



Shivaji University, Kolhapur.

A PROJECT REPORT

ON

**“Hospital Appointment Booking
System”**

Submitted To,

**Yashwantrao Chavan School of Rural
Development**

Shivaji University, Kolhapur.

**in the partial fulfillment of
MCA Part-II, Sem-III
(2023-2024)**

Submitted By

Mr. Onkar S. Yevale

Mr. Shreyash S. Abdagire

Under The Guidance of

Dr. Vaishali Bhosale



2023 – 2024

**Yashwantrao Chavan School of Rural
Development**

Shivaji University, Kolhapur

CERTIFICATE

This is to certify that, **Mr. Onkar Shrirang Yevale** and **Mr. Shreyash Sunil Abdagire** have satisfactorily completed the project entitled as **“Hospital Appointment Booking System”** in the partial fulfillment of MCA-II, SEM-III during the academic year 2023-2024.

Place: Kolhapur

Date: / . /2023

Internal Guide

Examiner

MCA Co-Ordinator

ACKNOWLEDGEMENT

Every project is always a scheduled, guided & coordinated team effort aimed at achieving common minimum goals. This minimum goal cannot be achieved without the guidance of guide.

It is with immense pleasure that we present our report to our project guide **Dr. Vaishali Bhosale**. We find no words to describe her efforts and total confidence in our potential to see this project to completion. She has always been a source of inspiration and a tower of support boosting our moral beyond imagination. We would like to express our gratitude to our Head of the Department **Dr. Vaishali P. Bhosale I/C Director, YCSR** for her continuing support and encouragement. We sincerely express our gratitude to our parents for their blessing for making this project successful.

Finally, we are thankful to our department and all our friends who have helped us to realize our efforts.

Thanking all of them, again.

Place: Kolhapur

Date: / / 2023

Name of Student:

Mr. Onkar Shrirang Yevale

Mr. Shreyash Sunil Abdagire

DECLARATION

Respected Sir/Ma'am,

We, undersigned here by declare that the project entitled “**Hospital Appointment Booking System**”. Developed under the guidance of Dr. Vaishali Bhosale

The reports generated in the project work are based on the information collected by us.

Place: Kolhapur

Date: / / 2023

Name of Student:
Mr. Onkar Shrirang Yevale
Mr. Shreyash Sunil Abdagire

INDEX

| SR.NO | TITLE | PAGE NO |
|-------|-----------------------------------|---------|
| 1. | INTRODUCTION | |
| 2. | MANUAL SYSTEM & SYSTEM ANALYSIS | |
| 3. | OBJECTIVES | |
| 4. | DATA FLOW DIAGRAM (DFD) | |
| 5. | ENTITY RELATIONSHIP DIAGRAM (ERD) | |
| 6. | SYSTEM REQUIRMENTS | |
| 7. | FEASIBLITY STUDY | |
| 8. | OUTPUT DESIGN AND REPORTS | |
| 9. | FEATURES | |
| 10. | CONCLUSION | |
| 11. | REFERANCES | |

INTRODUCTION

INTRODUCTION:

Introduction of the Project Doctor Appointment System:

The "Doctor Appointment System" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by this existing system. More-over this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

The application is reduced as much as possible to avoid errors while entering the data. It also provides error message while entering invalid data. No formal knowledge is needed for the user to use this system. Thus by this all it proves it is user-friendly.

Doctor Appointment System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources. Every organization, whether big or small, has challenges to overcome and managing the information of Appointment, Doctor, Booking, Doctor Fees, Doctor Schedule. Every Doctor Appointment System has different Doctor needs, therefore we design exclusive employee management systems that are adapted to your managerial requirements This is designed to assist in strategic planning, and will help you ensure that your organization is equipped with the right level of information and details for your future goals. Also, for those busy executive who are always on the go, our systems come with remote access features, which will allow you to manage your workforce anytime, at all times. These systems will ultimately allow you to better manage resources.

SYSTEM ANALYSIS

System analysis for your Hospital Appointment Booking System involves a structured process of understanding, diagnosing issues, and proposing improvements for the system. It's essential to facilitate effective communication between users and developers. Here's a simplified explanation of the system analysis for your Hospital Appointment System:

Understanding the Current System: The first step is to through examine how your current appointment system works. This includes looking at how patients book appointments, how the staff manages these appointments, and the overall workflow.

