ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
A SUBSIDARY ORGAN OF OIC

Medical Appointment System
MAS

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PROJECT INFORMATION

An online appointment is an appointment system where a user can know about doctor's availability and schedule consultation through IUT MEDICAL WEBSITE. IUT Medical appointment system that streamlines the process of scheduling and booking appointments. The system aims to optimize clinical workflows and enhance patient experience.

OBJECTIVES

- Pre-booked appointments eliminate long queues and wait times
- Patients can book an appointment anytime and anywhere
- More flexibility to book suitable appointment times
- To reduce record information manually

PROBLEM STATEMENT

- Unorganized appointment system. Inefficient Time management.
- Manual patient information record.
- Unmanaged Schedule for doctor availability

Unorganized appointment system:

This scenario including patient come and take appointment from hospital. Authority provide time to visits doctor, that situation patient have to wait for long time as hours as go. Sometimes doctor is not available but patients still have to wait for doctors coming.

Inefficient Time management:

Patient may have to visit with doctor at 4 pm but he/she wait from 12 pm that effects on time management. Patient get boring and demotivated to visit the doctor.

Manual patient information record:

Authority write information manually on their note book or hand book. That may be destroy they can't find easily patient information even patients previous medical history

Unmanaged Schedule for doctor availability:

One of the challenge when scheduling appointments is to match the availability and preferences of both the Patients and the doctors. Patients can't see which doctor is available in a particular time.

MOTIVATION

At IUT medical center we can see many students go there but they don't know what doctor is available or not, they are waiting for the consultant's schedule; some of them return without any consultant .Definitely it is a waste of time. If students can see which doctor is available now, or if they make any previous appointment they don't need to wait for a long time, that time system will be more organized. This System also keeps records such as how many patients they treat a particular day.

- Better time management
- Automatic update patient record system
- Easy Appointment management system

POTENTIAL SOLUTIONS

- Create an appointment system within an organized way.
- System can handle doctor and patient information easily.
- Patients can see all doctor information and Doctor Schedule.
- Maximize the efficiency of time management.

EXISTING WORK

In the modern era. Technology is developed, many hospitals or medical centers there already use medical software for managing all kinds of medical services.

Some example:

- Athena Health [1]
- Veradigm [2]
- Cerner Corp [3]

In IUT there is no medical website or system for managing doctors, patients and appointment management systems. That's why we are trying to develop medical software for the patient appointment system.

OUR IDEA

We are trying to develop an appointment management system for IUT medical. This system can be used for patient and doctor information and appointment systems. Admin can access all data, he can edit delete update data and manage appointment and doctor schedules.

We target our system where user first have to register in our system. Then can access to the system and according to his/her ailment they will select related specialized doctor to take appointment. Patients also can visits doctor information and also available time slot for book an appointment.

HOW FAR DIFFERENT FROM EXISTING IDEA

In existing medical software they use many features like, medicine, doctor, appointment, cabin bed management, food management staff management system, test report manager, laboratory manager, staff salary. But our medical software we are only focusing on the patient appointment system. In our system patients can see doctor info which Specialization doctor works, and doctor work schedule accordingly. Patients can book their appointment and consultation time. And also patients can pay before for fixed appointments.

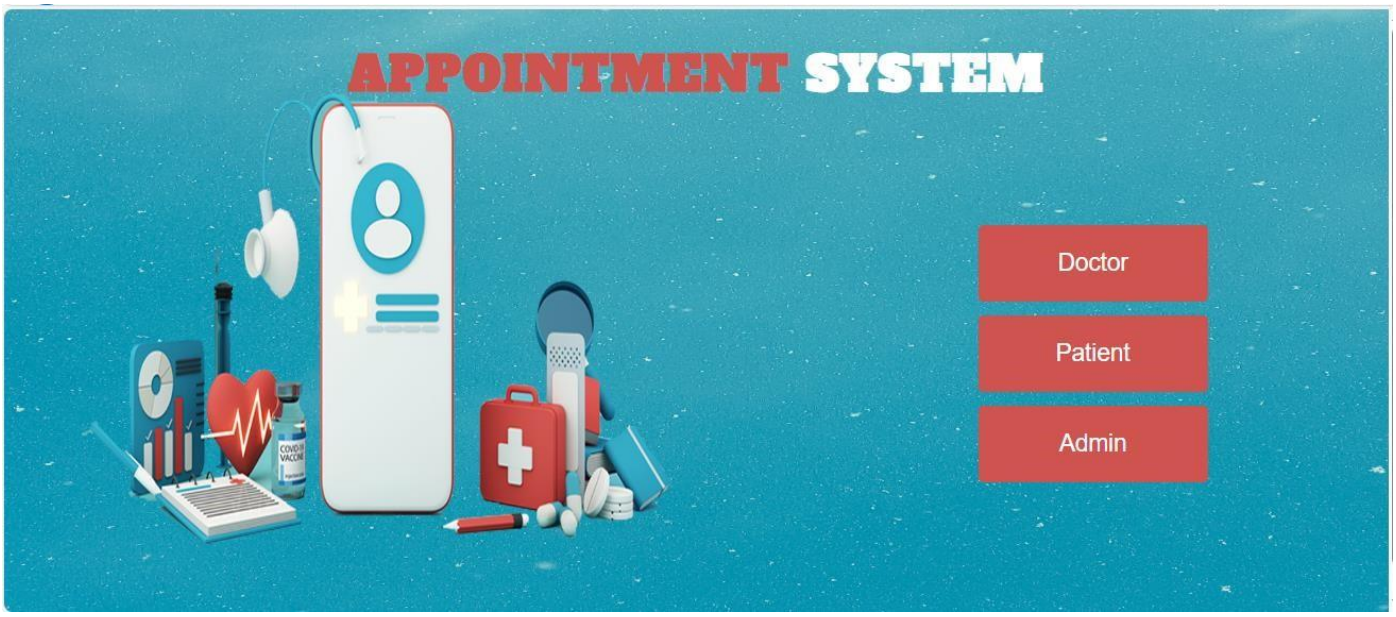


Figure 1: Medical Appointment System

FEATURES

- Online Appointment
- Doctor information
- Doctor Schedule
- Chat Box
- Notification
- Authentication

Features Explanation

Admin Panel:

- Authentication
- Manage Doctor Information
- View patient information
- View patient appointment
- Mailing System

Doctor Panel:

