BOOKFAST

DOCTORS BOOKING SYSTEM

A PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF THE DEGREE

MASTER OF COMPUTER APPLICATIONS (MCA)

OF

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

BY

SHIMRON RAJ
Reg No: 22PMC153

Marian College Kuttikanam Autonomous

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Under the guidance of

Sr. ITALIA JOSEPH MARIA
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PG DEPARTMENT OF COMPUTER APPLICATIONS

Marian College Kuttikkanam Autonomous

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

KUTTIKKANAM – 685 531, KERALA.

CERTIFICATE

This is to certify that the project work entitled

BOOKFAST

is a bonafide record of work done by

SHIMRON RAJ

Reg. No. 22PMC153

In partial fulfillment of the requirements for the award of Degree of

MASTER OF COMPUTER APPLICATIONS [MCA]

During the academic year 2022-2024

Sr ITALIA JOSEPH MARIA
Assistant Professor
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Mr WIN MATHEW JOHN
Head of the Department
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Examiner

Examiner

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Finally, I express my deep appreciation to all my friends and family members for the moral support and encouragement they have given to complete this project work successfully.

SHIMRON RAJ

ABSTRACT

The doctors booking system is an online platform designed to facilitate the efficient scheduling and management of medical appointments between patients and doctors. The system provides a user-friendly interface where patients can search for available doctors, view their profiles and specialties, and book appointments based on their preferred date and time slots. Allowing them to book appointments from anywhere and at any time.

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1. INTRODUCTION

1.1 Problem Statements

The existing process of booking appointments with doctors is often time- consuming, inefficient, and inconvenient for patients. The traditional methods, such as phone calls or in-person visits, lack flexibility and can result in long waiting times or scheduling conflicts. This leads to frustration for patients and can result in delayed or missed medical care.

Additionally, healthcare providers and administrative staff face challenges in managing appointment schedules, tracking patient information, and maintaining an organized system. Manual processes for appointment booking, rescheduling, and managing patient records are prone to errors and can consume significant time and resources.

Therefore, there is a need for an improved doctor booking system that addressesthese challenges and provides a seamless and user-friendly experience for patients, while streamlining administrative tasks for clients.

1.2 Proposed System

The proposed project is an online doctor booking system that aims to providea convenient and streamlined process for patients to schedule appointments.
The system will be designed to address the challenges faced by patients in the traditional appointment booking process, offering a user-friendly interface and automated features to enhance efficiency and accessibility. Key Features and Functionality are User Registration, Doctor Profiles and Availability, Appointment Scheduling, Ratings,etc

1.3 Features of the Project

- User can register and performs their functions
- User can book their slot
- User can view doctors profile
- User can rate their hospital out of 5

2. FUNCTIONAL REQUIREMENTS

FUNCTIONAL REQUIREMENTS

1. *User Registration and Authentication:*

- Patients should be able to create user accounts by providing necessary information.
- The system should authenticate and validate user credentials during login.

2. *Doctor Profile Management:*

- Doctors should be able to create and manage their profiles, including personal details,specialties, qualifications, and availability.
- Doctors should have the option to update their profiles and make changes to theiravailability through admin.

3. *Appointment Scheduling:*

- Patients should be able to search for doctors based on various criteria such as specialty,and availability.
- Patients should be able to view available time slots and book appointments with theirpreferred doctors.
- The system should handle appointment conflicts and prevent double bookings

4.*Ratings:*

- Patients have the ability to provide ratings for the hospital they have visited

5. *Admin can add/delete reviews/details of doctor:*

- Admin have the privilege to access all the features

6. *Logout*

- User can logout successfully

3. NON-FUNCTIONAL REQUIREMENTS

NON-FUNCTIONAL REQUIREMENTS

1. Reliability

Reliability is an essential non-functional requirement for the doctor booking system, ensuringthat the system performs consistently and reliably under various conditions. The reliability of the system contributes to building trust among users, preventing data loss or corruption, and minimizing system failures. Also the system will be functioning inside a container. Thus, the overall stability of the system depends on the stability of container and its underlying operatingsystem.

2. Availability

Availability is a crucial non-functional requirement for the doctor booking system, ensuring that the system remains accessible and operational for users whenever they need it. High availability minimizes downtime, ensures uninterrupted service, and contributes to user satisfaction.. It means 24 X 7 availability.

