CSE302: Database Systems (Section 4) [FALL 2024]

Project Report
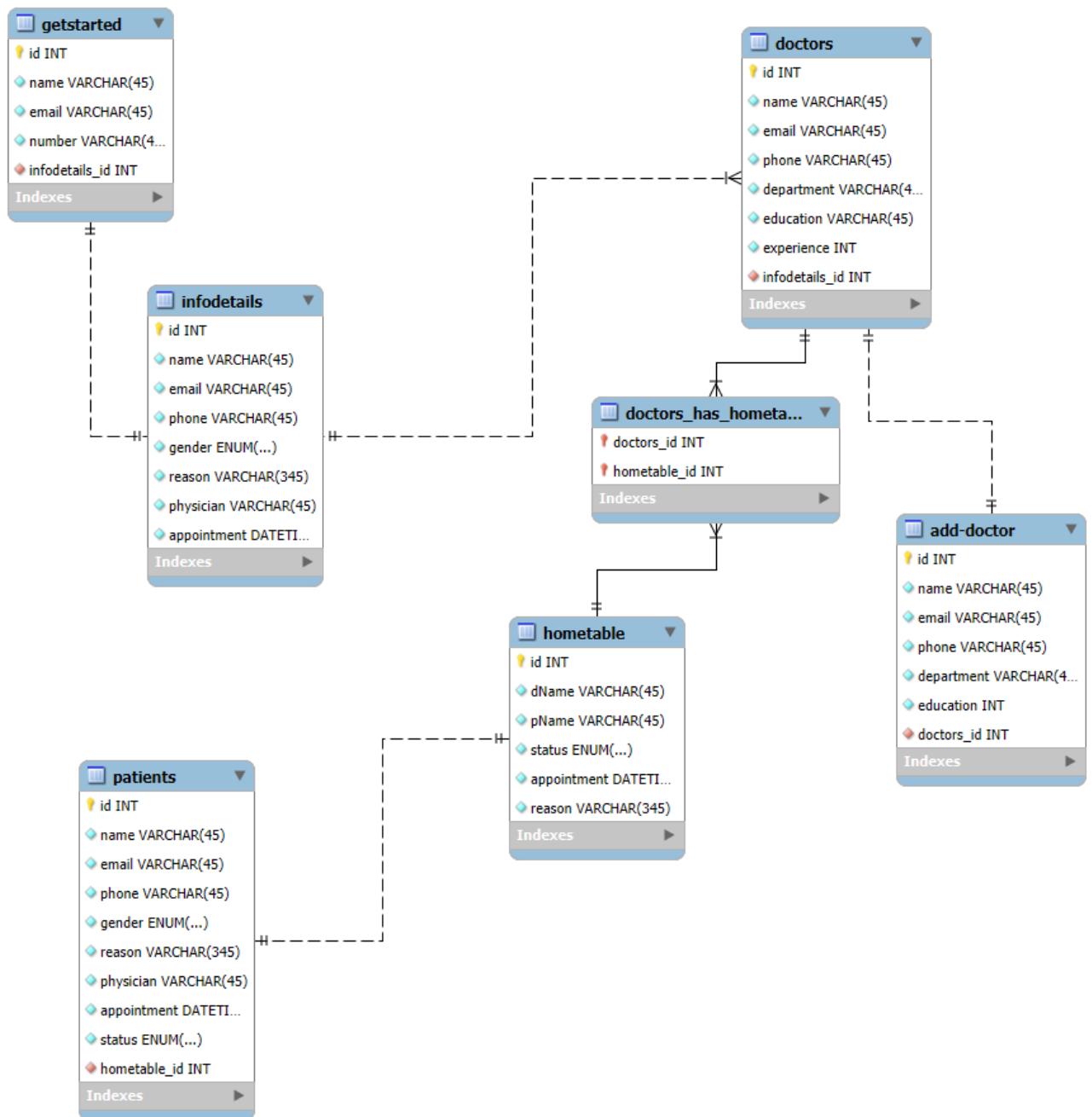
Hospital Management System