Identifying Problems: As a system analyst, you need to identify any challenges or inefficiencies in the current system. This could be issues like long waiting times, appointment scheduling conflicts, or difficulty in managing patient records.

Gathering Information: To gather information, you may conduct interviews with hospital staff and patients. You can also use questionnaires to collect data that will help in understanding the system's strengths and weaknesses.

Data Analysis: Once you've collected data, you'll need to analyze it to gain insights into how the system functions and where improvements can be made. This is crucial to understand the existing system thoroughly.

Proposing Solutions: After identifying the problem areas, you'll work on proposing solutions to address them. These solutions might include streamlining appointment scheduling, implementing an electronic health record system, or improving patient communication.

User Involvement: Your proposed solutions should be presented to the hospital staff for their input and feedback. They should be involved in the decision-making process to ensure that the changes are practical and meet their needs.

Review and Refinement: The proposed changes are reviewed by users, and any necessary adjustments or modifications are made based on their feedback. This iterative process continues until users are satisfied with the proposed improvements.

Feasibility Studies: In addition to the above steps, feasibility studies are conducted to determine the cost, resource requirements, and potential benefits of implementing the proposed changes.

Selecting the Best Solution: Ultimately, the most suitable solution is chosen, considering user feedback, feasibility, and the expected impact on the hospital appointment system.

Implementation: Once a solution is selected, the implementation phase begins. This involves making the necessary changes to the system and ensuring that users are trained to use the new system effectively.

Monitoring and Evaluation: After the system changes are in place, continuous monitoring and evaluation are essential to ensure that the improvements are achieving the desired outcomes and that any further adjustments are made as needed.