3. Maintainability

It ensuring that the system can be easily maintained, updated, and enhanced over time. A maintainable system is cost-effective to manage, allows for efficient bug fixes and updates, andsupports future enhancements.

4. Supportability

The code and supporting modules of the system will be well documented and easy to understand. Online documentation and help system requirements.

4. FEATURES AND HIGHLIGHTS

4.1 Features

Online Appointment Booking

Patients can easily book appointments online through a user-friendly interface. They can select their preferred doctor, choose a suitable time slot, and provide necessary information.

Real-time Availability

The system displays real-time availability of doctors, allowing patients to see the available time slots and book appointments accordingly.

Doctor Profiles

The system can provide detailed profiles for each doctor, including their qualifications, specialties and experience. This helps patients make informed decisions when choosing a doctor.

Receipt Generation

When the user books their slot, the system will provides a pdf receipt containing appointment details.

Customer support

The system provides a contact form and WhatsApp link for interacting with the client and vise versa

Hospital Rating

Patients have the ability to provide ratings for the hospital they have visited.

5.TECHNICAL ASPECTS

Architecture of Project

1. Front-End Interface

The front-end component would consist of a user interface that allows patients to view available doctors, their schedules, and book appointments. It should be user-friendly and accessible from various devices such as desktops, tablets, and mobile phones.

2. Application Layer

The application layer acts as an intermediary between the front-end and the back-end components. It handles user requests, processes data, and communicates with the database and external services. This layer includes components such as API endpoints, authentication, and authorization mechanisms.

3. Database

A database is crucial for storing and managing various types of data, including patient details, doctor profiles, appointment schedules, and booking records.

4. Availability and Scheduling

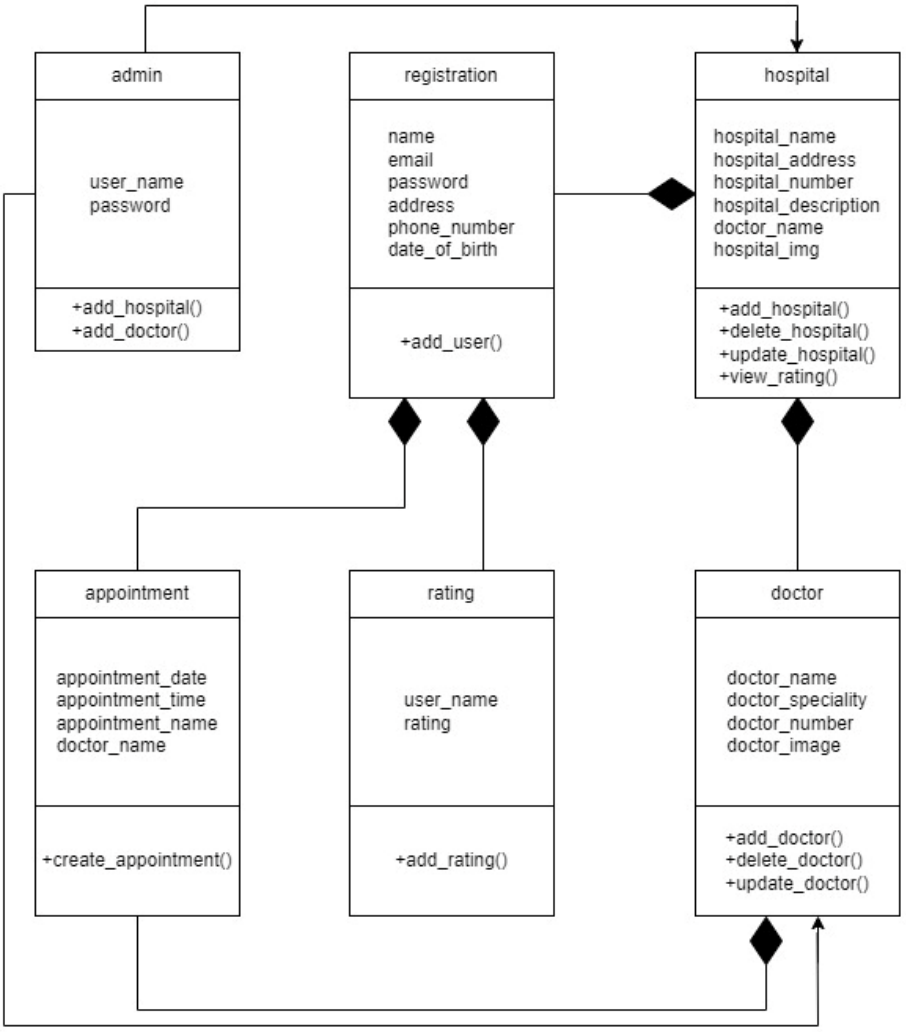
The system should include features for managing doctor availability and appointment scheduling. This can involve complex algorithms to handle overlapping time slots, ensuring proper time management, and avoiding scheduling conflicts.