Brick-C/Hospital-Management-System
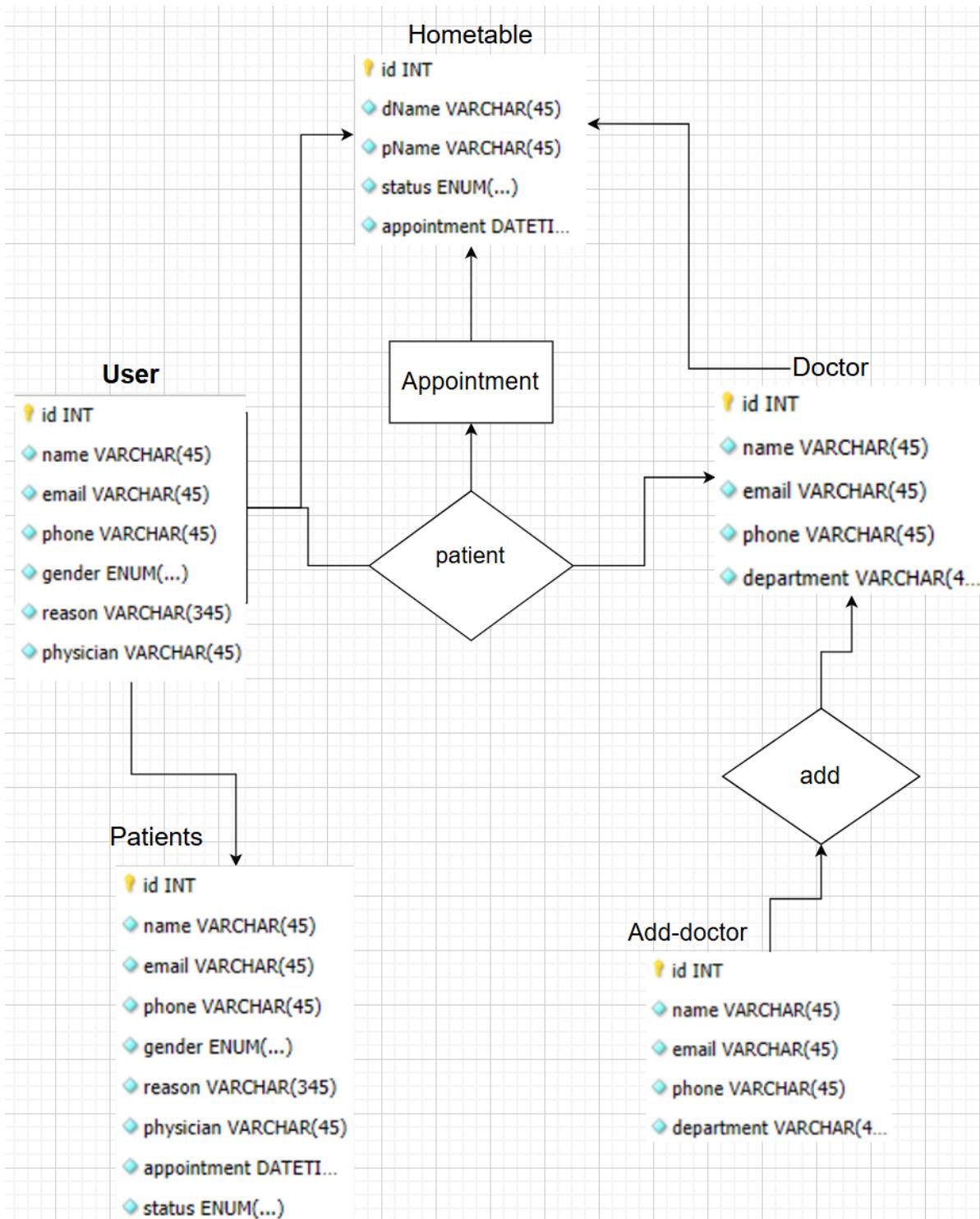
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1. E-R Model of the Project

getstarted
- 🔑 id INT
- ◇ name VARCHAR(45)
- ◇ email VARCHAR(45)
- ◇ number VARCHAR(4...
- ◆ infodetails_id INT
- Indexes

infodetails
- 🔑 id INT
- ◇ name VARCHAR(45)
- ◇ email VARCHAR(45)
- ◇ phone VARCHAR(45)
- ◇ gender ENUM(...)
- ◇ reason VARCHAR(345)
- ◇ physician VARCHAR(45)
- ◇ appointment DATETI...
- Indexes

doctors
- 🔑 id INT
- ◇ name VARCHAR(45)
- ◇ email VARCHAR(45)
- ◇ phone VARCHAR(45)
- ◇ department VARCHAR(4...
- ◇ education VARCHAR(45)
- ◇ experience INT
- ◆ infodetails_id INT
- Indexes

doctors_has_hometa...
- 🔑 doctors_id INT
- 🔑 hometable_id INT
- Indexes

add-doctor
- 🔑 id INT
- ◇ name VARCHAR(45)
- ◇ email VARCHAR(45)
- ◇ phone VARCHAR(45)
- ◇ department VARCHAR(4...
- ◇ education INT
- ◆ doctors_id INT
- Indexes

hometable
- 🔑 id INT
- ◇ dName VARCHAR(45)
- ◇ pName VARCHAR(45)
- ◇ status ENUM(...)
- ◇ appointment DATETI...
- ◇ reason VARCHAR(345)
- Indexes

patients
- 🔑 id INT
- ◇ name VARCHAR(45)
- ◇ email VARCHAR(45)
- ◇ phone VARCHAR(45)
- ◇ gender ENUM(...)
- ◇ reason VARCHAR(345)
- ◇ physician VARCHAR(45)
- ◇ appointment DATETI...
- ◇ status ENUM(...)
- ◆ hometable_id INT
- Indexes

2. Schema Design of the Project

Hometable

- 🔑 id INT
- 🔷 dName VARCHAR(45)
- 🔷 pName VARCHAR(45)
- 🔷 status ENUM(...)
- 🔷 appointment DATETI...