- Authentication
- Doctor Profile
- Check Appointment
- View patient Information

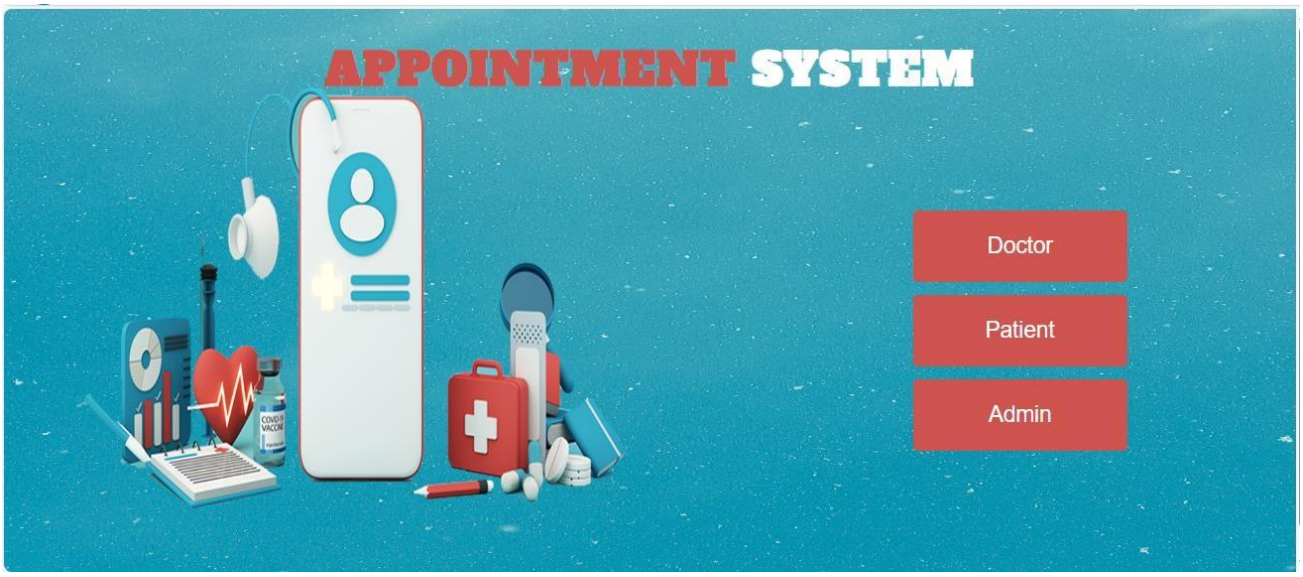
Patient Panel:

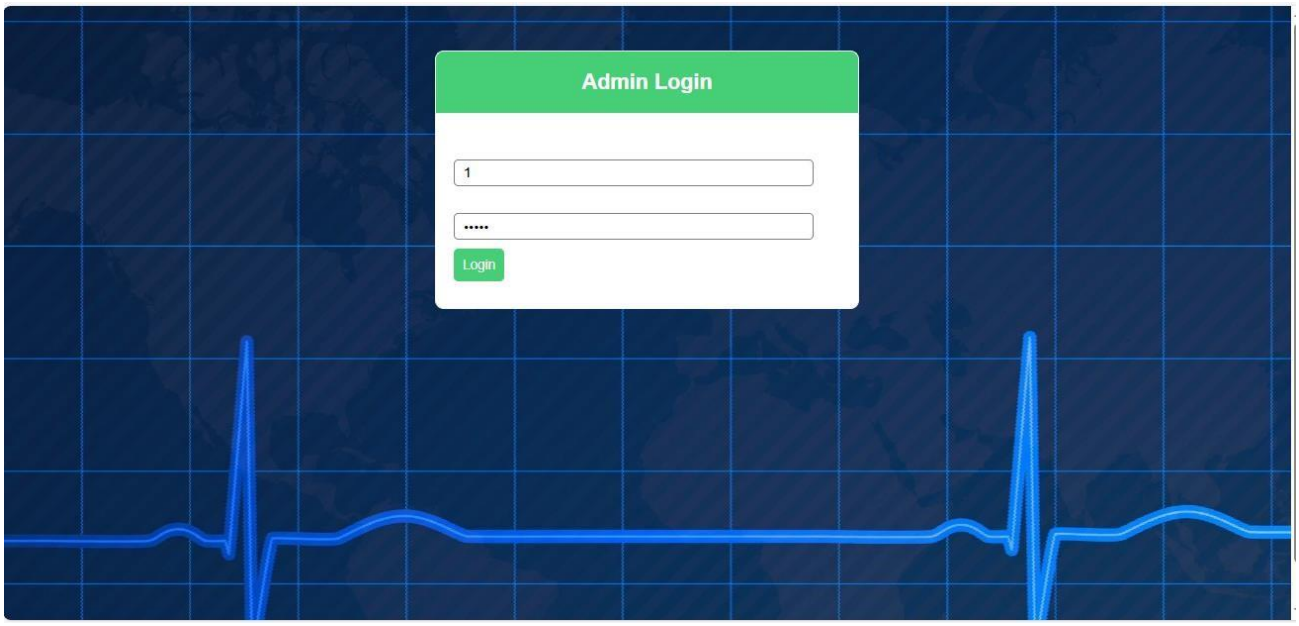
- Authentication
- View Doctor Information
- Online Appointment system
- Search Specialized Doctor
- Doctor Schedule

Admin Panel:

Authentication:

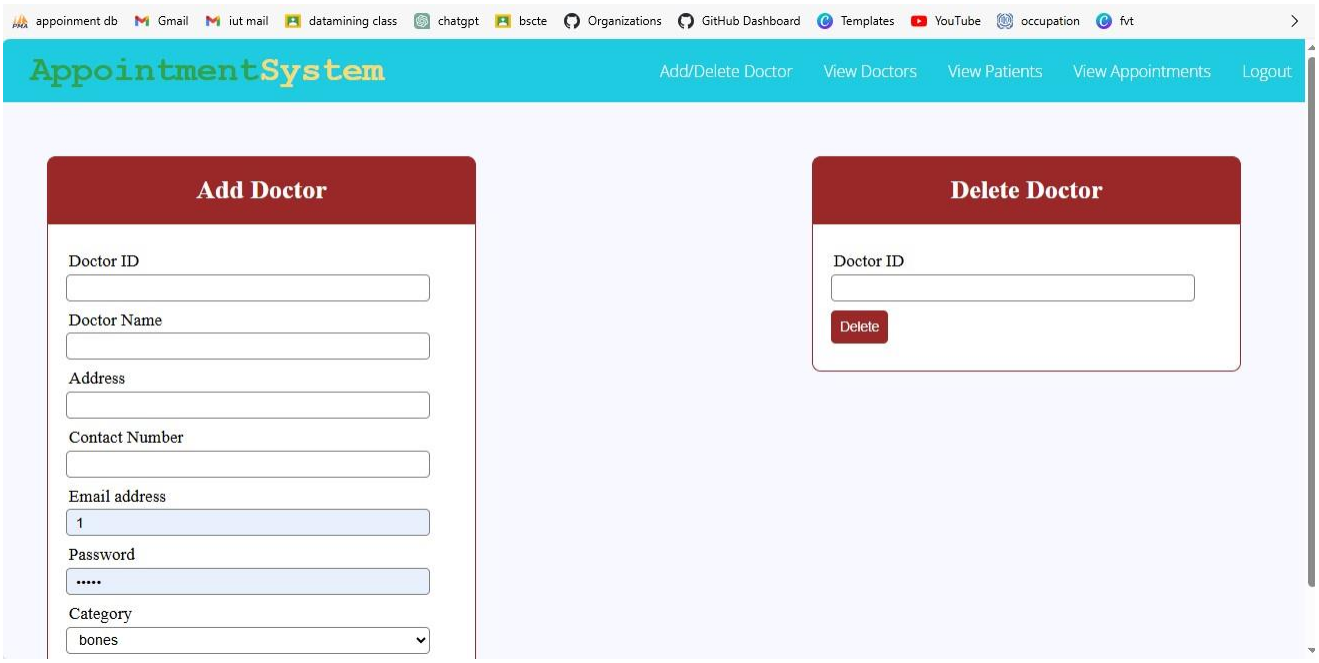
Admin login the system using his own id and password. Without authentication anyone cannot access the system.





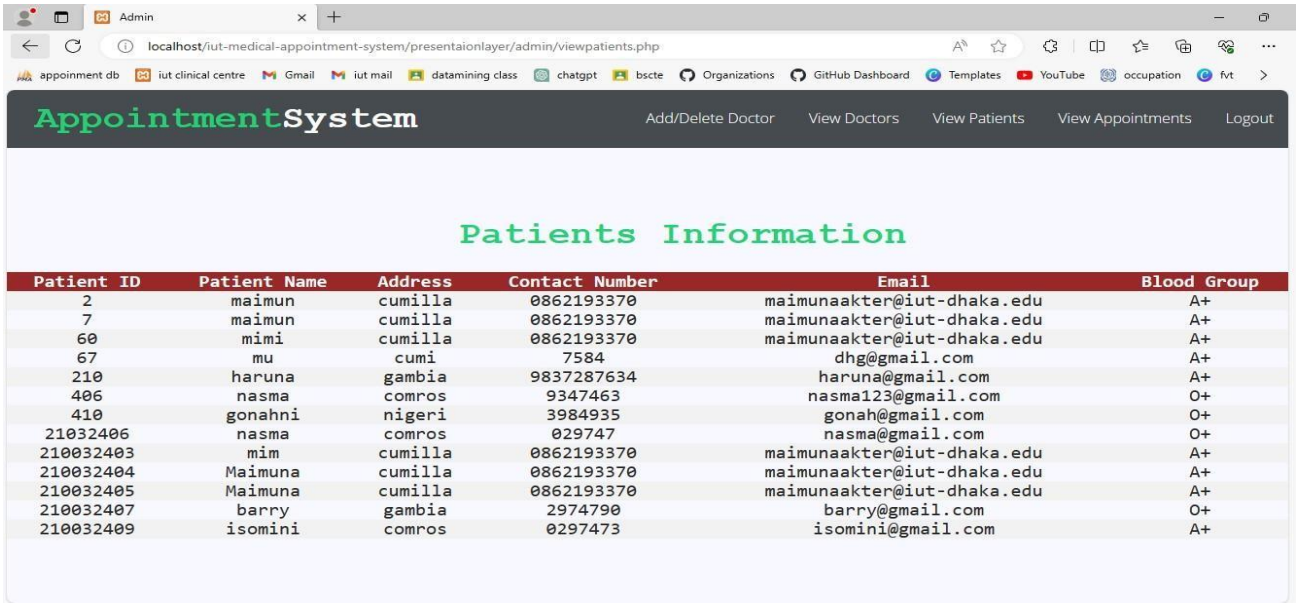
Manage Doctor Information:

System or admin can add doctor information and also delete Doctor Information from the Database.



View patient information:

Admin can check all patients that are registered in the system.



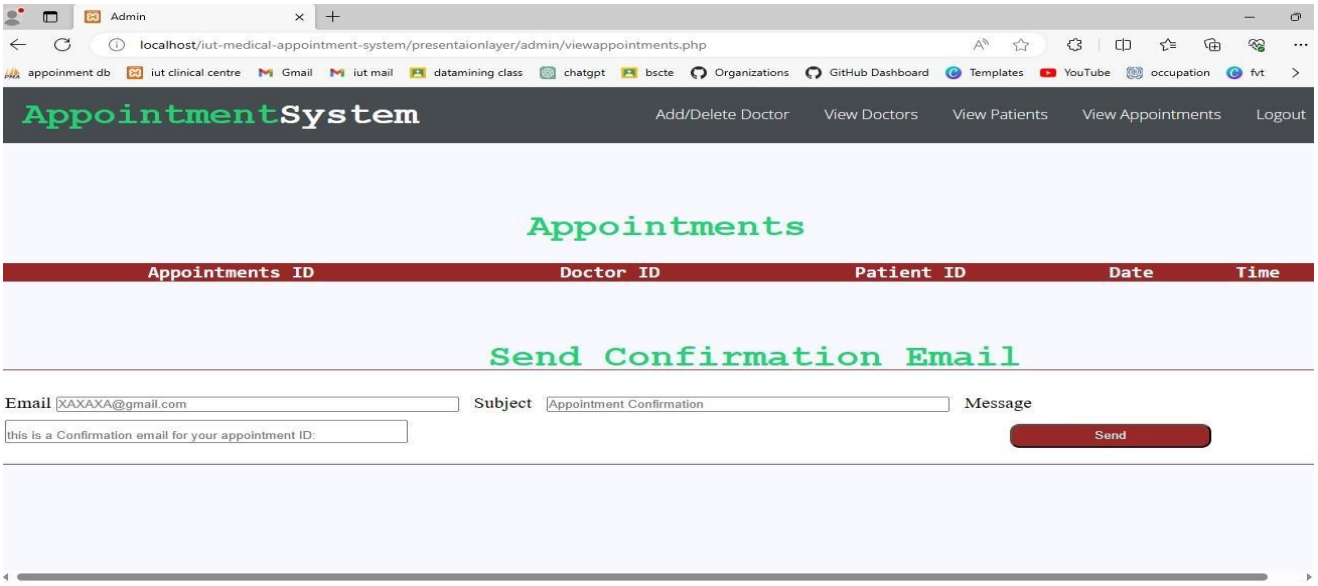
View patient appointment:

Those patients who are booking appointment systems can see about that information.