5. Scalability and Performance

Design the architecture to handle a large number of concurrent users and ensure high availability. This can involve techniques like load balancing, caching, and horizontal scaling of infrastructure components.

Database

Class Diagram



6.CHALLENGES

Challenges faced during development

1. Handling data validation and ensuring data integrity during various operations.
2. Integrating the doctors booking system with Django libraries
3. Creating a user-friendly interface that is intuitive and easy to navigate
4. Implementing secure user authentication and authorization mechanisms
5. Balancing the need for a visually appealing design with functional requirements.

7.FUTURE ENHANCEMENTS

1. Artificial Intelligence (AI) Chatbots

Implement AI-powered chatbots to provide automated support to patients. Chatbots can handle common inquiries, assist with appointment scheduling, answer basic medical questions, and provide information about doctors and services.

2. Real-Time Availability Updates

Enhance the system to provide real-time updates ondoctor availability. Patients can view up-to-date information on doctors' schedules, including any cancellations or rescheduling, ensuring accurate and timely booking.

3. Advanced Search and Filters

Improve the search functionality by implementing advanced filters based on specialties, locations, languages, ratings, and other criteria. This enables patients to refine their search and find the most suitable doctors.

4. Mobile Application

Develop a mobile application for the doctor's booking system, allowing patients to access the system on their smartphones. The app can provide a user-friendly interface, push notifications for appointment reminders, and easy access to doctor profiles and schedules.

8.CONCLUSION

In conclusion, the doctor booking system is a valuable solution that streamlines the process ofscheduling appointments with doctors. It provides numerous benefits for patients, doctors, byoffering a convenient and efficient way to manage appointments and improve the overall healthcare experience.

Throughout this project, we have discussed various aspects of the doctor booking system, including its methodology, proposed features, functional and non-functional requirements, andpotential future enhancements. The system's methodology involves stages such as analysis, design, development, testing, and deployment, ensuring a systematic and well-structured approach to its implementation.

GitHub link : https://github.com/shimronraj/Doctor-Appoitment-Booking-System.git

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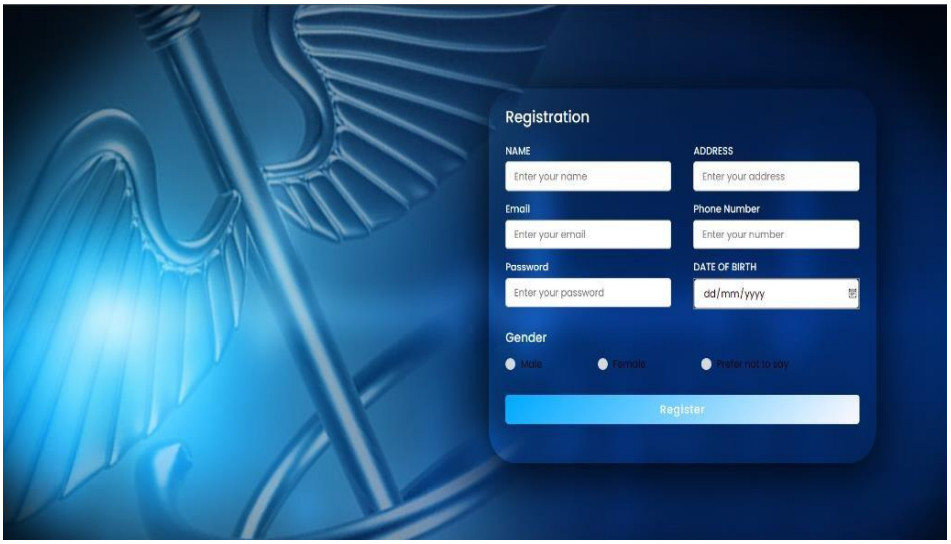
  - https://stackoverflow.com/
- **Quickobook:**
  - https://www.quickobook.com/hospitals
- **ChatGPT**
  - https://chat.openai.com/
- **Django Jazzmin Documentation**
  - https://django-jazzmin.readthedocs.io/

