



**FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY**

**CSC 3402-1 (DATABASE APPLICATION DEVELOPMENT)**

**SEMESTER II 2022/2023**

**PROGRAMME:**

**BACHELOR OF COMPUTER SCIENCE WITH HONORS**

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**COURSE: DATABASE APPLICATION DEVELOPMENT**

**COURSE CODE: CSC3402**

**GROUP MEMBERS:**

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GitHub Link : <https://github.com/DRAX099/DTBS-PROJECT.git>

## 1.0 INTRODUCTION

The development of a web-based application for healthcare data management is a significant endeavor with the primary objective of improving the efficiency and accuracy of managing patient information and medication records. By leveraging a well-designed database and intuitive user interfaces, this project aims to streamline the process of registering staff members, recording patient details, and managing prescribed medicines.

To accomplish these goals, the project will involve the development of a web application that incorporates key technologies such as HTML, CSS, JavaScript, and a server-side programming language such as PHP, Python, or Ruby. This combination of technologies will enable the creation of a robust and dynamic user interface that facilitates seamless data storage and retrieval from a database, thereby ensuring quick and efficient access to patient information and medication records.

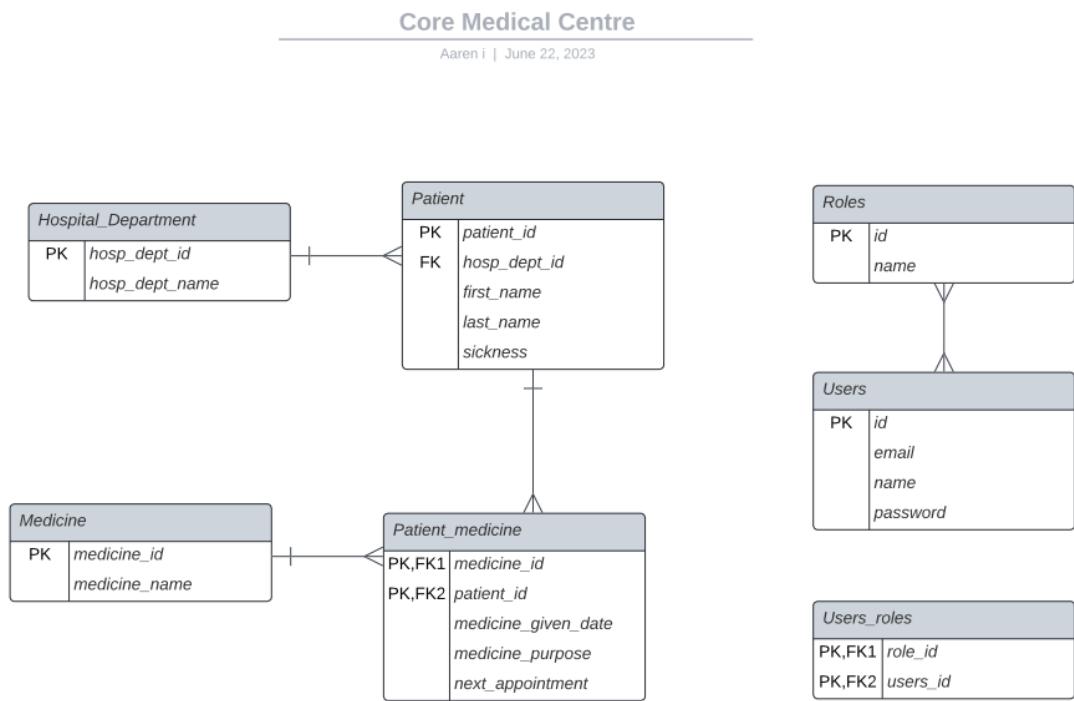
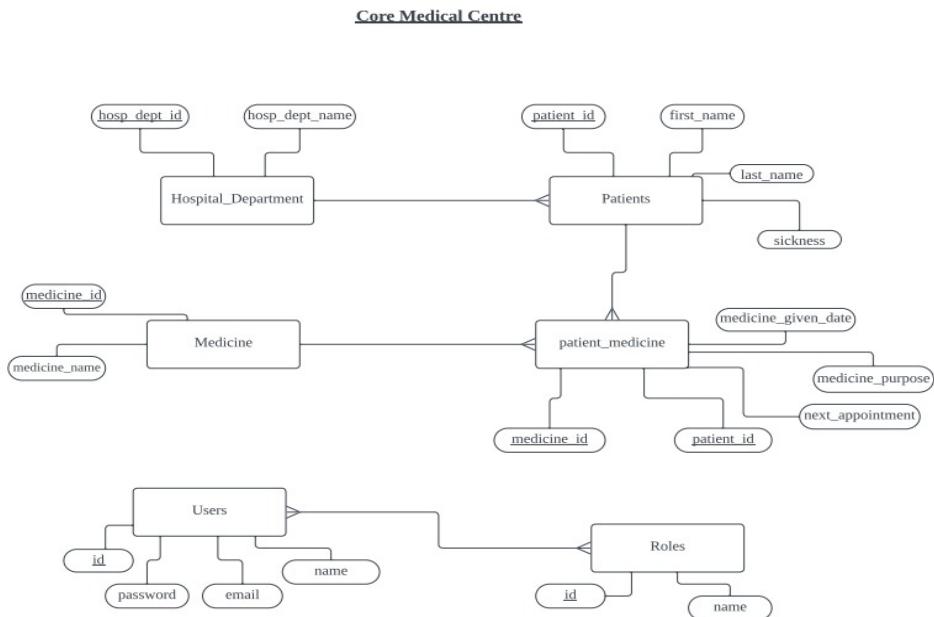
The web-based application will cater to the needs of doctors, providing them with a comprehensive interface that allows them to register their staff, add patient information, and update medication records securely. Additionally, staff members will have their own authenticated access to the application, granting them the ability to view patient details and prescribed medications within the scope of their authorized responsibilities. The system will enforce role-based access control, safeguarding sensitive information and ensuring that only authorized personnel can perform specific actions such as registering staff or editing patient information.