View Doctor Formation from Admin Panel:

Confirmation

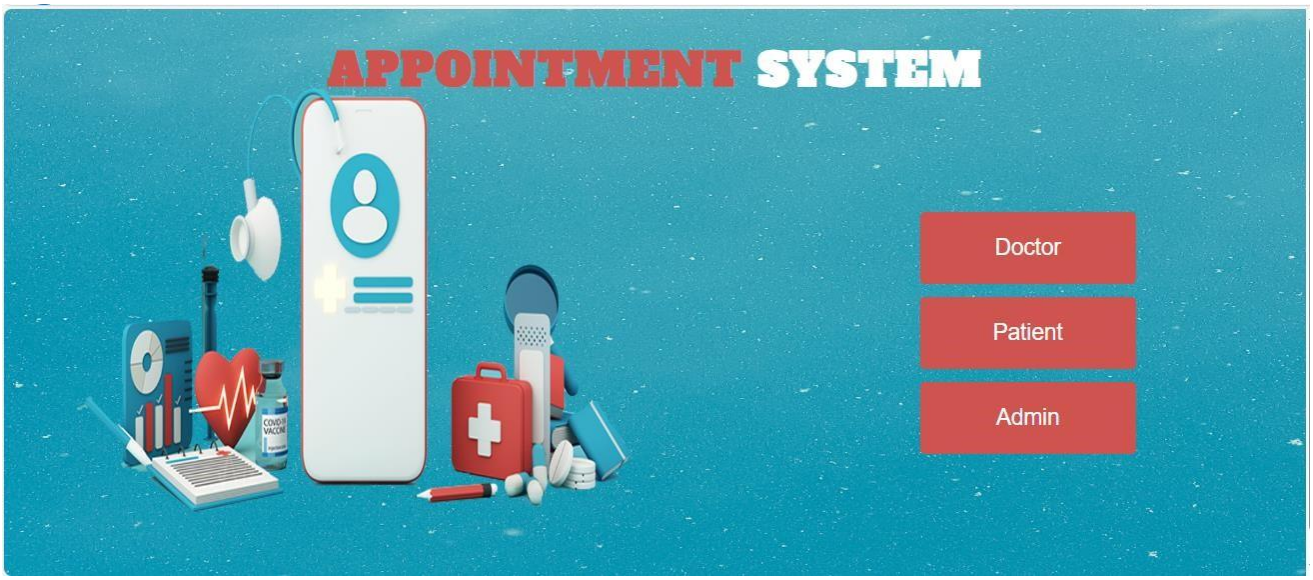
System gives confirmation to patient mail for patient appointment id.

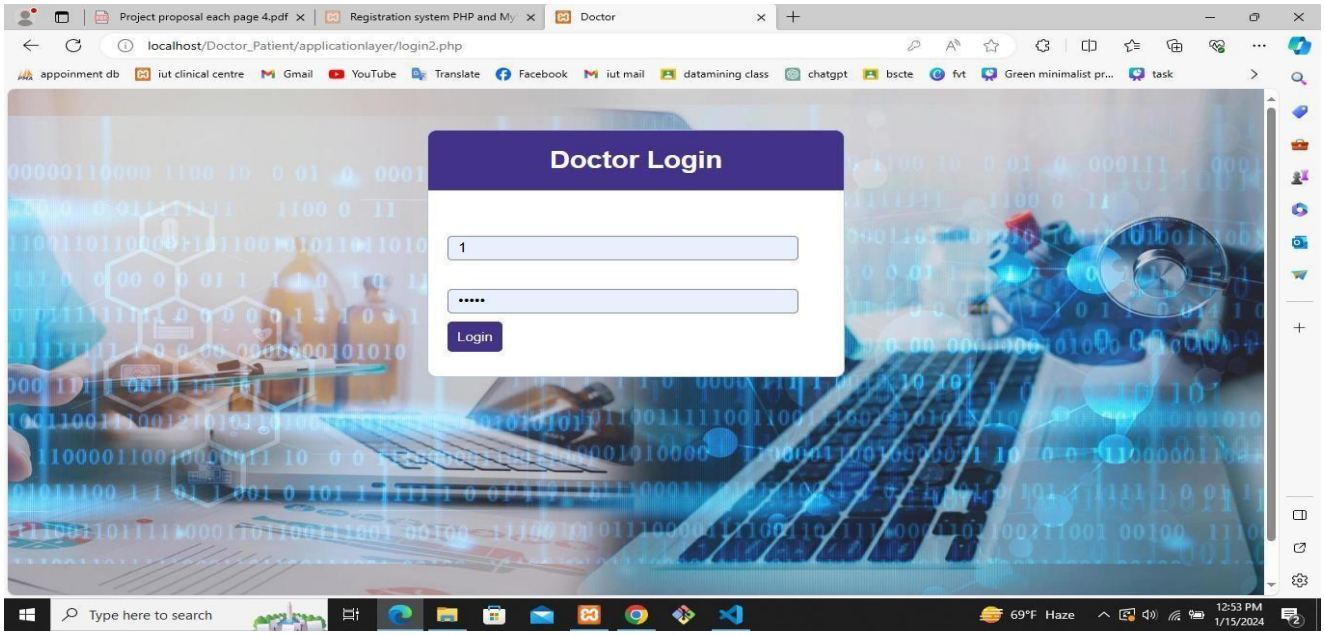


Doctor Panel:

Authentication:

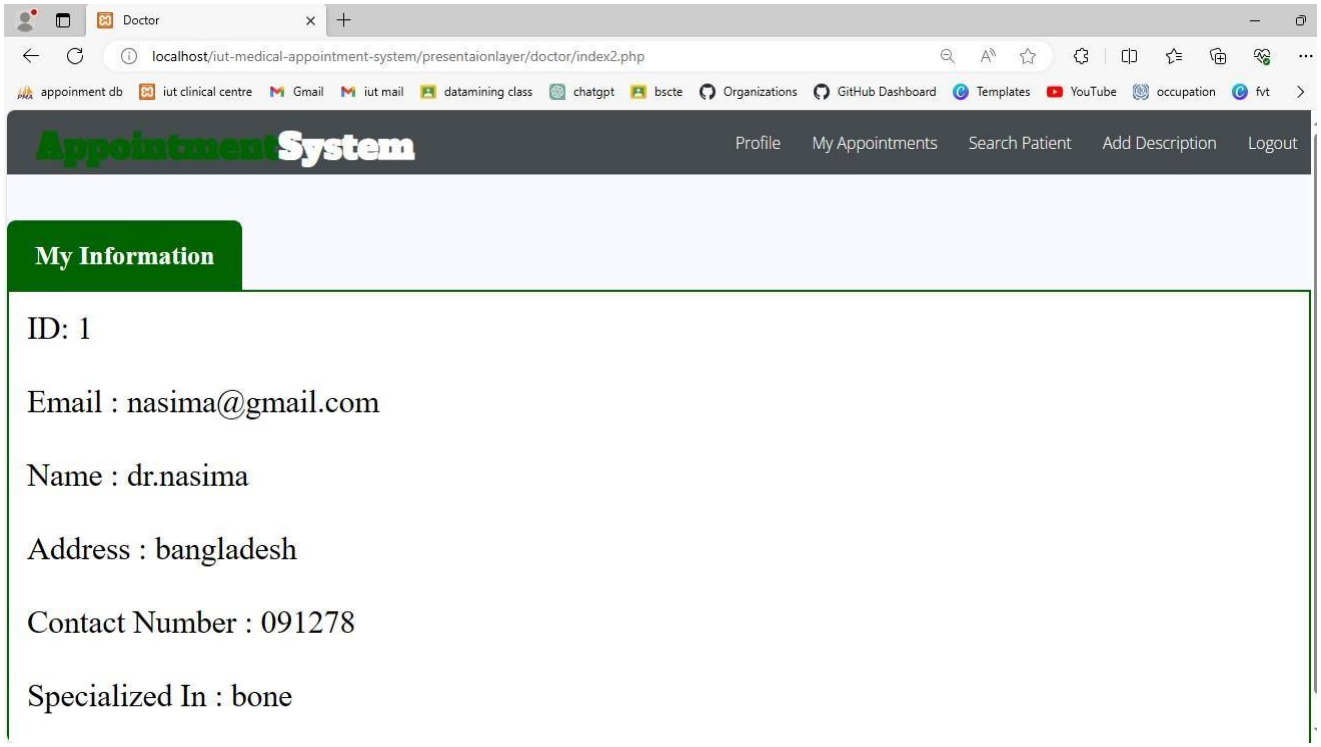
Doctors can login to the system. They will use their own password and id. This id and password will be provided by the admin panel.





Doctor Profile:

Doctors only can see their own profile. If they need any modification the admin panel will do it.

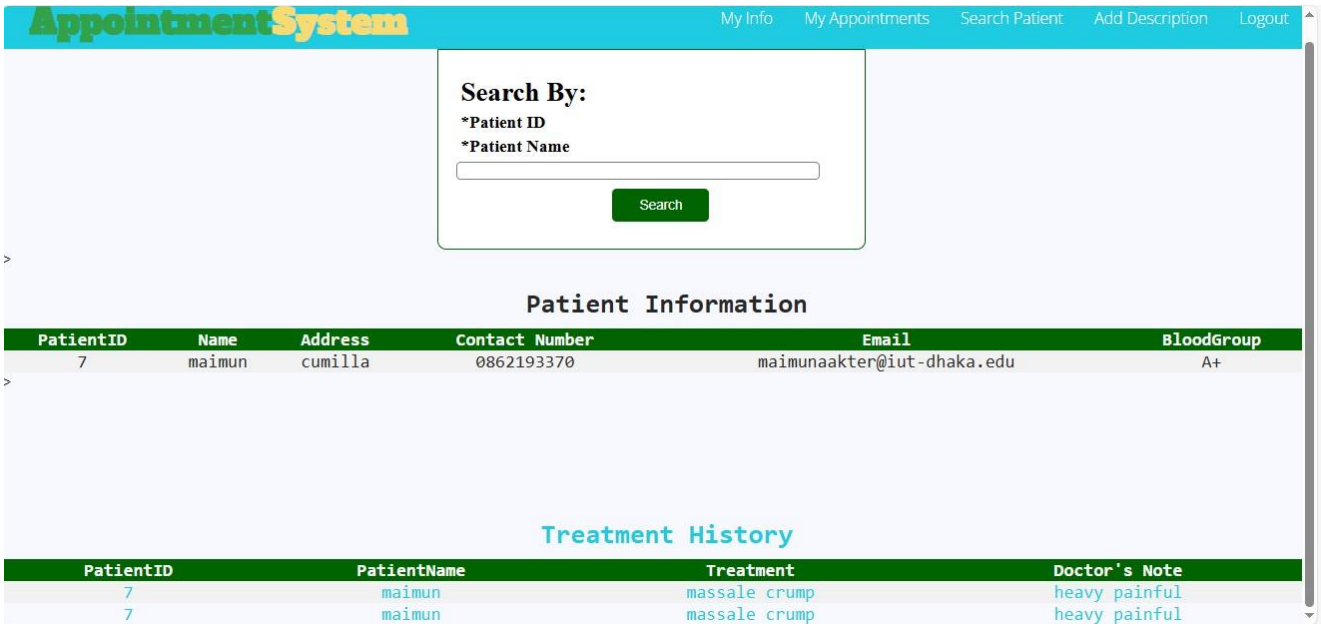


Check Appointment:

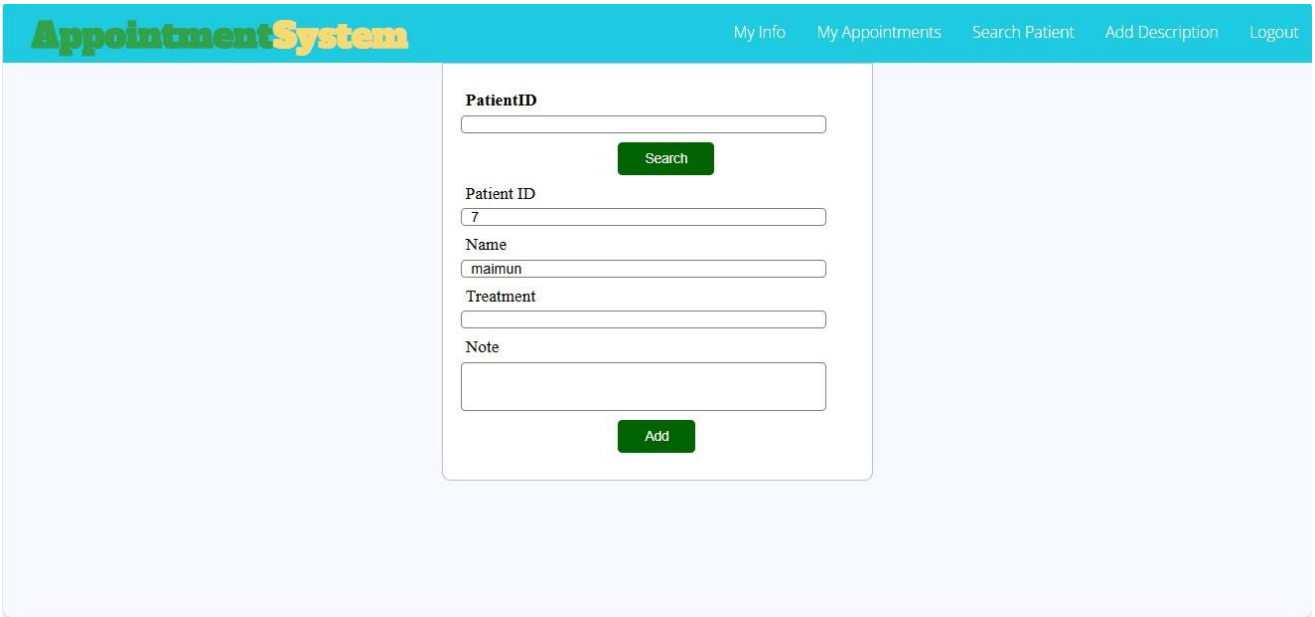
Doctors can check their appointment list. How many appointments in a single day and week.

View patient Information:

Doctors can write a single note for the patient. There will be a form and the doctor will write some comments for the patient based on patient treatment.