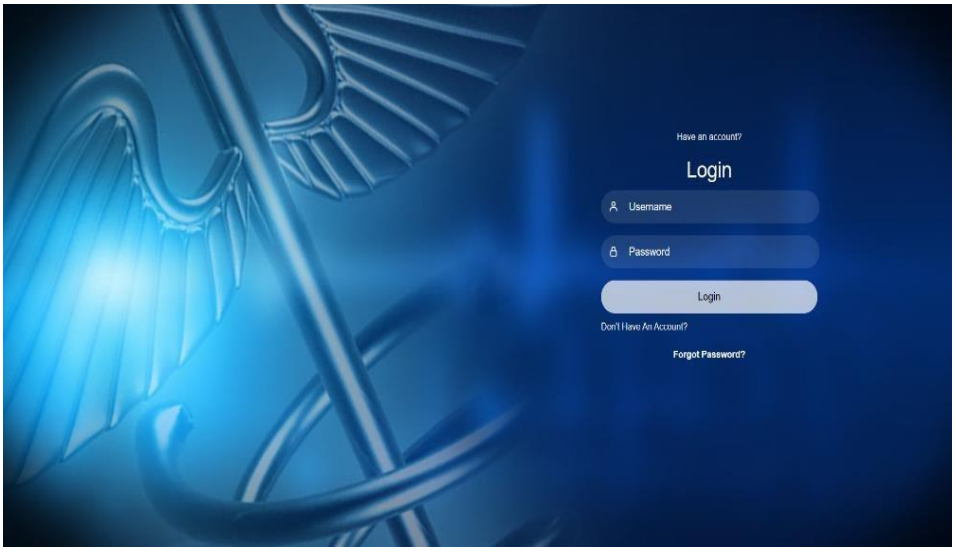
10.ANNEXURE

A. SCREENSHOT

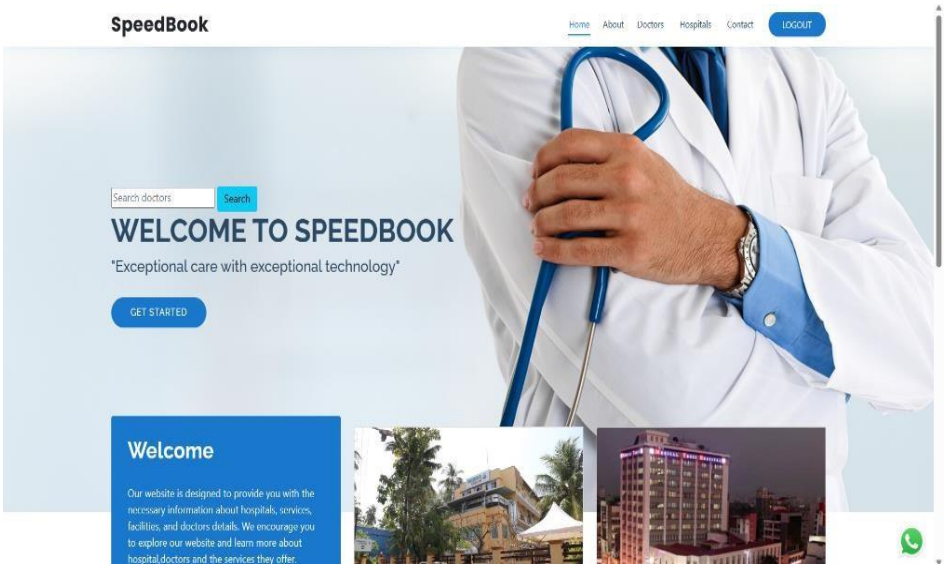
1. *REGISTRATION PAGE*



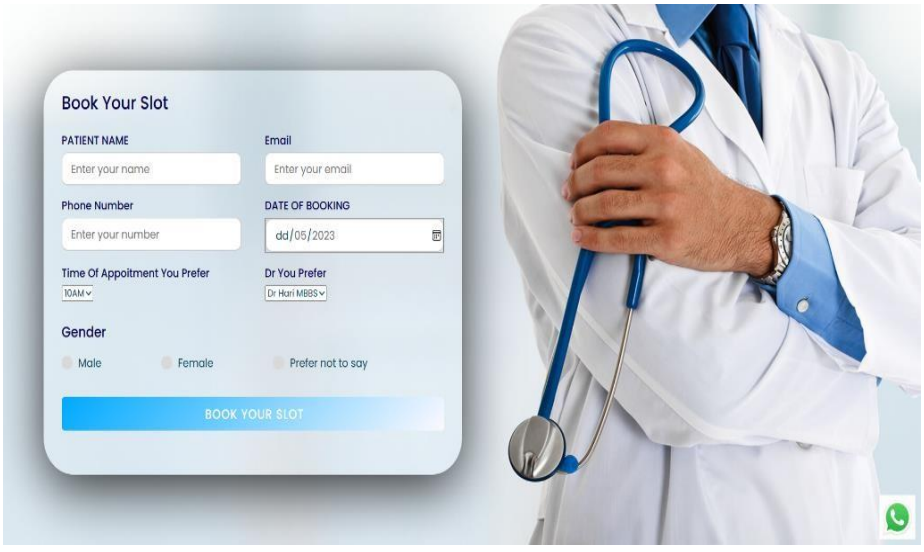