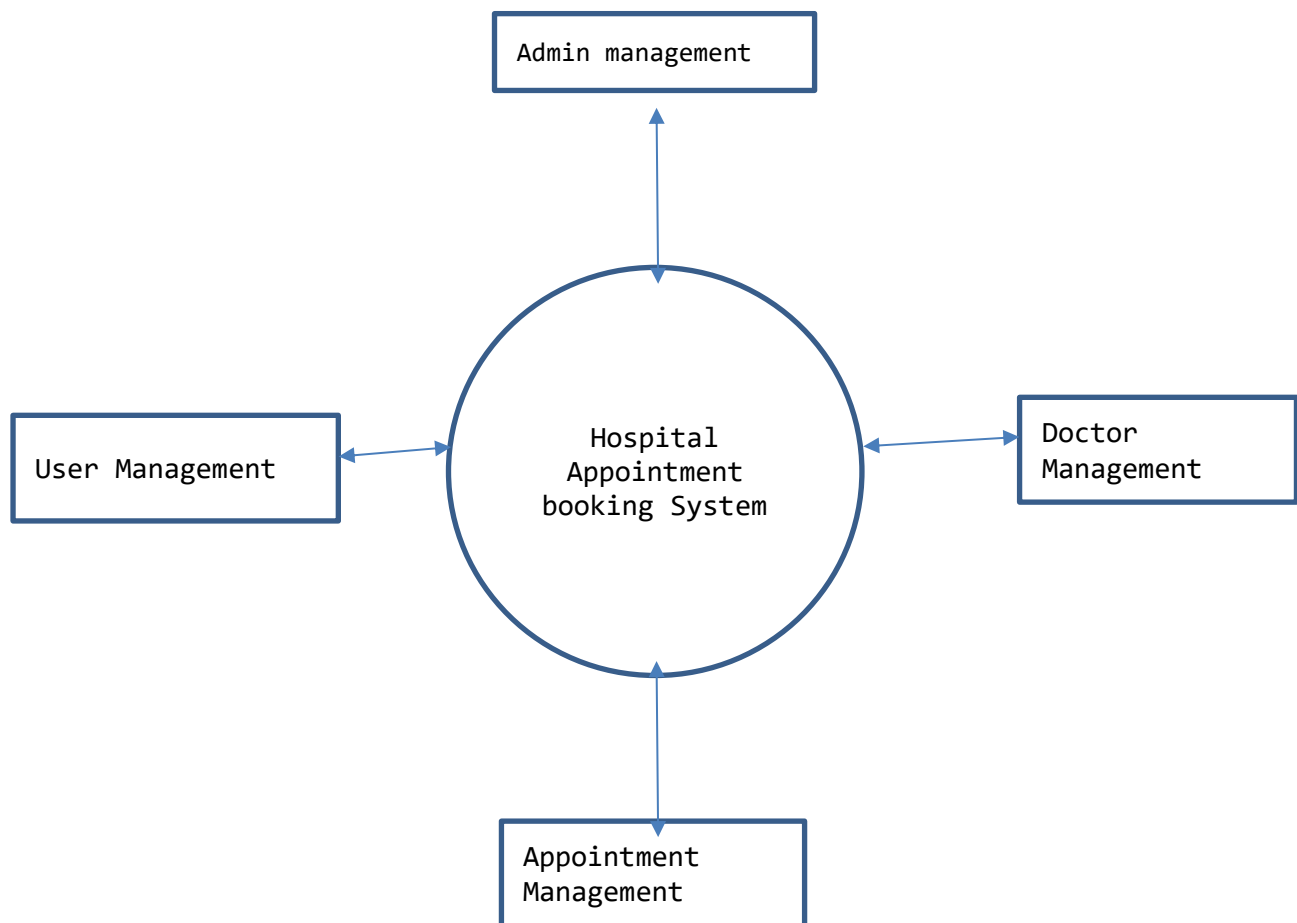
OBJECTIVES

Objective of Project on Doctor Appointment System:

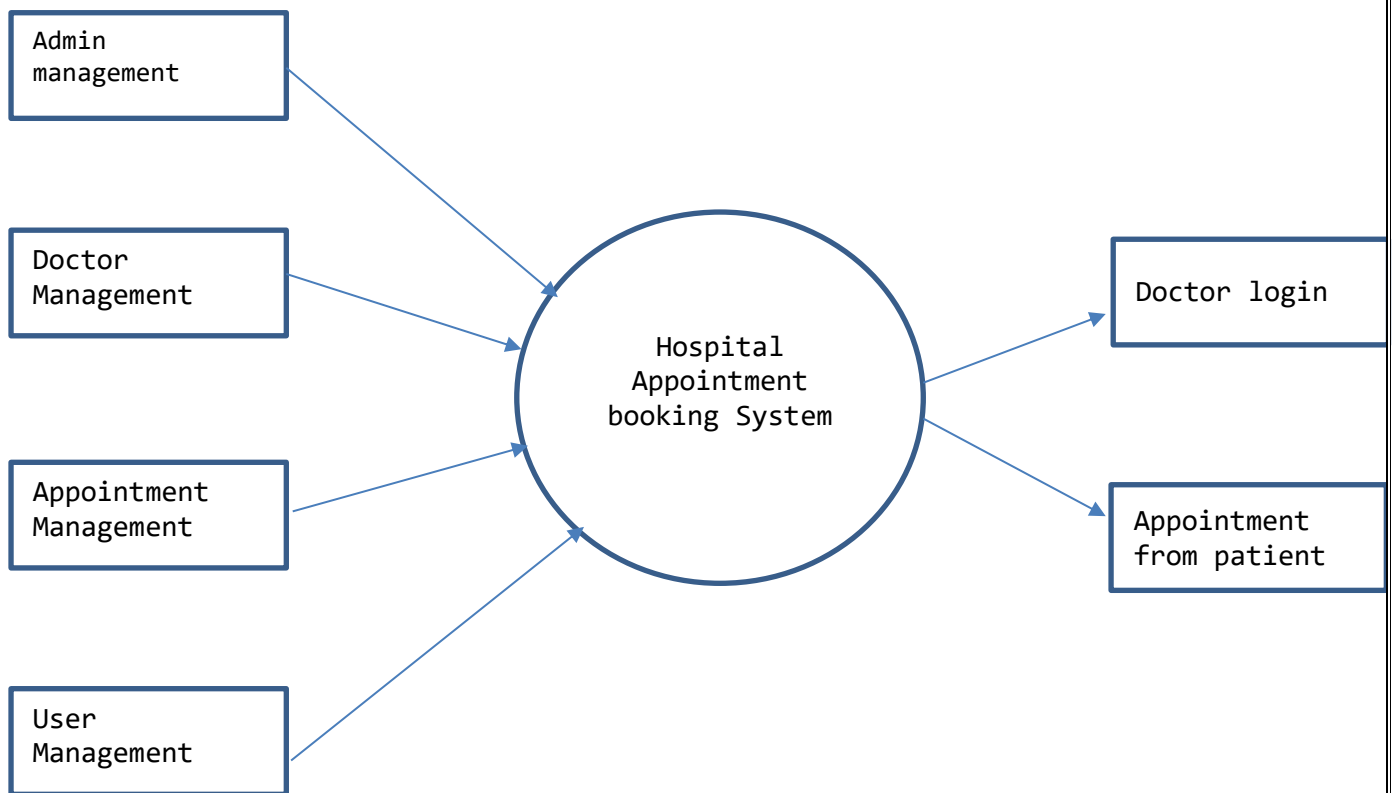
The main objective of the Project on Doctor Appointment Booking System is to manage the details of Doctor, Appointment, Patient, Booking, Doctor Schedule. It manages all the information about Doctor, Doctor Fees, Doctor Schedule, Doctor. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for managing the Doctor, Appointment, Doctor Fees, Patient. It tracks all the details about the Patient, Booking, Doctor Schedule.

