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Doc +: Appointment Booking and Hospital Finder

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Abstract: ***The Hospital Finder application is a web application that provides an interface for patients to locate hospitals within their location with the specialists that are needed based on their health condition and book appointments online. The main aim of this application is to make patients aware of their needs that is special doctors to attend them and reduce time to get better treatment and good care. The main advantage of this application is that patients can choose doctors based on their health condition, choose the right specialist for them, and book appointments for a suitable time and date. It is easy to use, user-friendly, and saves time.***
Index Terms: web application, hospital, book appointments, Medical services

I. INTRODUCTION

In today's modern world, every individual has access to the internet. Having access to the Internet, they can communicate with a wide population of people through a web application, which is software that can be accessed by a browser that can access smartphones and laptops. Smartphones have many sensors, such as accelerometers, GPS position sensors, fingerprint sensors, and gyroscopes, which make these devices very efficient. Every household has a person who has health issues such as blood pressure, cholesterol, and heart issues, and we need to monitor them often. Many web applications are available on the Google Play store. Many health-related apps are uploaded every day. A health-based web application that can many lives easier and more accessible, and many applications include the location of hospitals, book appointments, medicine reminders, etc. Updating the current scenario of the hospital and doctor regularly can help and easily use this web application Hospital Finder.

in our web application, we provide users with the details of the hospital and their specialities with their location and other useful information that is required for the users, which helps users to find hospitals from any location within their city.

It provides patients with access to information about the healthcare facilities available near them ,also play a crucial role in providing healthcare in regions with limited resources.it reduces the waiting time of the patient and could increase the utilization of healthcare services.

During an emergency, we tend to look for nearby hospitals but do not look for the facilities and doctors available in that hospital. Our web application can help you locate nearby hospitals based on our requirements, book appointments based on doctors' availability, and handle patient data. The challenging issue here is to get information from the hospitals and the services provided by them. Another issue is that information about the hospital is provided but their directions to reach the hospital. Therefore this web application is useful in emergencies and for mankind in this digital world.

II. PROBLEM STATEMENT

When we are searching for a hospital during an emergency, we tend to go to nearby hospitals without knowing the medical specialities available there. then shifting patients based on their medical necessities and doctors would be difficult for both the patient and the hospital, to overcome this problem we came up with a solution,

1) To create a web application where one can locate the nearest hospital based on requirements such as distance, location, and medical necessity.
2) And to book appointments based on doctor's availability in a nearby hospital through our web application.

III. LITERATURE REVIEW

According to a recent study by researchers of Vivekanand Education Society's Institute of Technology [1] It is a web-based doctor appointment system that can save patients precious time and decrease the physical gap between doctors and patients, providing fast and adequate medical services. the effort to the patients will be reduced as they can view doctor details, their specializations.

Creating a online doctor appointment booking system through an online application. Patients can register once and use the login credentials for later bookings. Both the doctor and the patients can use this web application to book, and cancel their appointments, and their patients.[2]

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Hari Priya R [3] proposed that latest Smartphones are using global positioning System(GPS) to calculate the nearest hospitals and provide directions through Google Maps. this application "Hospital Finder App" aims to locate the nearest hospital; with a specific specialization within a five km radius and also provides information on doctors and hospitals, allows for online appointments, and manages patient data.

Researchers of , Acropolis Institute of Technology and Research [4] suggested that a location-based services which can provide value-added features to smartphones for information retrieval about their current location. This application provides details of the nearest Ayush hospital with their locations and related useful information. It helps users find hospitals from any location and provides information about opening-closing times, availability of doctors, and beds in the hospital.