2. *LOGIN PAGE*



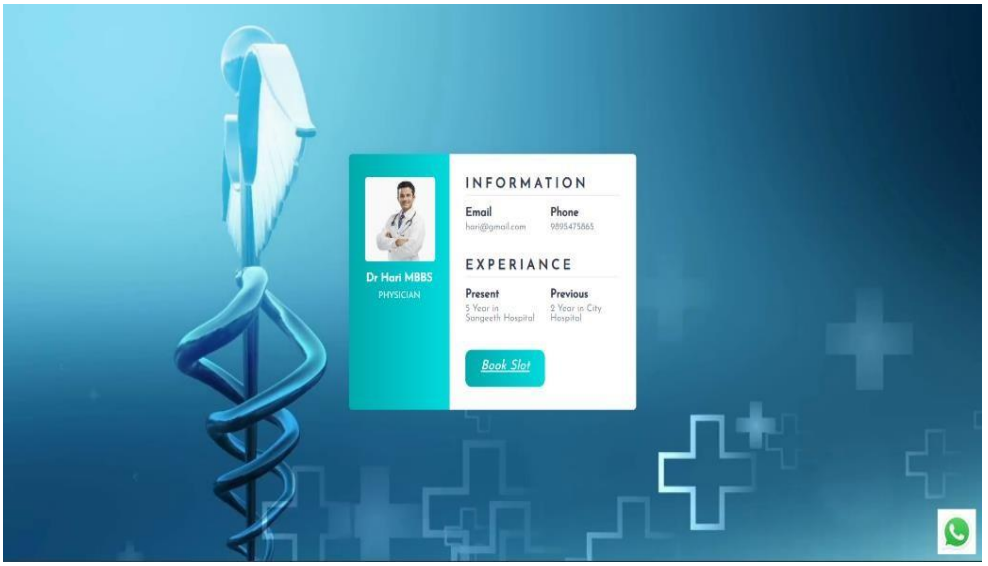
3. *HOME PAGE*



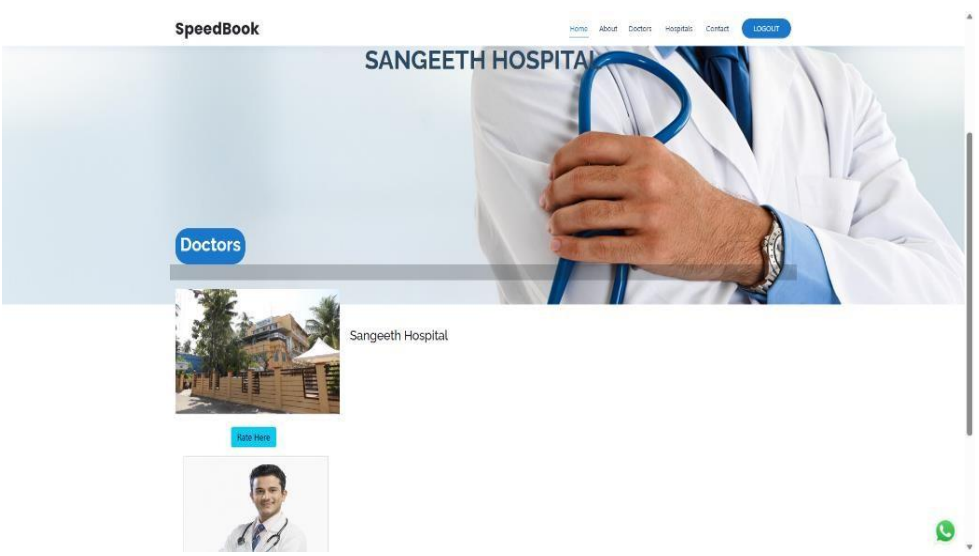
4. *BOOK SLOT PAGE*