DFD:

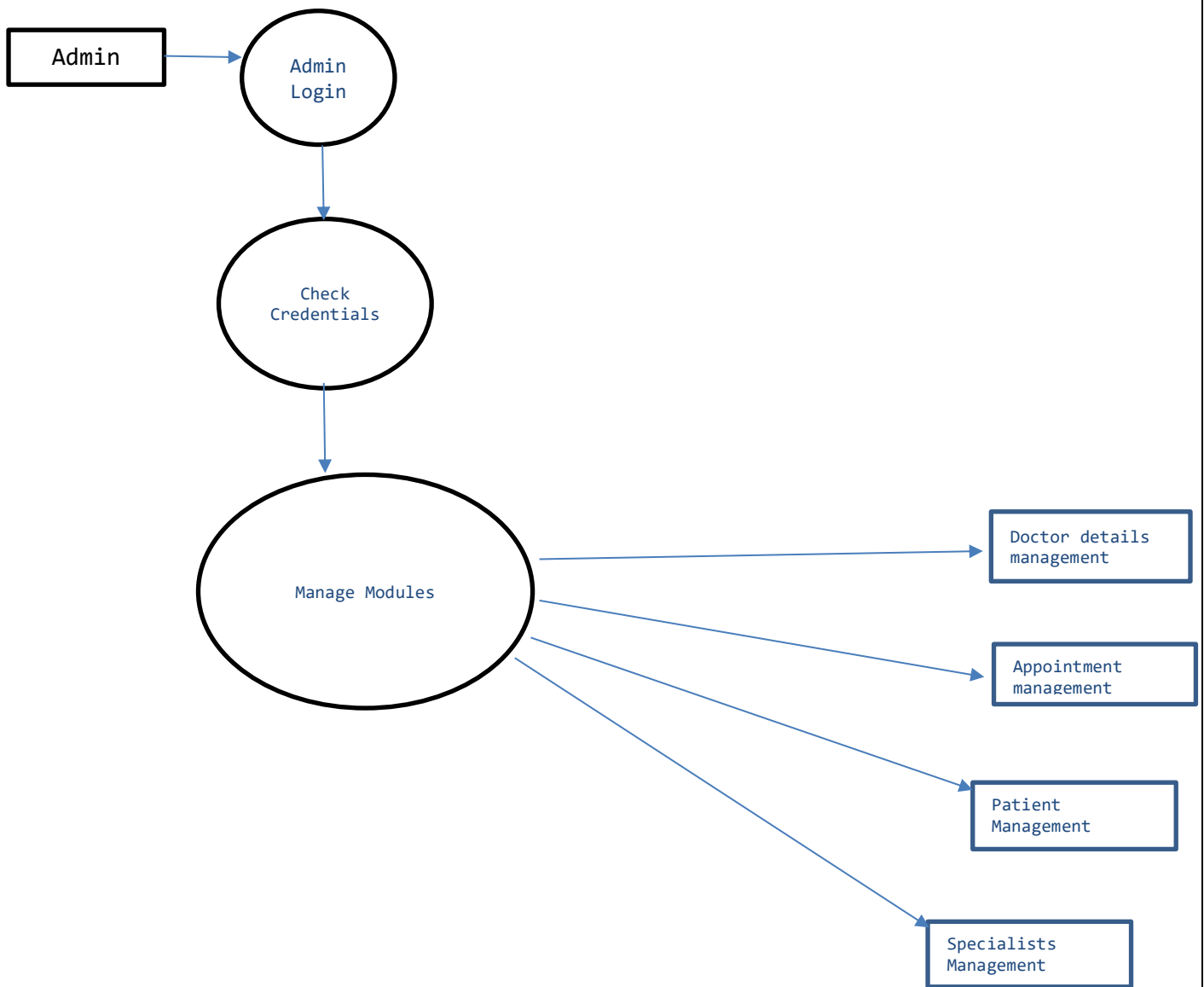
Zero Level DFD:



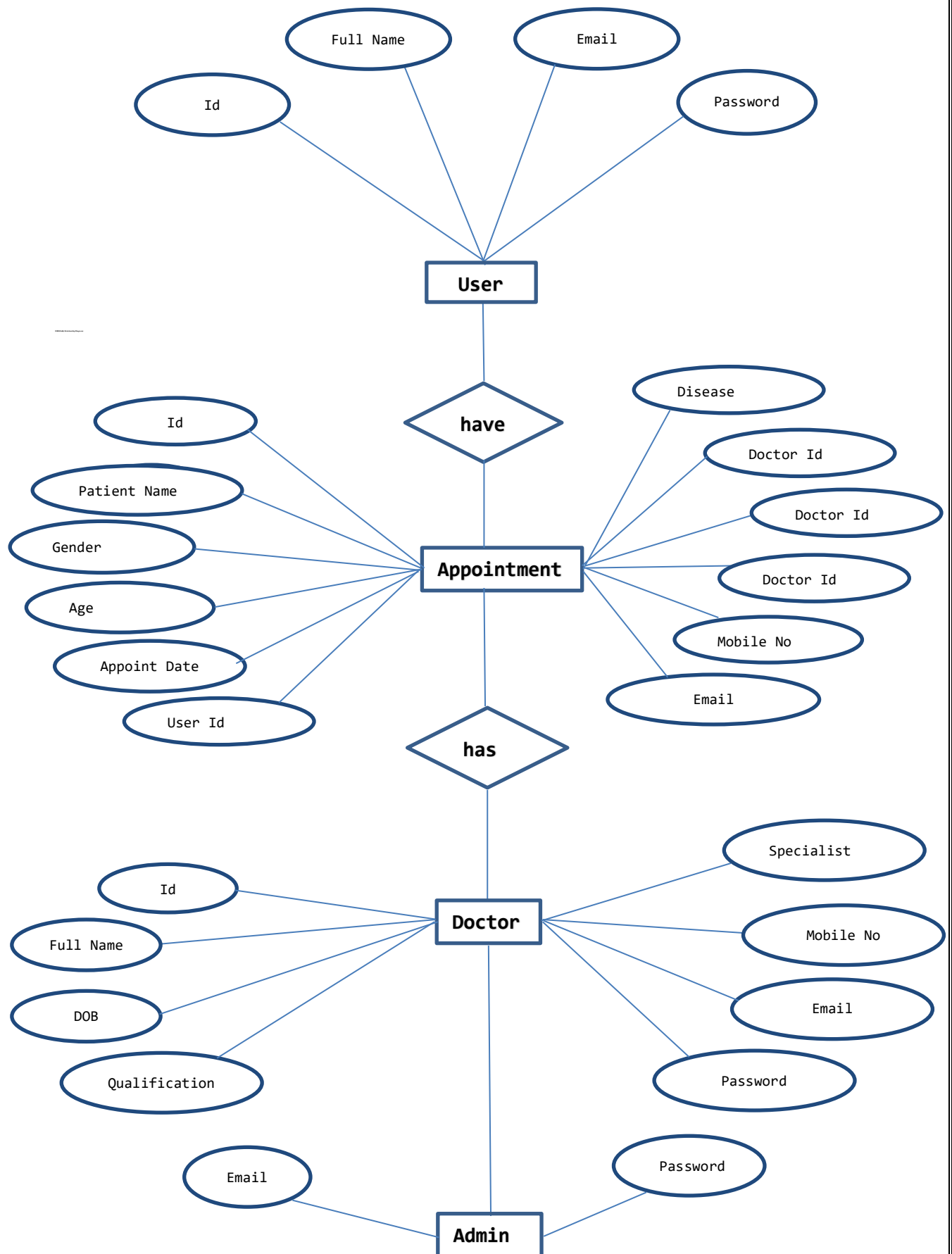
Level 1 DFD:



Level 2 DFD:



ERD:



SYSTEM REQUIREMENT

- **Hardware and Software**

A. Software Requirement

Operating System: Windows 11(64bit)

Web browser: Chrome, Firefox, Etc.