User

- 🔑 id INT
- 🔷 name VARCHAR(45)
- 🔷 email VARCHAR(45)
- 🔷 phone VARCHAR(45)
- 🔷 gender ENUM(...)
- 🔷 reason VARCHAR(345)
- 🔷 physician VARCHAR(45)

Appointment

patient

Doctor

- 🔑 id INT
- 🔷 name VARCHAR(45)
- 🔷 email VARCHAR(45)
- 🔷 phone VARCHAR(45)
- 🔷 department VARCHAR(4...

add

Patients

- 🔑 id INT
- 🔷 name VARCHAR(45)
- 🔷 email VARCHAR(45)
- 🔷 phone VARCHAR(45)
- 🔷 gender ENUM(...)
- 🔷 reason VARCHAR(345)
- 🔷 physician VARCHAR(45)
- 🔷 appointment DATETI...
- 🔷 status ENUM(...)

Add-doctor

- 🔑 id INT
- 🔷 name VARCHAR(45)
- 🔷 email VARCHAR(45)
- 🔷 phone VARCHAR(45)
- 🔷 department VARCHAR(4...

3. Implementation Checklist

Description	Remarks

Project ID	
Workspace Name	
Workspace Email	
Workspace Password	
Authentication Type	Application Express/Custom (keep the relevant one)
Username and Password to Login	
admin	*admin123*
if you have multiple users, write all username and password correctly	none
Number of Reports with Forms	3
Number of Reports based on Queries, Aggregate Queries	5
Included any trigger/other feature which is not taught in class. If yes, please explain briefly.	none
Write the most unique feature/functionality in your application or the page of your application that you are proud of. Explain briefly.	Updating status to ('scheduled', 'canceled', 'pending') when submitting an appointment or canceling an appointment and pending by default

4. Reports with Forms

Report Page Number and Name	Form Page Number and Name	Table
Url link - "/"	"/"	infodetails
"/info"	"/info"	infodetails
"/doctor"	"/doctor"; Doctor's Info	Add-doctor
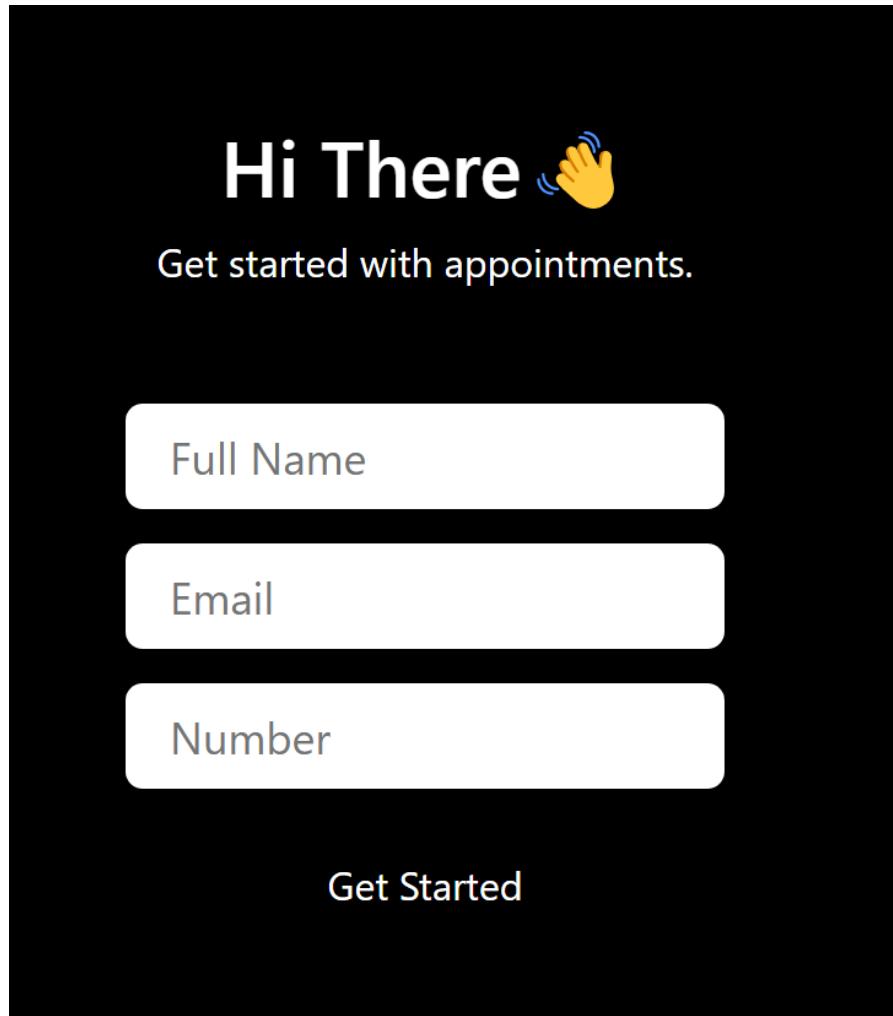
Fig 4.1 (Infodetails)