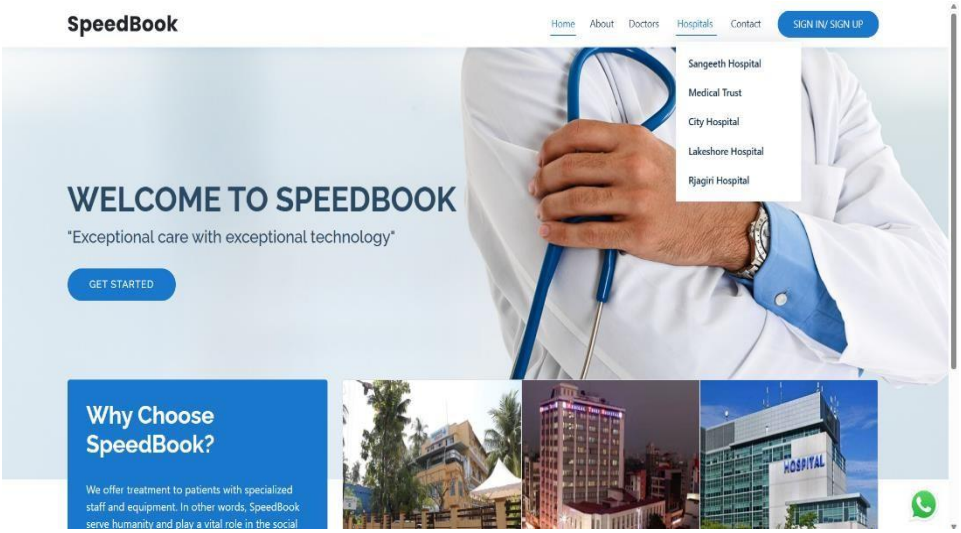
5. *DOCTORS PROFILE PAGE*



6. *HOSPITAL PAGE*

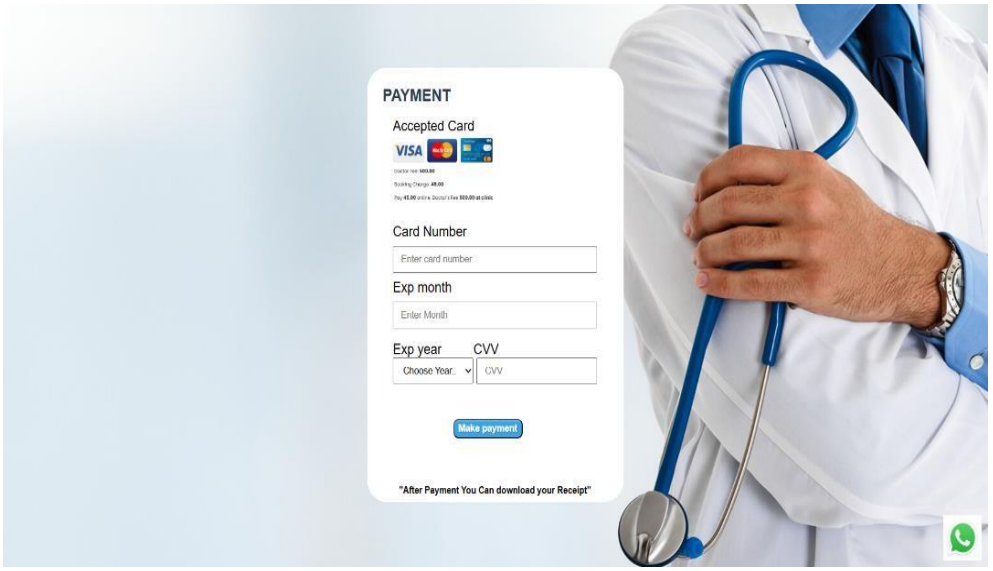


7. *HOSPITAL NAME VIEW*