One of the significant advantages of developing a web-based application is its inherent accessibility. By utilizing the internet as a platform, users can access the system from any device with an internet connection, eliminating the need for specific software installations or device restrictions. This flexibility promotes ease of use and efficiency in healthcare data management, enabling medical professionals to retrieve patient information and update medication records on-the-go or from various locations.

Moreover, deploying the application on a secure server ensures data privacy and compliance with healthcare regulations. By adhering to industry standards and implementing robust security measures, the system will protect sensitive patient information, maintain confidentiality, and contribute to maintaining the integrity of healthcare data.

In conclusion, the development of a web-based application for healthcare data management presents an opportunity to enhance the overall effectiveness of managing patient information and medication records. By leveraging a well-designed database, intuitive user interfaces, and web technologies, the project aims to streamline processes, improve accessibility, and strengthen data security. This project serves as a solid foundation for future enhancements and advancements in healthcare data management systems, ultimately leading to improved patient care and supporting medical professionals in their daily operations.

## 2.0 DATABASE DESIGN



### 3.0 APPLICATION DESIGN

**Prompts**

**LOGIN PAGE**

Core Medical Centre

Invalid Password

Successfully logout

Email

Enter Email Address

Password

Enter Password

Login

**MAIN PAGE**

Menu	Patient	Medicine	Logout	Register
	List of patients Add new patient Update patient Delete patient	Assign medicine to patient Display patient's medicine		

**Dropbox**

Patient Management  
Welcome Back  
Lets Make The World A Better Place

## LIST OF PATIENTS

Patient List Main Menu

List Patient  
Patient Id First Name Last Name Sickness Hospital Department Id Hospital Department Name

Back To Main Menu

## ADD PATIENT

Add New Patient Main Menu

Add Patient  
First Name  
 First Name  
Last Name  
 Last Name  
Sickness  
 Sickness  
Hospital Department  
 Choose Hospital Department  
Cardiology  
Intensive Care  
Neurology  
Orthopedics  
 Submit    Reset  
 Back To All Patient

Dropbox

Buttons

## CHOOSE PATIENT TO UPDATE

Patient Id	First Name	Last Name	Sickness	Update

## UPDATE PATIENT

Patient Id	First Name
<input type="text"/>	<input type="text"/>

Last Name

Sickness

Hospital Department  
 Cardiology  
Neurology  
Intensive Care  
Orthopedics

Dropbox

## CHOOSE PATIENT TO DELETE

Choose Patient To Delete    Main Menu

Patient Id	First Name	Last Name	Sickness	Delete
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## ASSIGN MEDICINE TO PATIENT

Assign medicine to patient    Main Menu

Patient Id	First Name	Last Name	Assign Medicine
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## ASSIGN MEDICINE

Update Patient Main Menu

### Calendar pop up

Assign Medicine  
Patient's Name

<input style="width: 100%; height: 30px; border: 1px solid #ccc; margin-bottom: 5px;" type="text"/> <p>Medicine Given Date</p>	<input style="width: 100%; height: 30px; border: 1px solid #ccc; margin-bottom: 5px;" type="text"/> <p>Next Appointment</p>
<p>Medicine Purpose</p> <input style="width: 100%; height: 30px; border: 1px solid #ccc; margin-bottom: 5px;" type="button" value="Choose Medicine Purpose"/>	<p>Assign Medicine</p> <input style="width: 100%; height: 30px; border: 1px solid #ccc; margin-bottom: 5px;" type="button" value="Assign Medicine"/>
<input style="width: 150px; height: 30px; border: 1px solid #ccc; border-radius: 5px; background-color: #f0f0f0; font-weight: bold; margin-right: 10px;" type="button" value="Assign Medicine"/> <span style="color: blue; font-size: 1.5em; font-weight: bold;">Dropbox</span>	

## DISPLAY PATIENT'S MEDICINE

## DISPLAY MEDICINE

Display Patient's Medicine    Main Menu

List of medicines

Patient's Name	Medicine Name	Medicine Given Date	Next Appointment	Medicine Purpose