Predicting diseases based on symptoms and providing navigation to hospitals with required services. The Android application is used for navigation and disease prediction, while the J2EE Web Application is used by the administrator to authenticate and register users. The system integrates navigation and disease prediction, providing information about hospitals, departments, services, symptoms, and diseases. GPS technology is used for navigation, and the data is stored in MySQL. The application is useful for both emergency cases and navigating to hospitals based on services.[5]

Sajeetha Thavareesan presented a healthcare application called My Care, which is designed to monitor physical signs and manage daily activities related to health. The system utilizes smartphone technology and wireless sensor networks to collect and store health data. It also allows for communication between patients and doctors through SMS and data transfer. The My Care system aims to provide a comprehensive and efficient solution for managing and reviewing health-related data.[6]

IV. METHODOLOGY

The methodology followed in this study consisted of two steps.

The first step was an informative survey to gather the latest information about the hospital and doctors and sort the list of doctors with specialization, and the second step was to implement a web application.

The phases that are required are-

- Research
- Prototyping
- Testing
- Implementation

The web application can be designed to be user-friendly and accessible to all patients of all ages and backgrounds. the phases will be iterative with regular testing and feedback from users to ensure the application meets their meets.

Software and tools used are-

- HTML
- CSS
- JavaScript
- XAMPP
- PHP
- Windows 11

First, we need to identify the user needs that is to gather the list of hospitals and doctor's information, Online booking appointments, and customer support and feedback.

Second, we need to develop the user interface that is a web application. we need Clean layouts that are easy for the users to access, filter options, and a search bar to make the users search the hospital easily simply, and more easily. User-friendly options for the users to make their usage better, every user must create an account to book appointments for a doctor in a particular hospital. User reviews and feedback can be included once the application gains a good amount of views.

For the backend we will be using PHP to store the user's data, doctor's details, hospitals, and appointments. PHP is a server-side scripting language, that runs on the web server and generates dynamic content before sending it to the user's browser. we can seamlessly interact with various databases, including MySQL, PostgreSQL, ORACLE, AND others. It allows the admin to read, insert, update, and delete data from databases to create dynamic web pages, forms, and reports.

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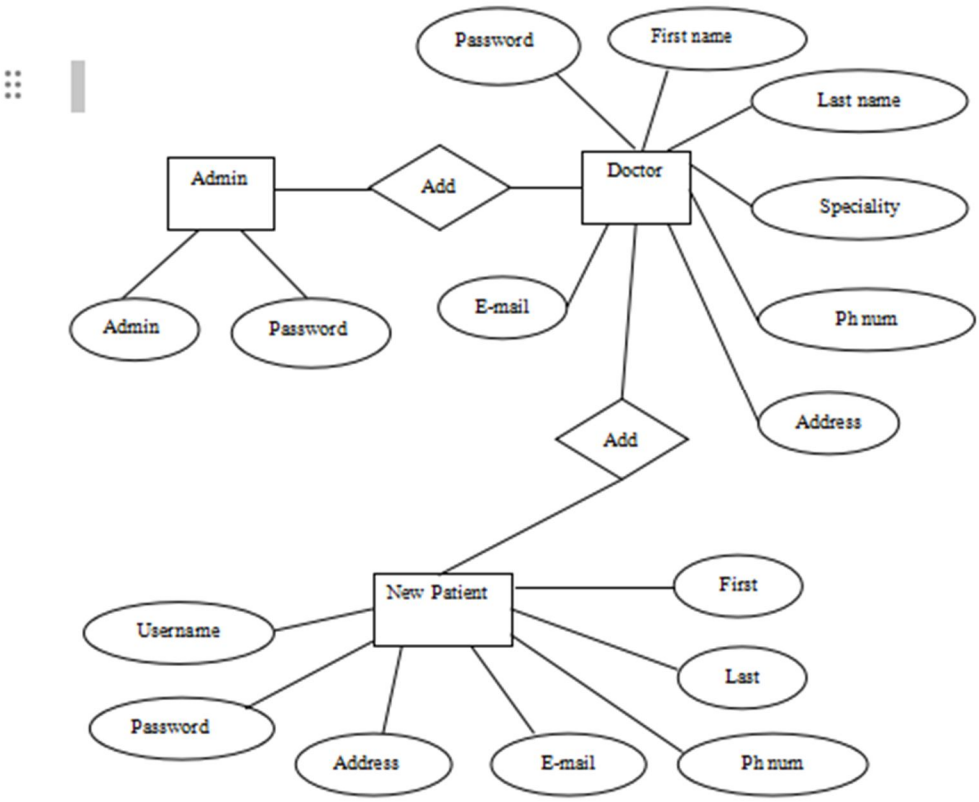