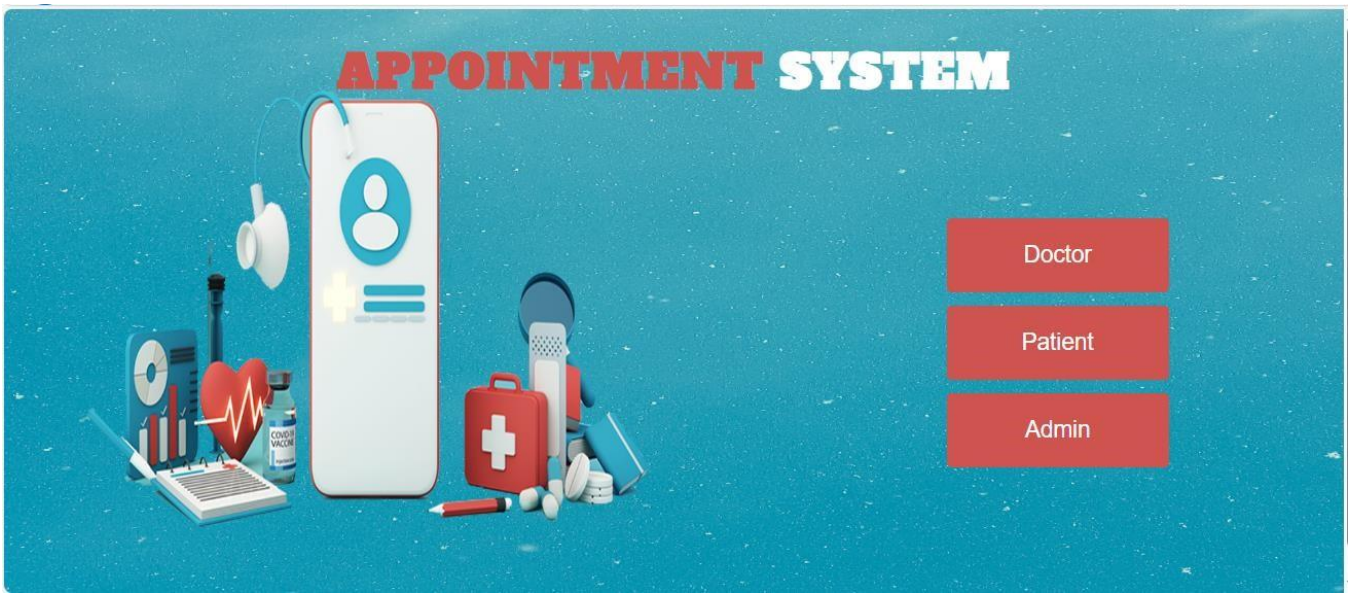
Add Patient Description

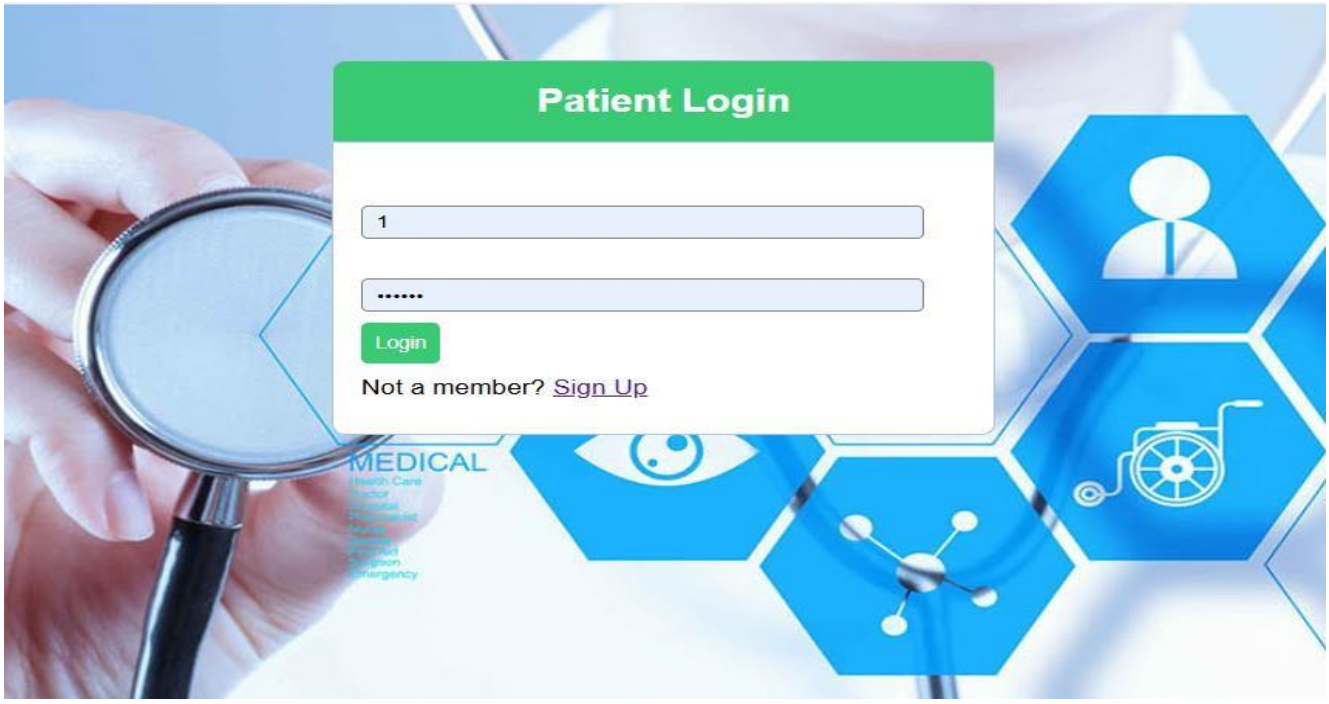


Patient Panel:

Authentication:

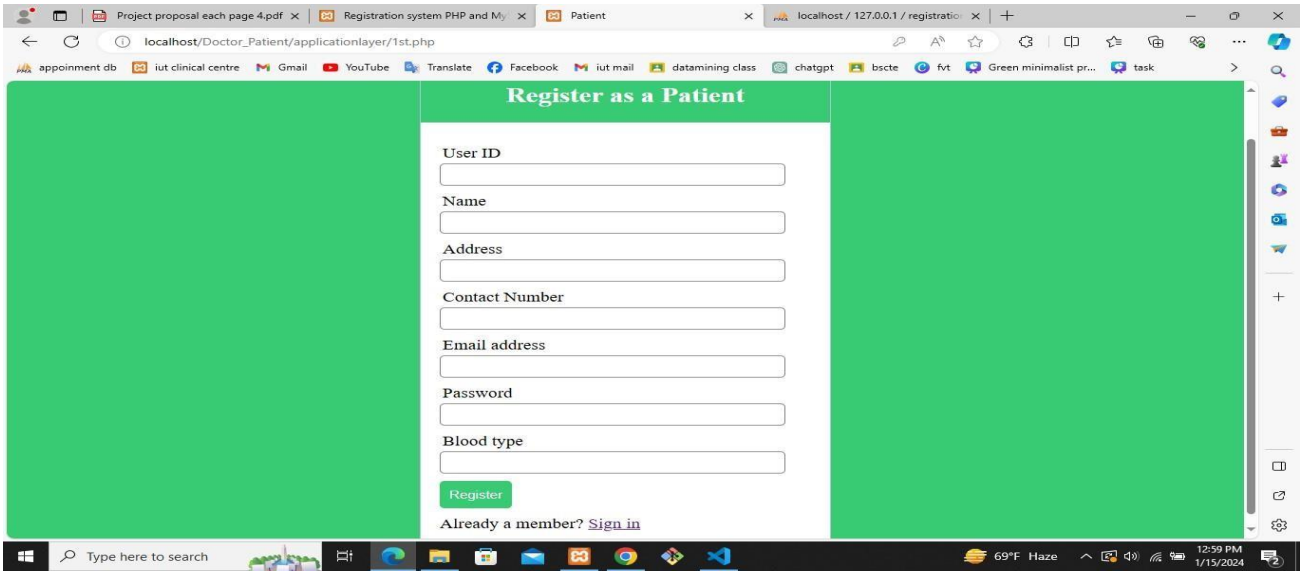
Patient must have to register our sign up in the system then he can login or access the system. During registration, patients must put their id, name, mail, contact number, address and system password.





Patient Register:

If patient is not a member of the system they have to register first for login the system.