## ERROR

Prompt/photo



ACCESS DENIED

## Prompts

### REGISTRATION

Staff Registration Main Menu

User Have Been Registered

New Staff Registration

Name

Email

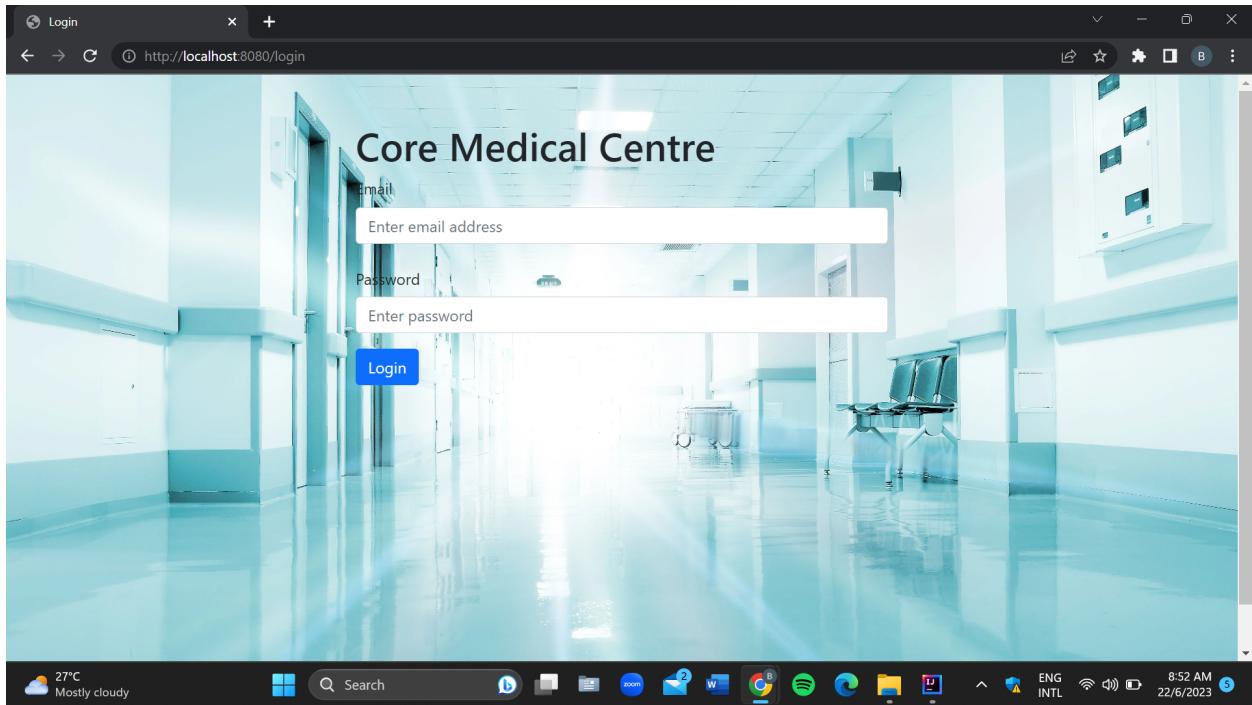
User Already Registered

Password

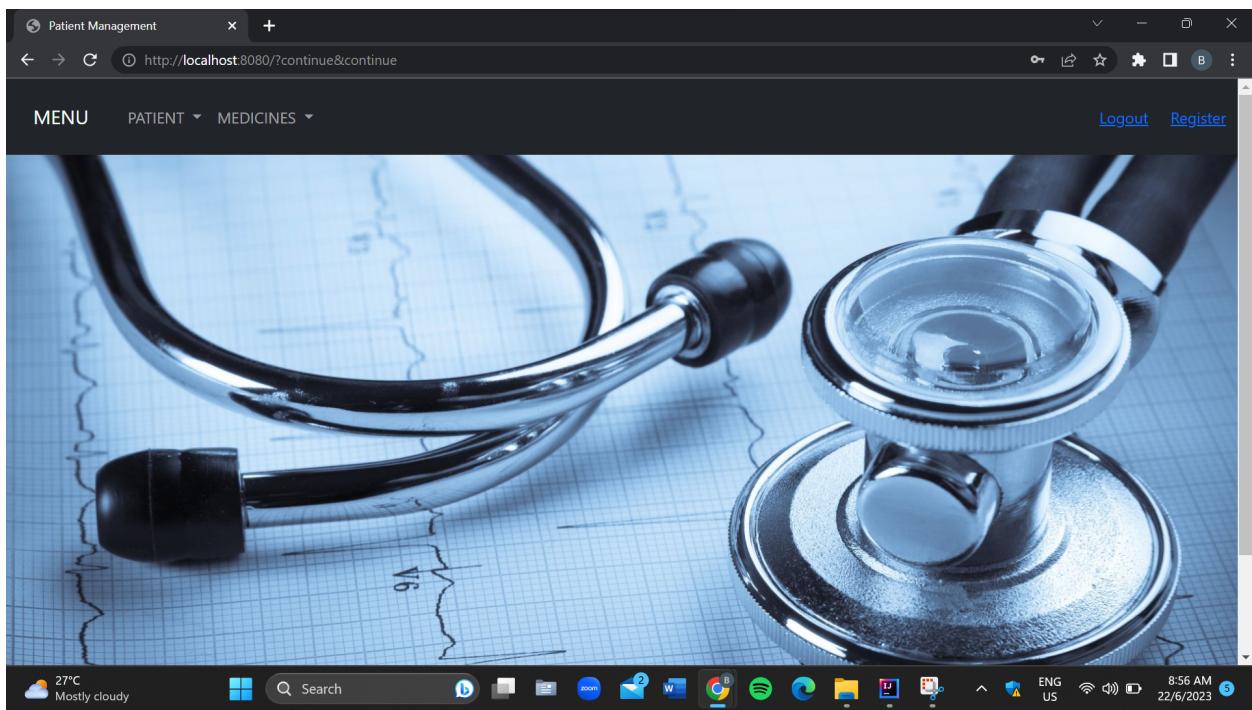
or

## 4.0 USER INTERFACE AND TESTING

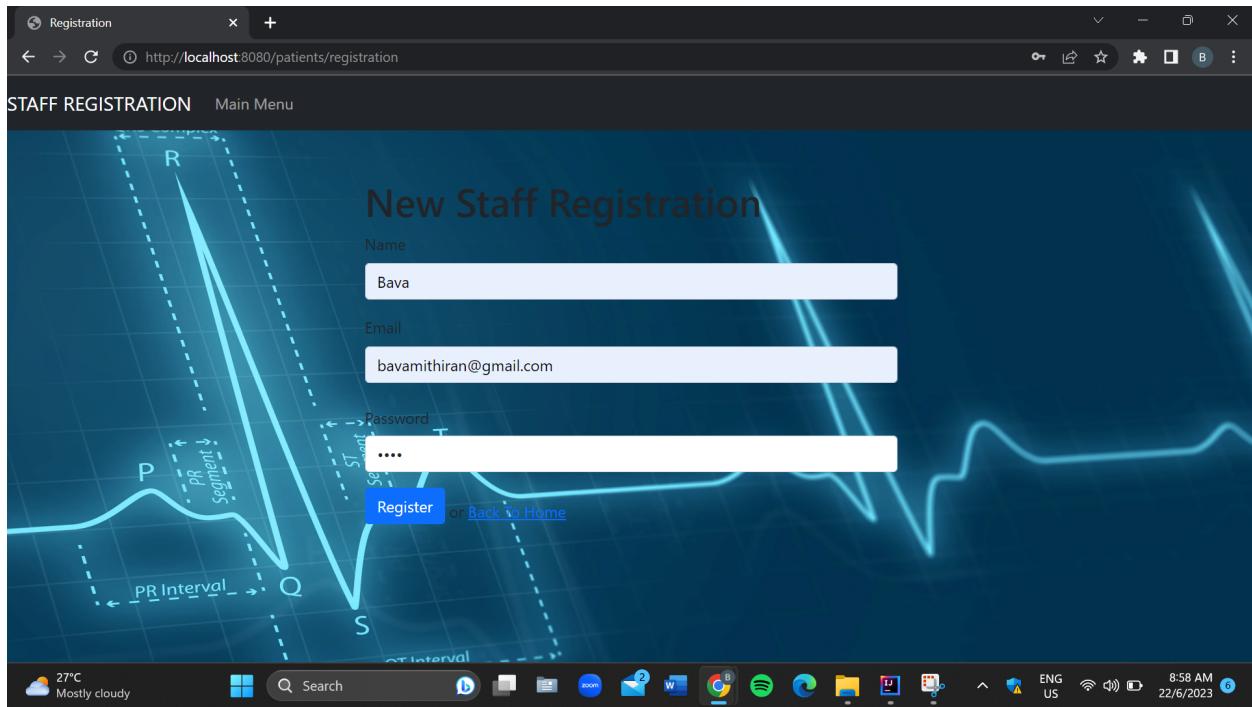
- Login Page



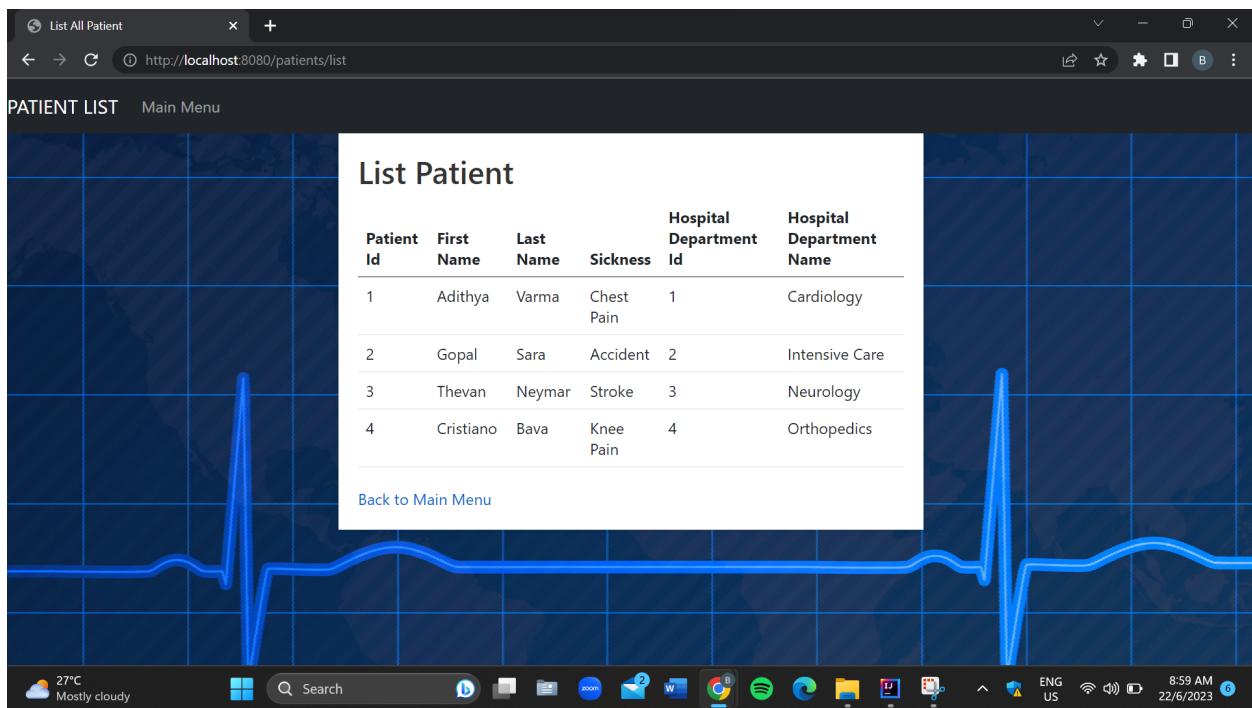
- Index Page



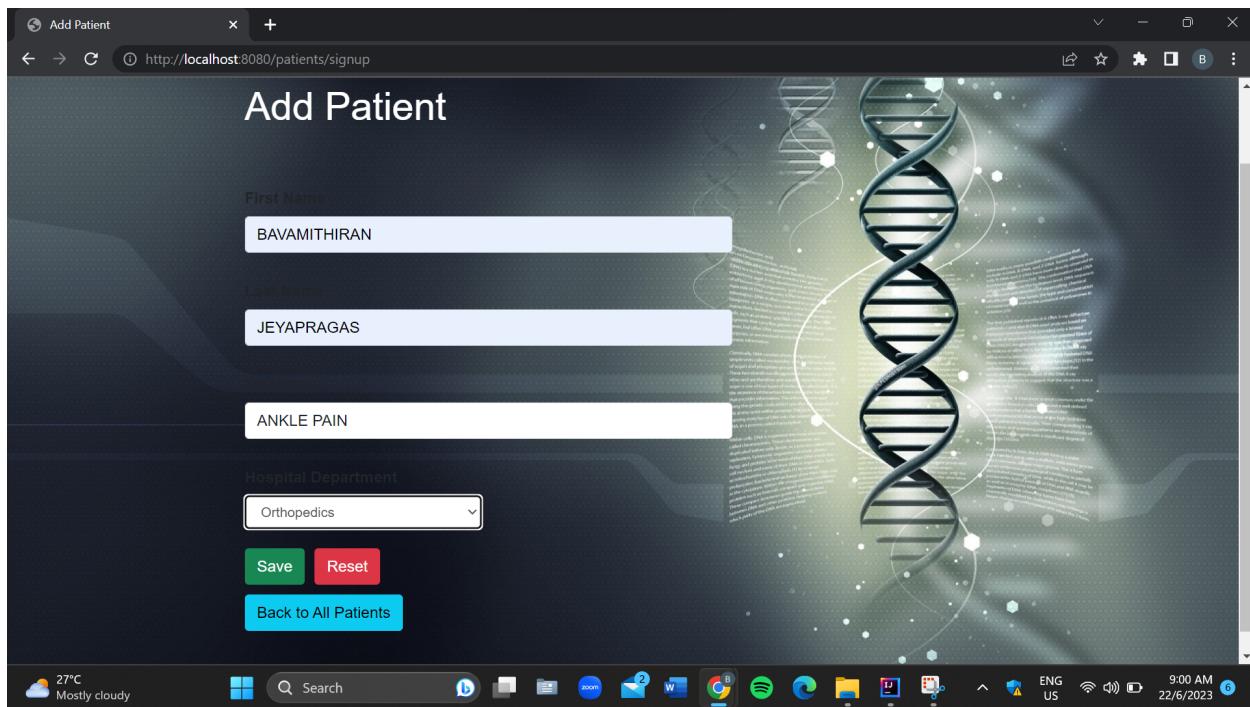
- Registration Page



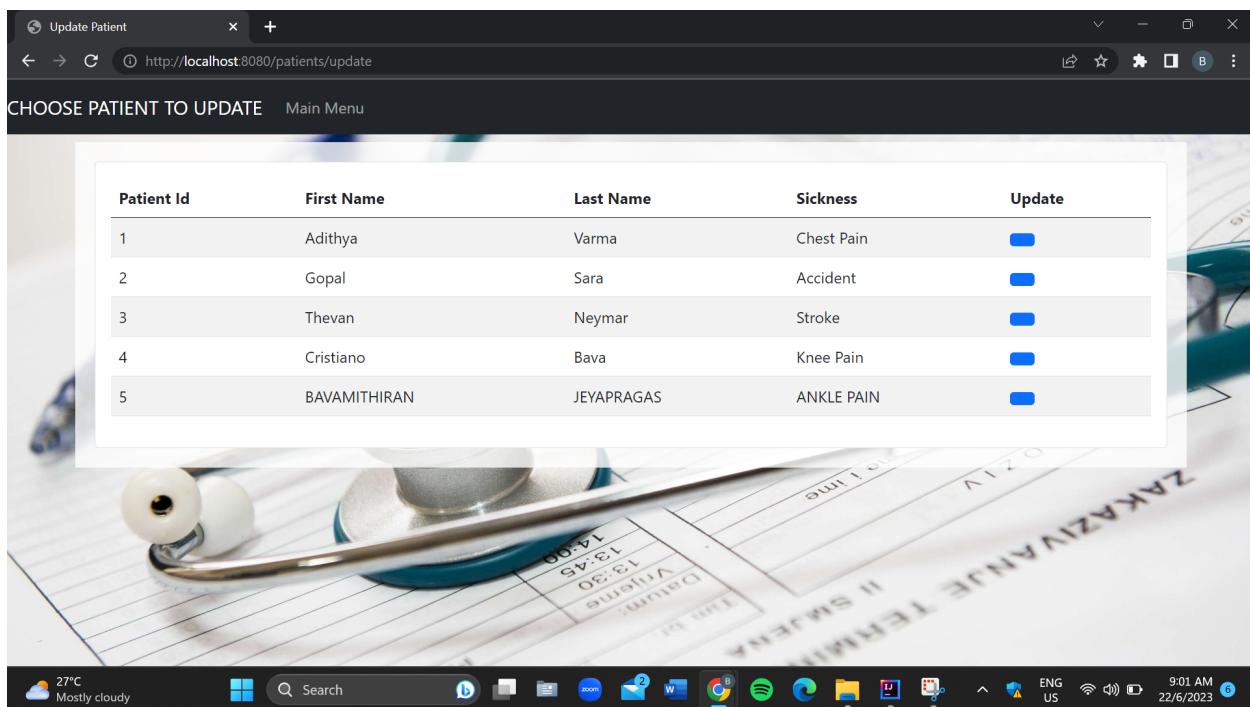