B. Hardware Requirement:

Hard Disk : 1GB free space

RAM : 512 MB

C. Front End

1)JSP, Servlet

2)JAVASCRIPT

3)Bootstrap

D. Back End

1) Core Java

2) JDBC API

3) MYSQL

FEASIBILITY STUDY

Feasibility Study for Hospital Appointment Booking System:

When considering the feasibility of implementing a Hospital Appointment Booking System, we must assess various aspects to ensure the project's viability:

A. Economical Feasibility:

Cost Assessment: We need to estimate the costs involved in developing and maintaining the system. This includes hardware, software, and personnel costs.

Benefit Analysis: Evaluate the benefits the hospital will receive from the proposed system. This could include reduced administrative workload, better patient management, and improved efficiency.

Return on Investment (ROI): Calculate the expected ROI to ensure that the benefits will outweigh the costs. The savings in terms of staff time, reduced paperwork, and improved resource allocation should be considered.

B. Technical Feasibility:

Functionality Assessment: Examine the technical capabilities required for the system. Ensure that the system can handle the essential functions like appointment scheduling, patient record management, and communication efficiently.

Performance Evaluation: Assess whether the proposed system can perform all necessary tasks within acceptable timeframes and without major technical constraints.

Compatibility: Confirm that the system can work with the existing hospital infrastructure, including databases and networks.

C. Operational Feasibility:

User-Friendliness: Evaluate how user-friendly the system is. It should be easy to use for both staff and patients, ensuring that the appointment booking process is smooth and efficient.

Training and Adoption: Determine the readiness of the hospital staff to adopt the new system. Training programs should be designed to help users understand and utilize the system effectively.

Stakeholder Satisfaction: Consider the comfort and satisfaction of both hospital staff

and patients. The system should simplify appointment booking and management, reducing workloads for staff and enhancing the patient experience.

In conclusion, the feasibility study for the Hospital Appointment Booking System should indicate that:

The costs associated with system development and maintenance are justified by the expected benefits, and the return on investment is favourable.