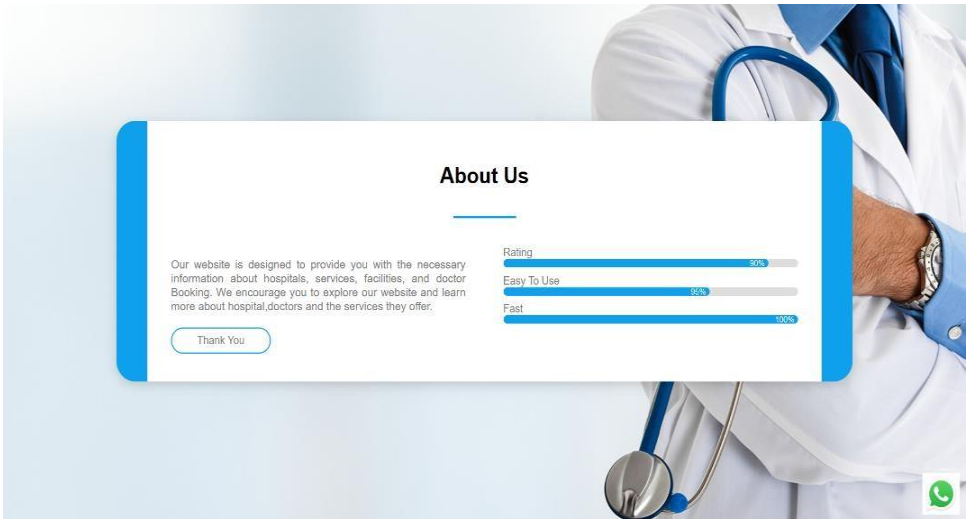


8. *RATING PAGE*

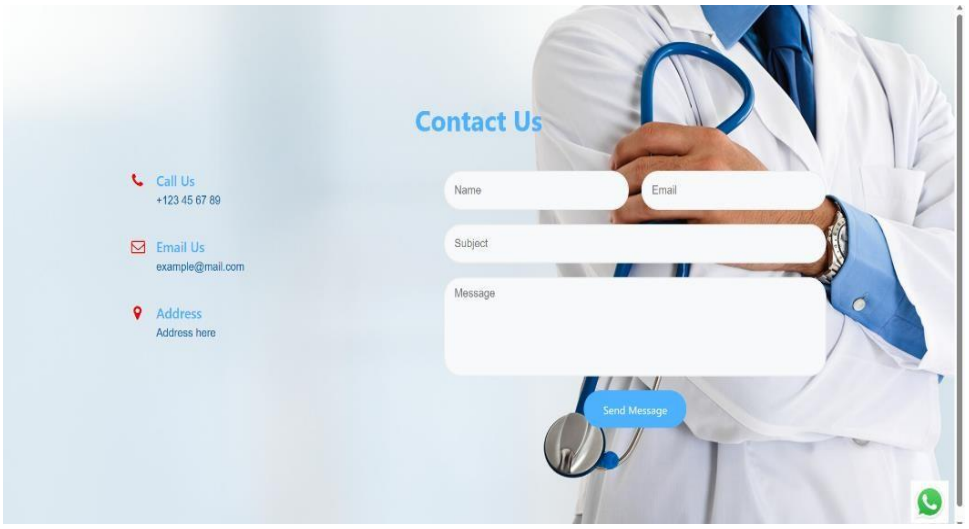
9. *PAYMENT PAGE*



10. *ABOUT PAGE*



11. *CONTACT PAGE*



12. *ADMIN*