Fig 4.1:ER Diagram

A. Doctors

Doctors have an account where they can register into the web application by giving necessary information like name, qualifications, specialization etc. Now they can login by creating a username and password. They can check their scheduled appointments and upcoming appointments. they can accept the patient's request if available and also upload their medications.

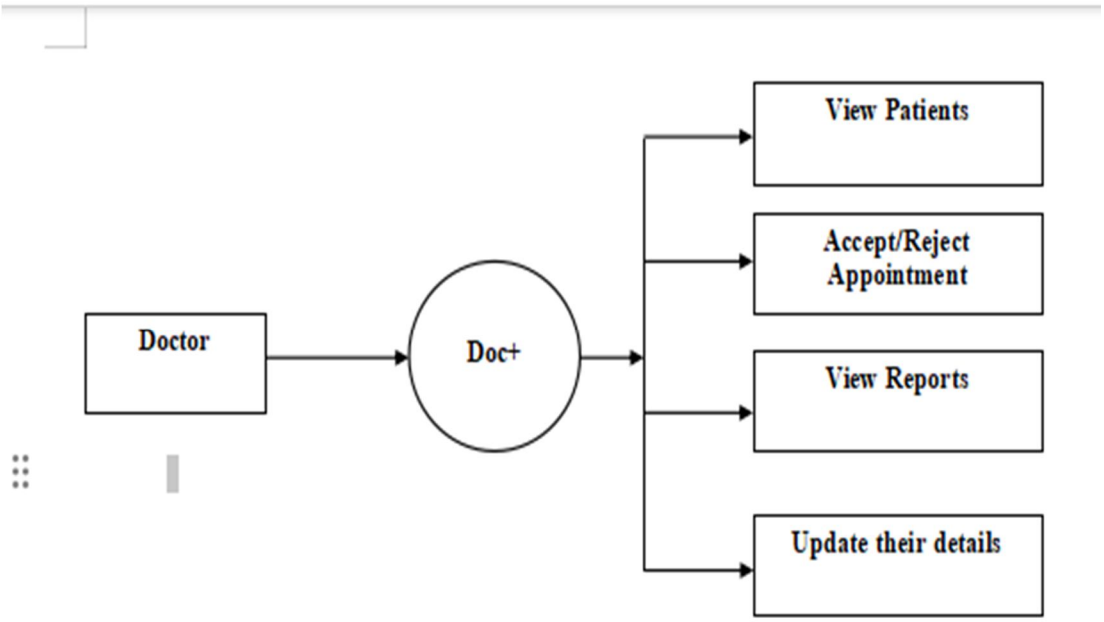


Fig 4.2:Doctor Activity Data Flow Diagram

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B. Patients

Patients can create an account by providing basic information like name, email id, password etc. Once they login , they can book appointments with a particular doctor. They can also see the medications prescribed by the doctor after consultation.

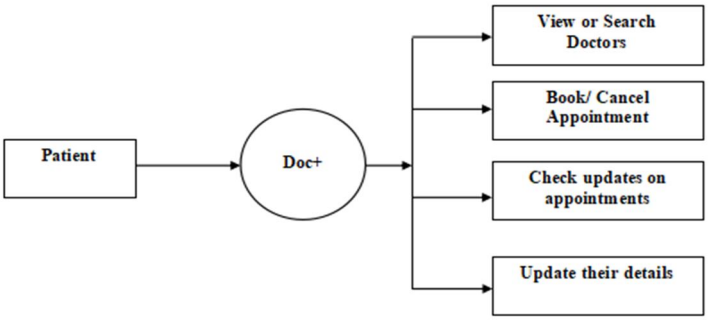


Fig 4.3: Patient Activity Data Flow Diagram

C. Admin

Admin acts as a bridge between doctors and patients. They need to manage doctors and patients and approve or decline the appointments based on doctor's availability.

