	Edit Quantity	
Medicine No. N			
Description of Medicine No. N	Quantity Available	Edit Quantity	
<b><u>Contact Us</u></b>			
Email Us at : <i>EMAIL ID</i>		Call Us at : <i>Phone Number</i>	
Business Hours: Monday - Friday 800 am - 5: 00 pm (CDT)			
* SUSHRUTA MEDICARE FOR ALL *			