- List Of Patient Page



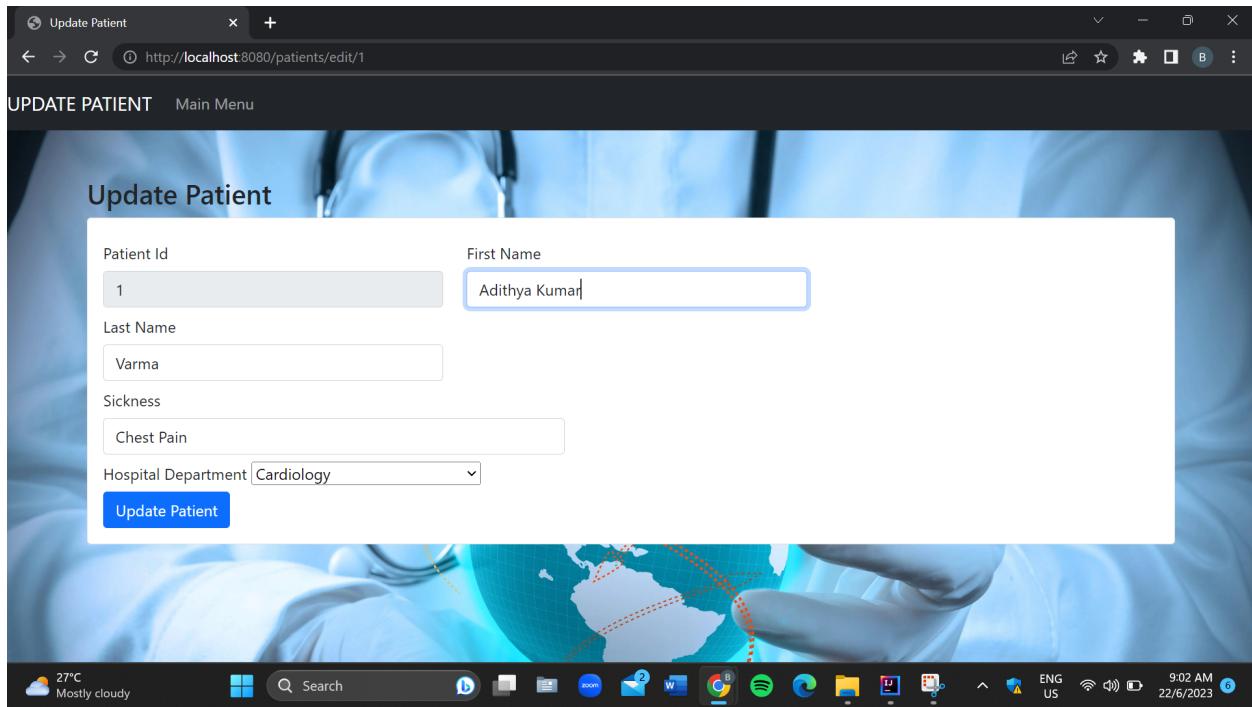
- Add New Patient Page



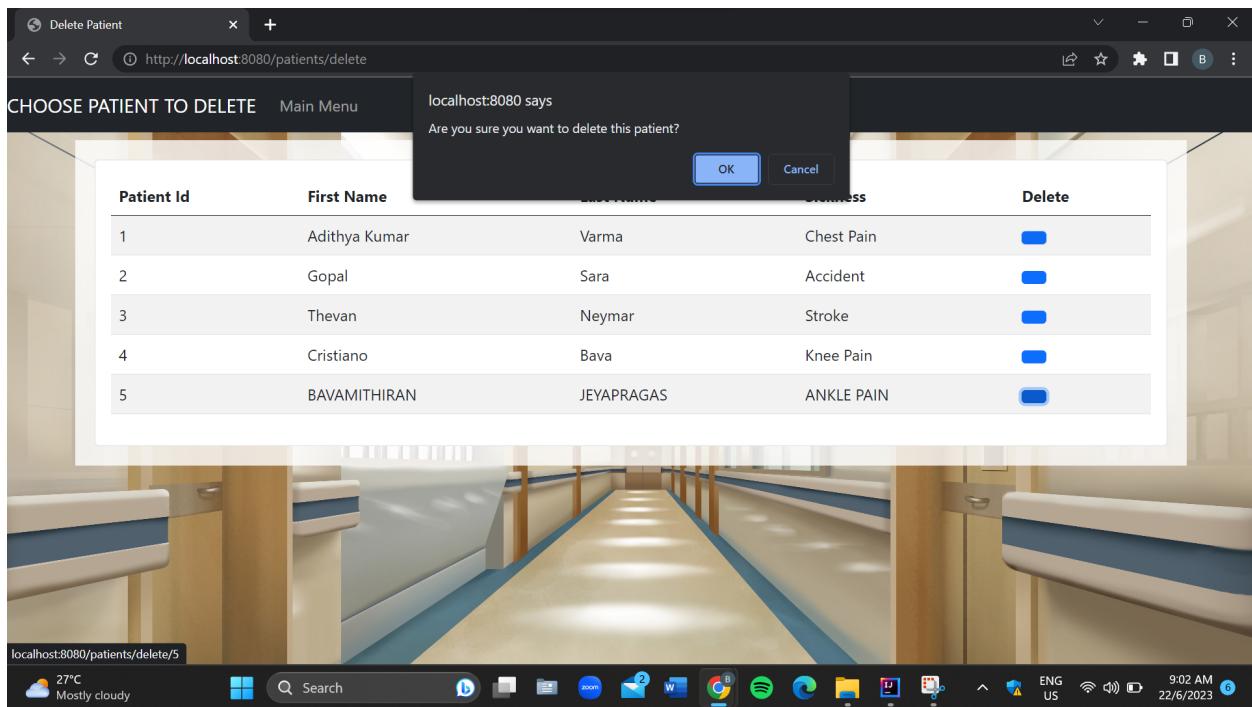
- Choose Patient To Update Page



- Update Patient Page



- Delete Patient Page



- Assign Medicine To Patient Page

The screenshot shows a web browser window titled "Choose Medicine to Assign". The URL is <http://localhost:8080/patients/assign>. The main content is a table titled "ASSIGN MEDICINE TO PATIENT" with the following data:

Patient Id	First Name	Last Name	Assign Medicine
1	Adithya Kumar	Varma	<input type="button" value="Assign"/>
2	Gopal	Sara	<input type="button" value="Assign"/>
3	Thevan	Neymar	<input type="button" value="Assign"/>
4	Cristiano	Bava	<input type="button" value="Assign"/>
5	BAVAMITHIRAN	JEYAPRAGAS	<input type="button" value="Assign"/>

The background of the page features a blue medical-themed image of hands in gloves. The system tray at the bottom shows weather (27°C, mostly cloudy), search, and various application icons.

- Assign Medicine Page

The screenshot shows a web browser window titled "Assign Medicine". The URL is <http://localhost:8080/patients/assign/1>. The main content is a form titled "Assign Medicine" for patient "Adithya Kumar".

Form fields:

- Medicine Given Date: 03/06/2023
- Next Appointment: 04/06/2023
- Medicine Purpose: Fever
- Medicine: Antibiotics
- Buttons: "Assign Medicine" (highlighted in blue)

The background of the page features a blue medical-themed image of hands in gloves. The system tray at the bottom shows weather (HSI -1.98%), search, and various application icons.