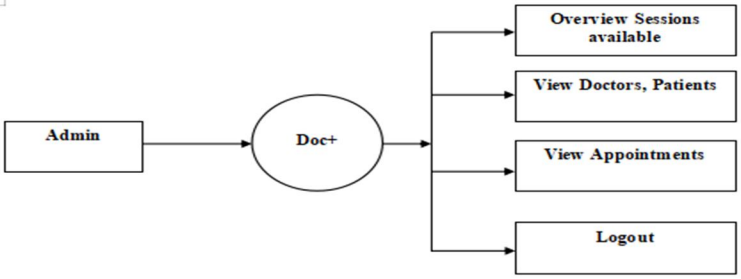


Fig 4.4:Admin Activity Data Flow Diagram

V. CONCLUSION

This is a web application that provides users with the details of the hospital and their specialities with their location and other useful information that is required for the users, which helps users to find hospitals from any location within their city. it provides patients with access to information about the healthcare facilities near them and also plays a crucial role in providing healthcare in regions with limited resources. it reduces the waiting time of the patient and could increase the utilization of healthcare services.

VI. RESULT AND DISCUSSIONS

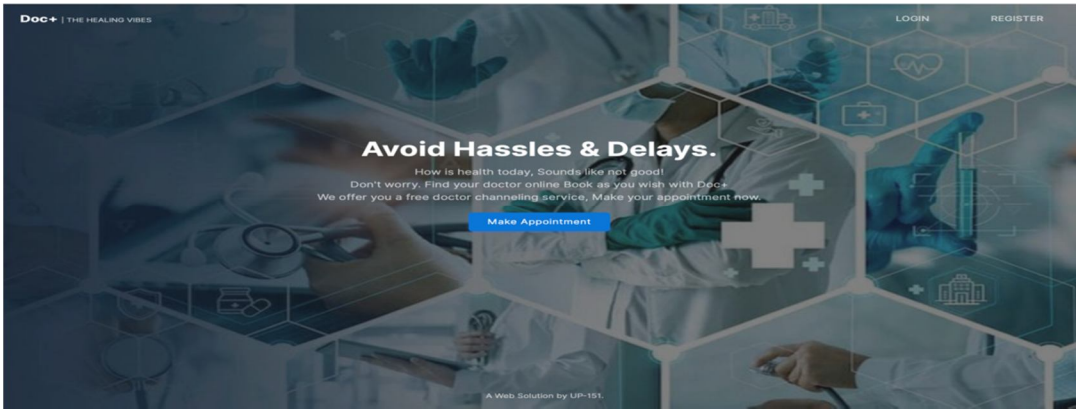


Fig 6.1:Index

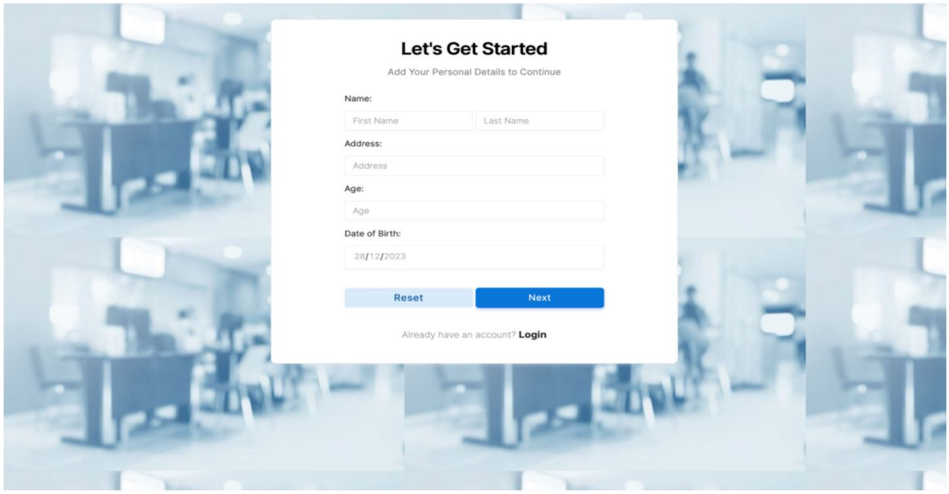


Fig 6.2 :LogIn Page

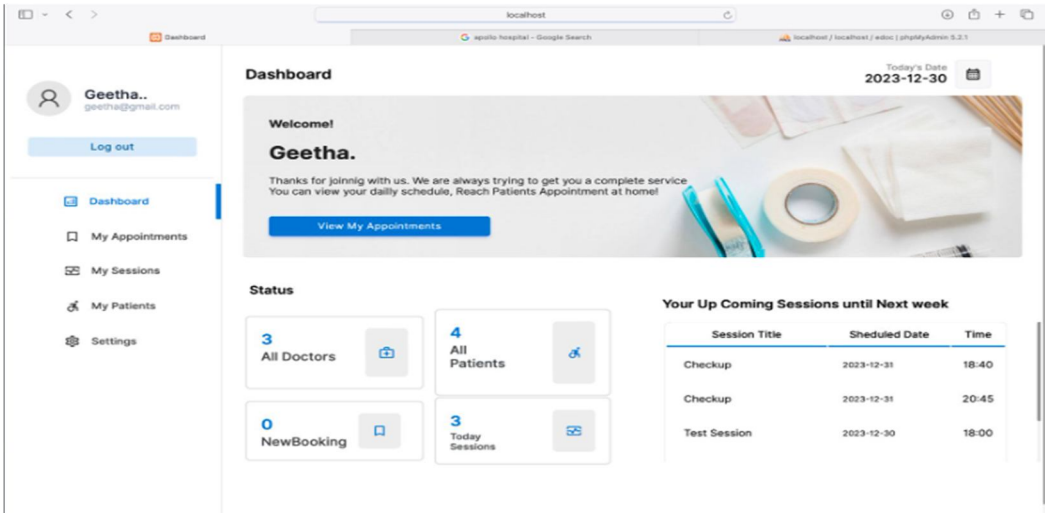


Fig 6.3:Doctor's Dashboard

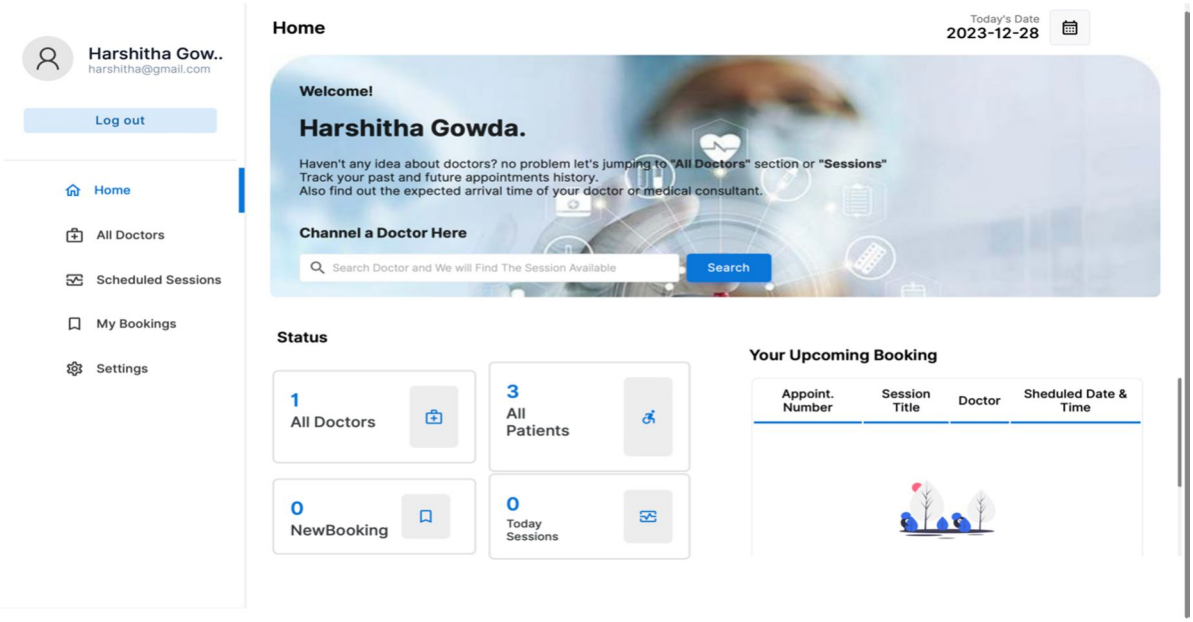


Fig 6.4:Patient's Dashboard

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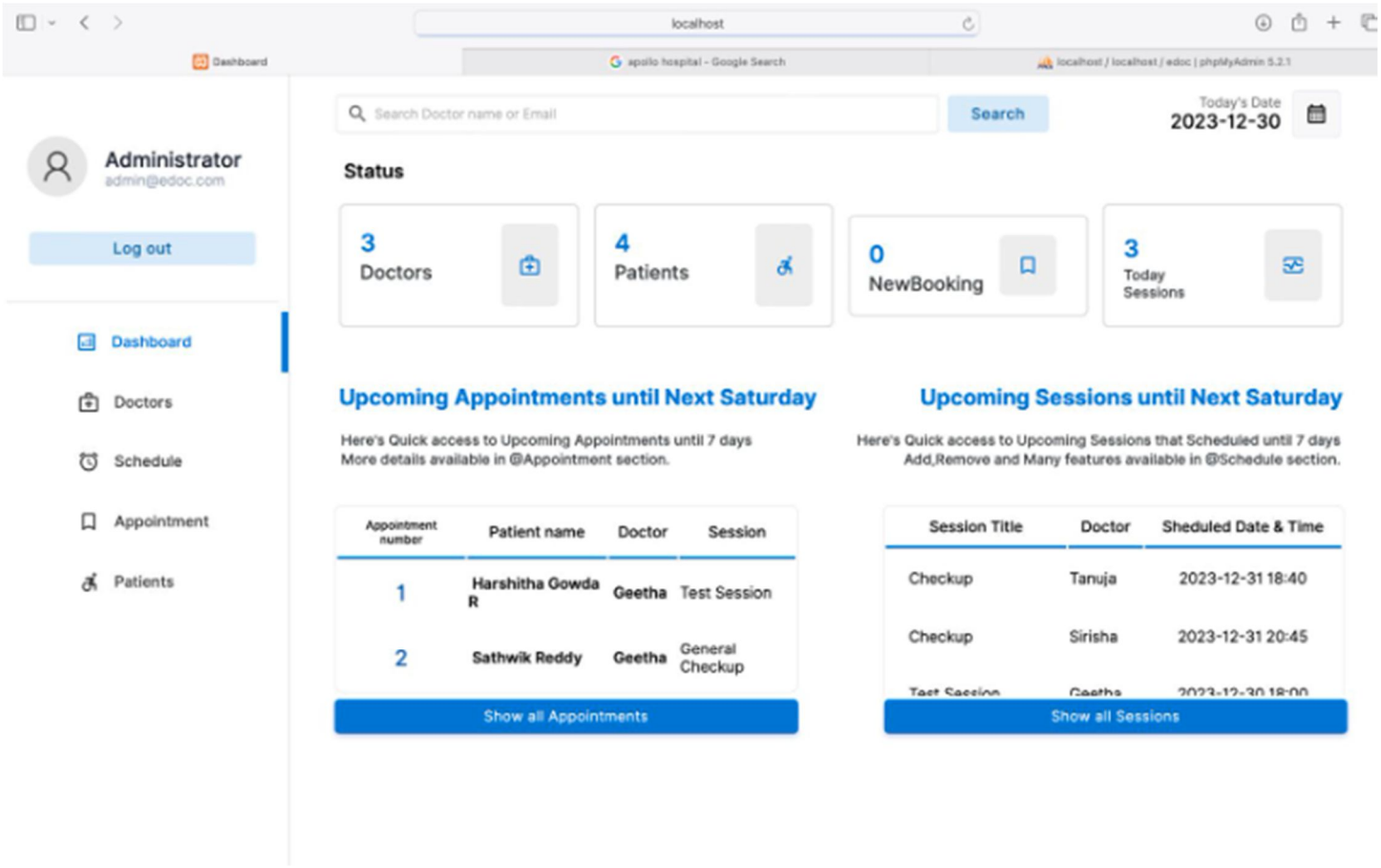