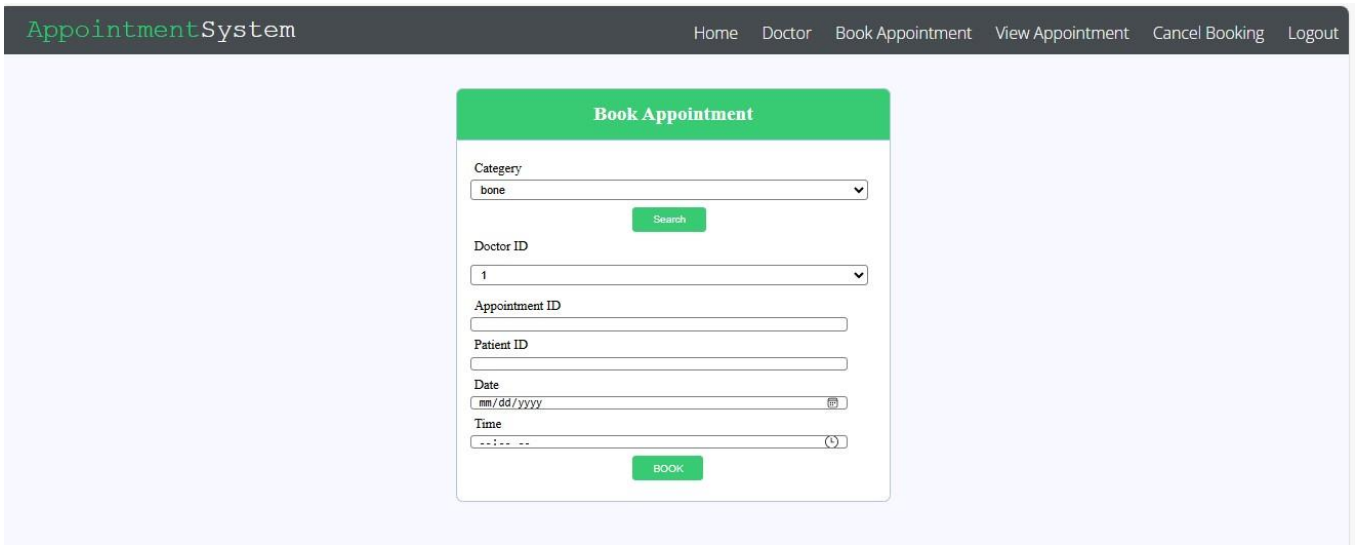


View Doctor Information

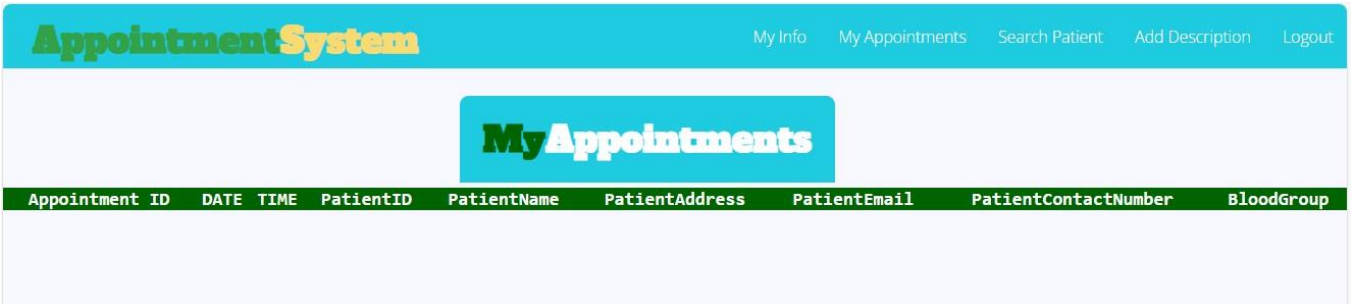
After login the system, patients see all doctors which treatment they actually need.

Online Appointment system:

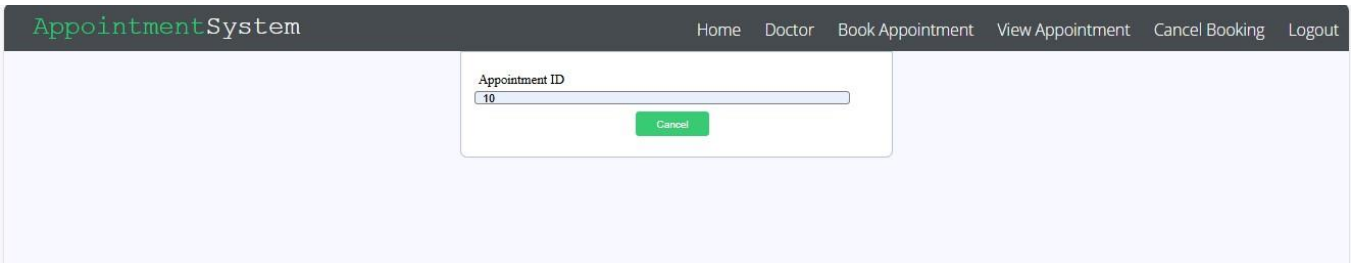
Patients choose a specialized doctor for booking appointments according to the doctor's schedule.



View Appointment:

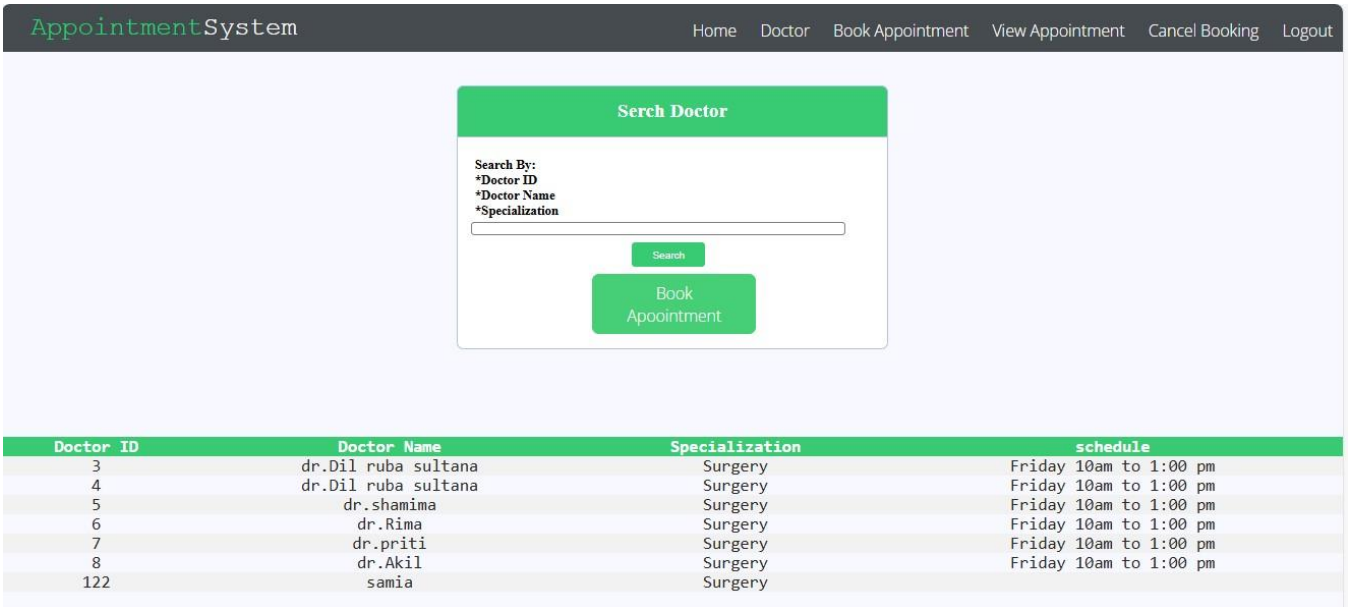


Cancel Appointment:



Search Specialized Doctor:

Patients also can search for a doctor from the system using doctor specializes that way he can easily and fast book appointments.



Doctor Schedule:

Patients can see the doctor's schedule at which time or date the doctor is available. Doctor schedule, maintained by the admin panel.

TOOLS AND TECHNOLOGY

PLATFORM

- Development Environment: Localhost
- Server: XAMPP
- Database: MySQL (PHPMyAdmin)
- Backend : plain PHP
- Version Control: Gitlab

LANGUAGE

- HTML
- CSS
- PHP

FUTURE WORKS

- Chat Box
- Notification

Chat Box

In our upcoming semester we targeted to implement this feature in our system. This feature includes patient’s communication with authority via Chat Box.

Notification

Whenever a patient book an appointment then admin will send a notification on patient email to provide appointment ID and it means confirmation of appointment.

CHALLENGES

- Difficulty to integrate.
- Inadequate knowledge for developing system.
- Difficulty to analysis the requirements.

- Less Prior Knowledge of Programming.
- Insufficient skill to use Version Control.
- Struggle to identify and troubleshoot problems.

CONCLUSION

In the manual Appointment procedure people are faceting so many Difficulties and on so on problem also. Due to We try to create best opportunities for patient, admin also with the doctor to organized appointment system in medical or healthcare organization through online.

REFERENCE

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2. https://veradigm.com/
3. https://www.globaldata.com/company-profile/cerner-corp/