- Display Patient's Medicine Page

A screenshot of a web browser window titled "Choose Medicine to Assign". The URL is "http://localhost:8080/patient/display". The main content is a table titled "DISPLAY PATIENT'S MEDICINES" with the following data:

Patient Id	First Name	Last Name	Display Medicine
1	Adithya Kumar	Varma	<input type="button" value="Display"/>
2	Gopal	Sara	<input type="button" value="Display"/>
3	Thevan	Neymar	<input type="button" value="Display"/>
4	Cristiano	Bava	<input type="button" value="Display"/>
5	BAVAMITHIRAN	JEYAPRAGAS	<input type="button" value="Display"/>

The background of the page features a blue medical-themed design with white plus signs. The system tray at the bottom shows a temperature of 27°C, a weather icon for "Near record", and the date/time 9:05 AM 22/6/2023.

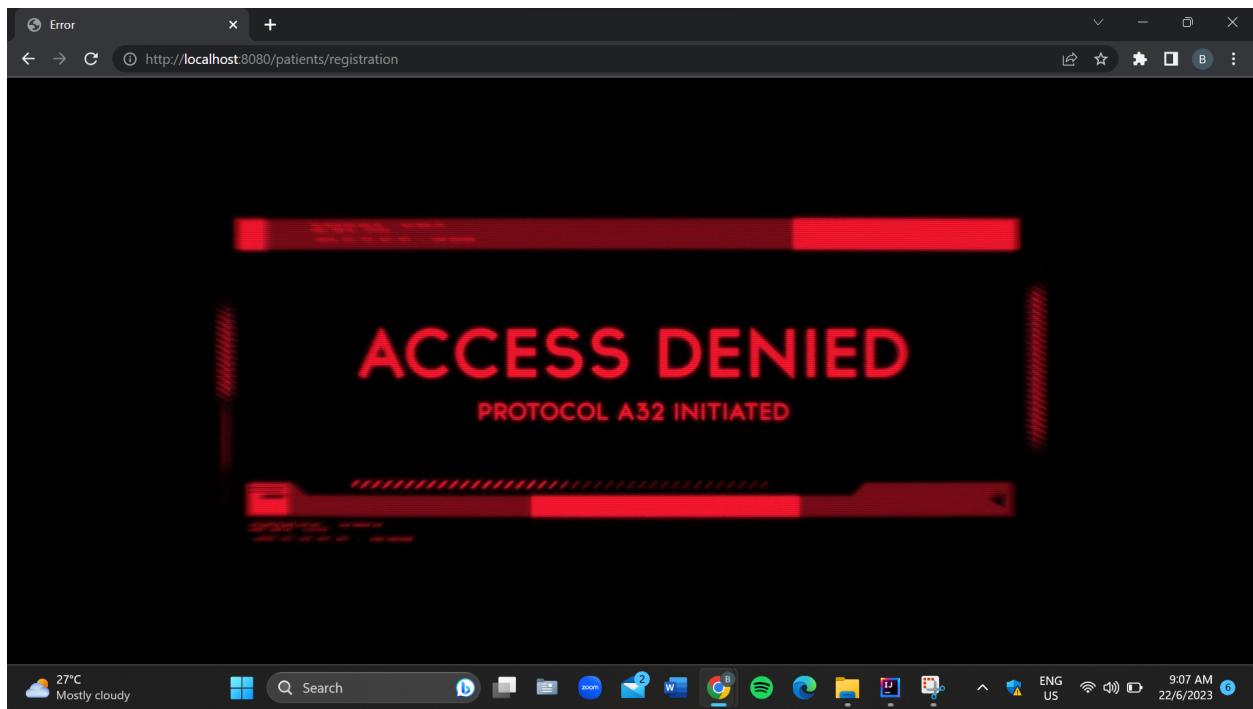
- Patient's Medicine Page

A screenshot of a web browser window titled "Display Medicine". The URL is "http://localhost:8080/patient/display/1". The main content is a table titled "List of Medicines" for "Adithya Kumar" with the following data:

Medicine Name	Medicine Given Date	Next Appointment	Medicine Purpose
Antibiotics	03/06/2023	04/06/2023	Fever