Fig 6.5:Admin's Dashboard

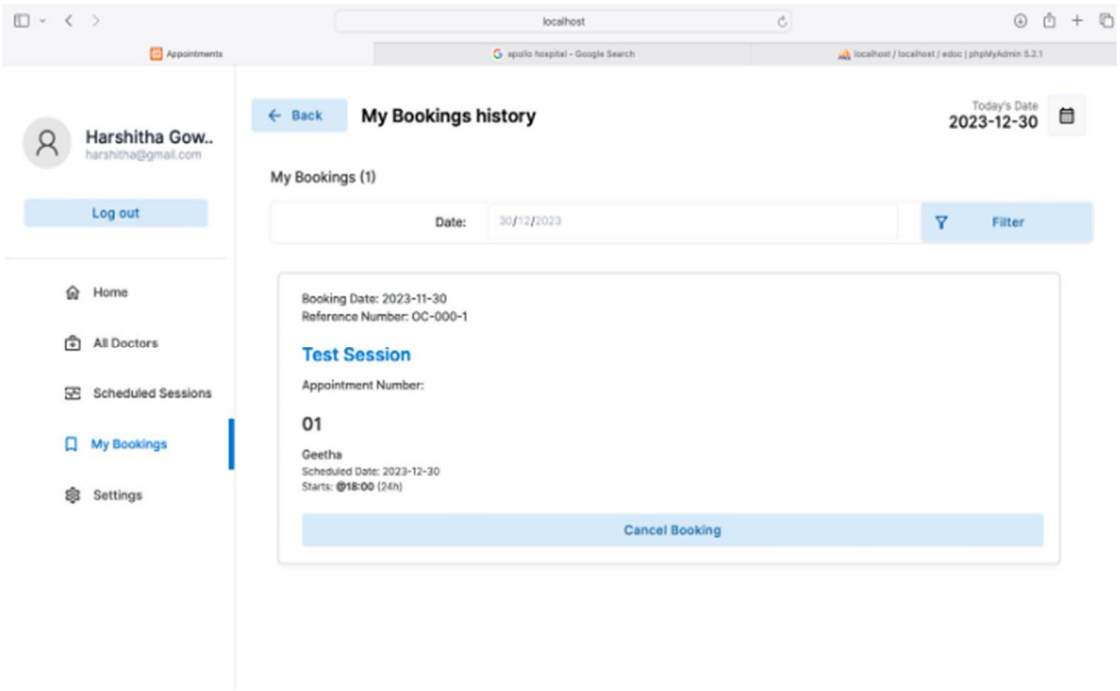


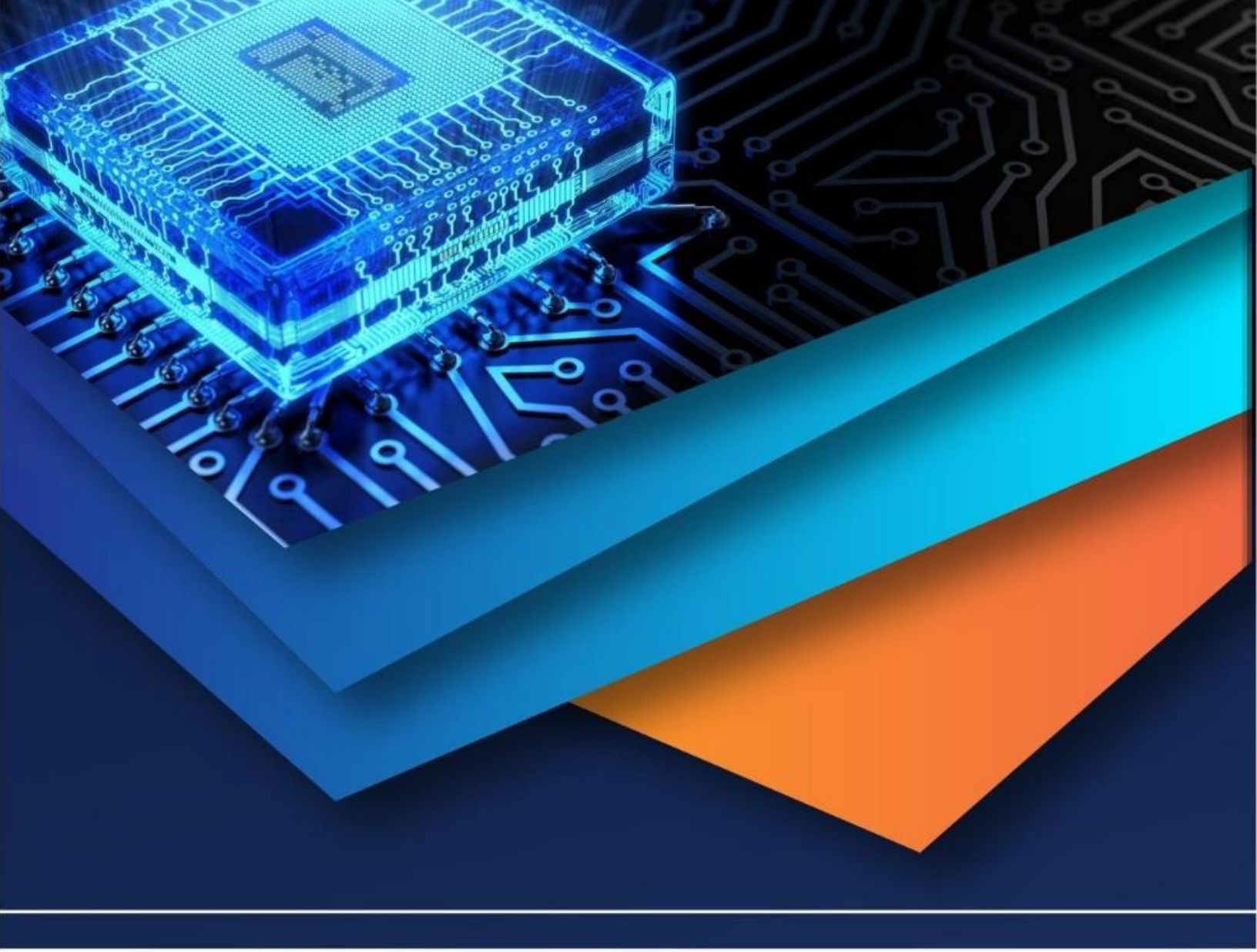
Fig 6.6: Patient's Booking History

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