Full Name

mohammad sanaullah

Email

tamjid2077@gmail.com

Phone Number

01790898818

Gender

Select Gender

Reason

Primary Care Physician

Select a physician

Appointment Date

mm/dd/yyyy --:-- --

Submit and Continue

Fig 4.2 (infodetails)

Doctor's Info

Name

Name

Email

hello@example.com

Phone Number

12345678

Department

Department

Education

Education

Experience

Experience

Close   Save

Fig 4.3 (add-doctor)

5. Reports based on Multi-Table and Aggregate Queries

Page Number and Name	Query Type	Report description
"/home"	Multi- table	Home table where the admin can see the patients name and their appointment date with their desired doctor and the admin can schedule, cancel it by consulting with the doctor
"/doctor"	Multi-table	Information about all the doctors available. Their name, email, phone, education, experience
"/patient"	Multi-table	Information about all the patients. Their name, email, phone, appointment date, their doctors

ID	Doctor	Patient	Status	Appointment	Action
4	Alice Johnson	Tamjid Hossain	scheduled	2025-01-25--18:00:00	Schedule Cancel
5	Dr. Frank Wilson	Eva	scheduled	2025-01-27--04:25:00	Schedule Cancel
6	Alice Johnson	Sanaullah	pending	2025-01-29--14:08:00	Schedule Cancel
7	Dr. Frank Wilson	Amir Fahad	pending	2025-01-29--02:28:00	Schedule Cancel

1

Fig 6.1

ID	Name	Email	Phone Number	Department	Education	Experience	Actions
1	Alice Johnson	alice.johnson@example.com	5551234567	Cardiology	MD in Cardiology	15 years	Delete
2	Dr. Bob Smith	bob.smith@hospital.com	5559876543	Orthopedics	MS in Orthopedic Surgery	12 years	Delete
3	Dr. Carol Davis	carol.davis@hospital.com	5555678901	Pediatrics	MD in Pediatrics	8 years	Delete
4	Dr. David Brown	david.brown@hospital.com	5553456789	Neurology	DM in Neurology	20 years	Delete
5	Dr. Emily White	emily.white@hospital.com	5554567890	Dermatology	MD in Dermatology	5 years	Delete

1 2

Fig 6.2

ID	Patient	Email	Phone Number	Gender	Physician	Appointment
4	Tamjid Hossain	tamjid2077@gmail.com	01790898818	Male	Alice Johnson	2025-01-25--18:00:00
5	Eva	tamtop2000@gmail.com	01790898819	Male	Dr. Frank Wilson	2025-01-27--04:25:00
6	Sanaullah	tamjid2077@gmail.com	01790898818	Male	Alice Johnson	2025-01-29--14:08:00
7	Amir Fahad	cheroke.3033@gmail.com	01590323818	Male	Dr. Frank Wilson	2025-01-29--02:28:00

1

Fig 6.3

6. Authorization and User Role Assignment

User Role Assignment

localhost:5173 says

Enter Admin Username

OK   Cancel

localhost:5173 says

Enter Admin Password

OK   Cancel

User name	Password	Role
admin	admin123	Administrator

7. Concluding Remarks

This project presented a significant learning curve due to the adoption of a completely new tech stack for both the frontend and backend development. The initial phases were particularly challenging, with difficulties in establishing a functional backend and integrating it with the frontend to fetch data. This integration process proved to be quite demanding, requiring extensive debugging and problem-solving. Furthermore, deploying the application to the server introduced additional complexities, as the application experienced frequent crashes upon backend connection. Despite these obstacles, including frustrating periods of troubleshooting and debugging, the project ultimately achieved its core objectives. The experience gained through overcoming these challenges has significantly enhanced our understanding of the new tech stack and provided valuable insights into full-stack development and deployment processes.