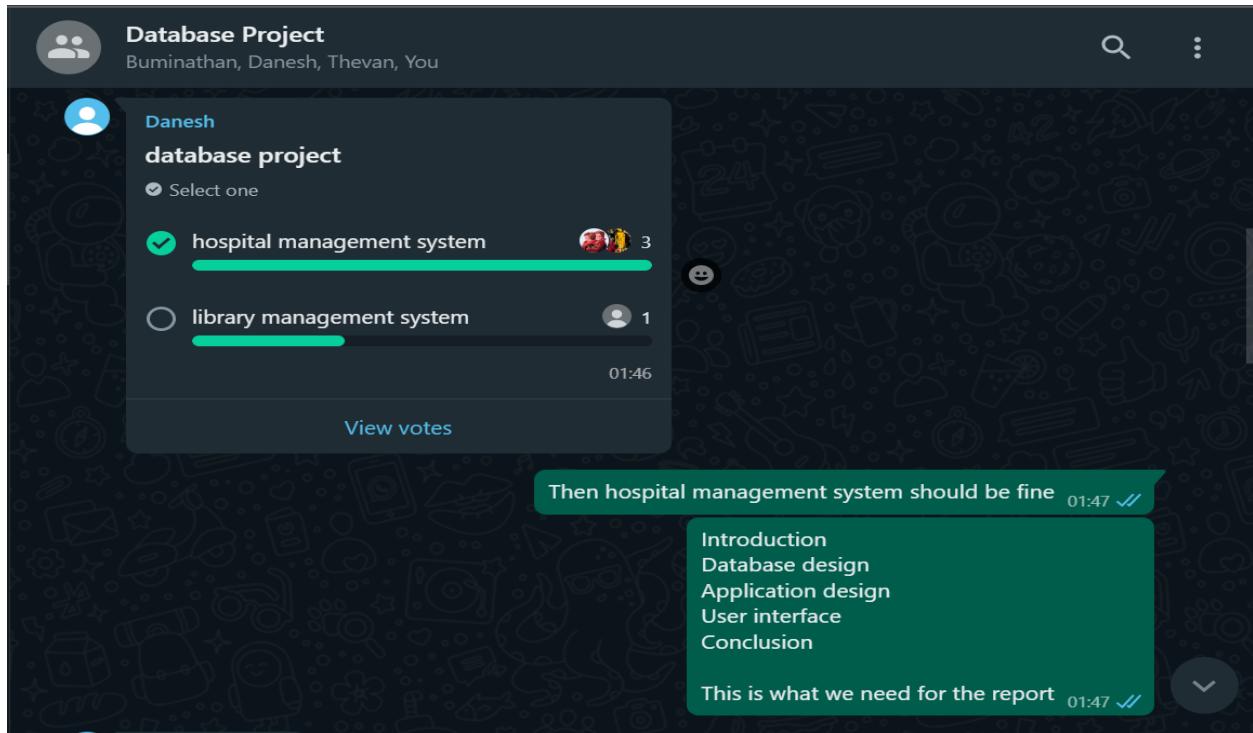
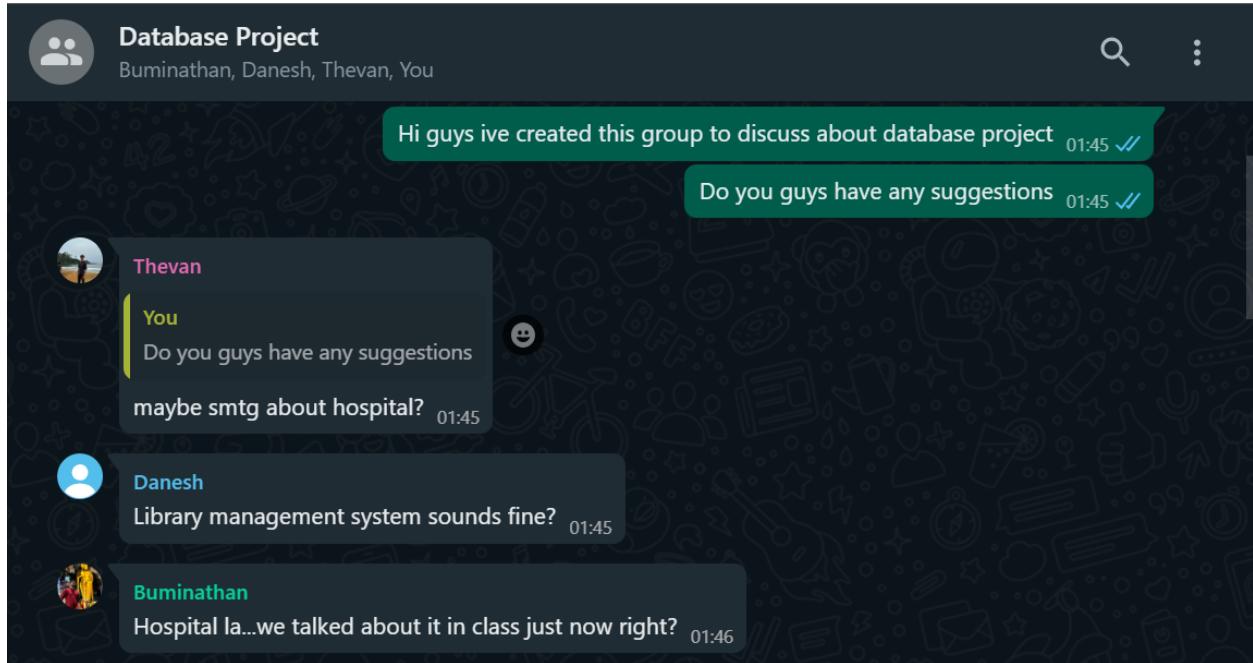
The background of the page features a blue medical-themed design with hexagonal icons related to healthcare and medicine. The system tray at the bottom shows a temperature of 27°C, a weather icon for "Mostly cloudy", and the date/time 9:06 AM 22/6/2023.

- Access Denied Page



## 5.0 EVIDENCE OF GROUP MEETING AND TASK ALLOCATION

- Task Allocation Via Whatsapp



 **Database Project**  
Buminathan, Danesh, Thevan, You

 **Danesh**  
okayy  01:47

Introduction  
Database design-Danesh  
Application design  
User interface  
Conclusion

This is what we need for the report 01:47

 **Thevan**  
i wouldn't mind doing this 01:47

 **Thevan**  
later we discuss further in your room rao 01:47

 **Database Project**  
Buminathan, Danesh, Thevan, You

Introduction  
Database design-Danesh  
Application design - Thev  
User interface  
Conclusion

This is what we need for the report 01:48

 **Bava**  
Introduction - Bava  
Database design-Danesh  
Application design - Thev  
User interface- Sahtish  
Conclusion - Bava

This is what we need for the report 01:48 ✓

- Discussing Database Project At FSKTM



## 6.0 CONCLUSION

In conclusion, the development of a web-based application for healthcare data management has been successfully accomplished. The project has resulted in the creation of a user-friendly interface that streamlines the process of registering staff members, recording patient information, and managing prescribed medicines. Through role-based access control and secure authentication mechanisms, the application ensures that only authorized personnel can perform specific actions and access sensitive data.

The web-based nature of the application enhances its usability and accessibility, allowing doctors and their staff to access the system from any device with an internet connection. This feature promotes flexibility and efficiency in healthcare data management, enabling medical professionals to retrieve patient information and update medication records seamlessly.

It is important to note that this project represents an initial implementation, and there is potential for future enhancements. Further development could include features such as appointment scheduling, integration with electronic health record systems, or data analytics capabilities to derive valuable insights. Overall, this project serves as a solid foundation for the ongoing advancement of healthcare data management systems, facilitating improved patient care, and supporting medical professionals in their daily operations.