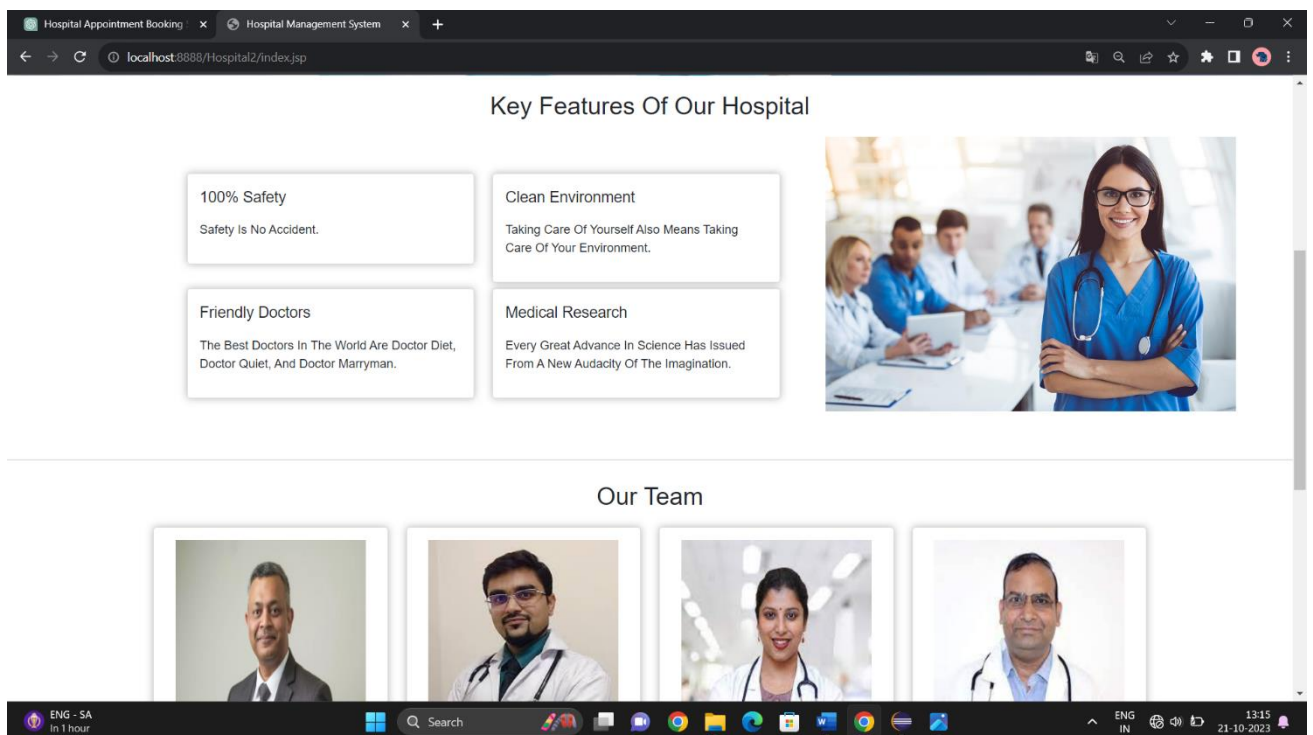
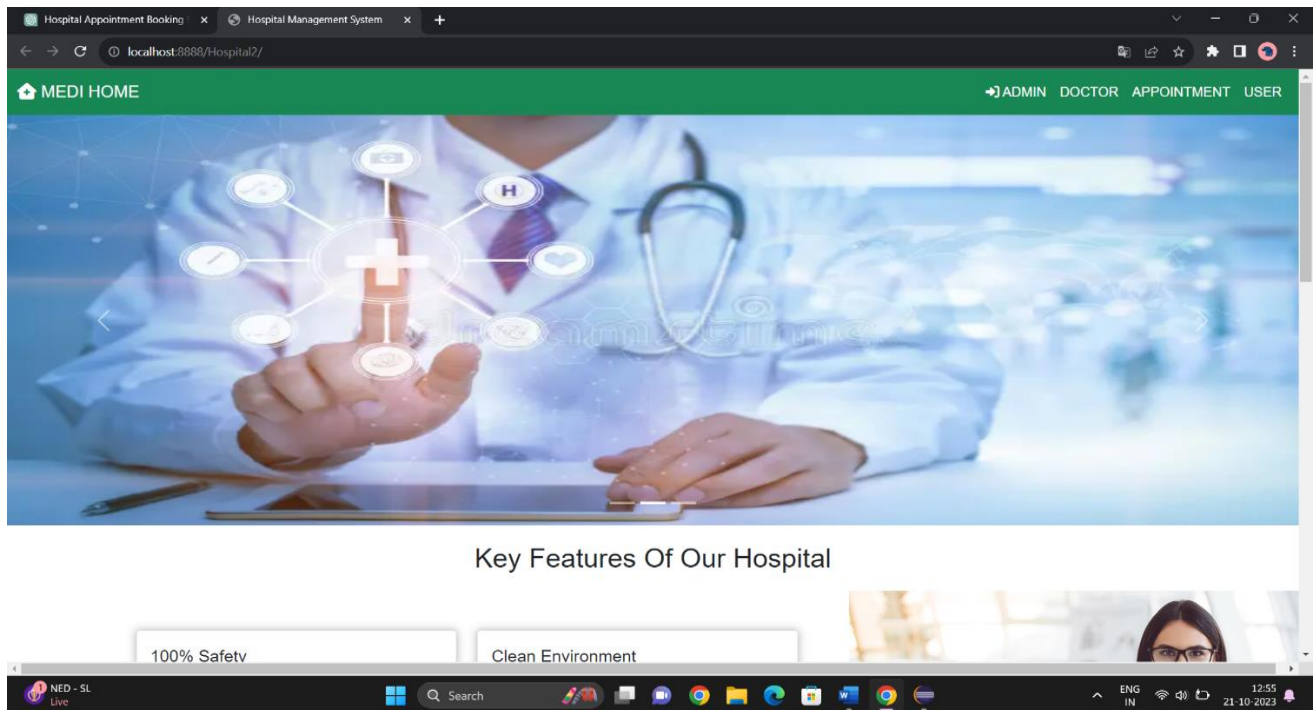
The technical requirements and constraints can be met, ensuring the system's reliability and performance.

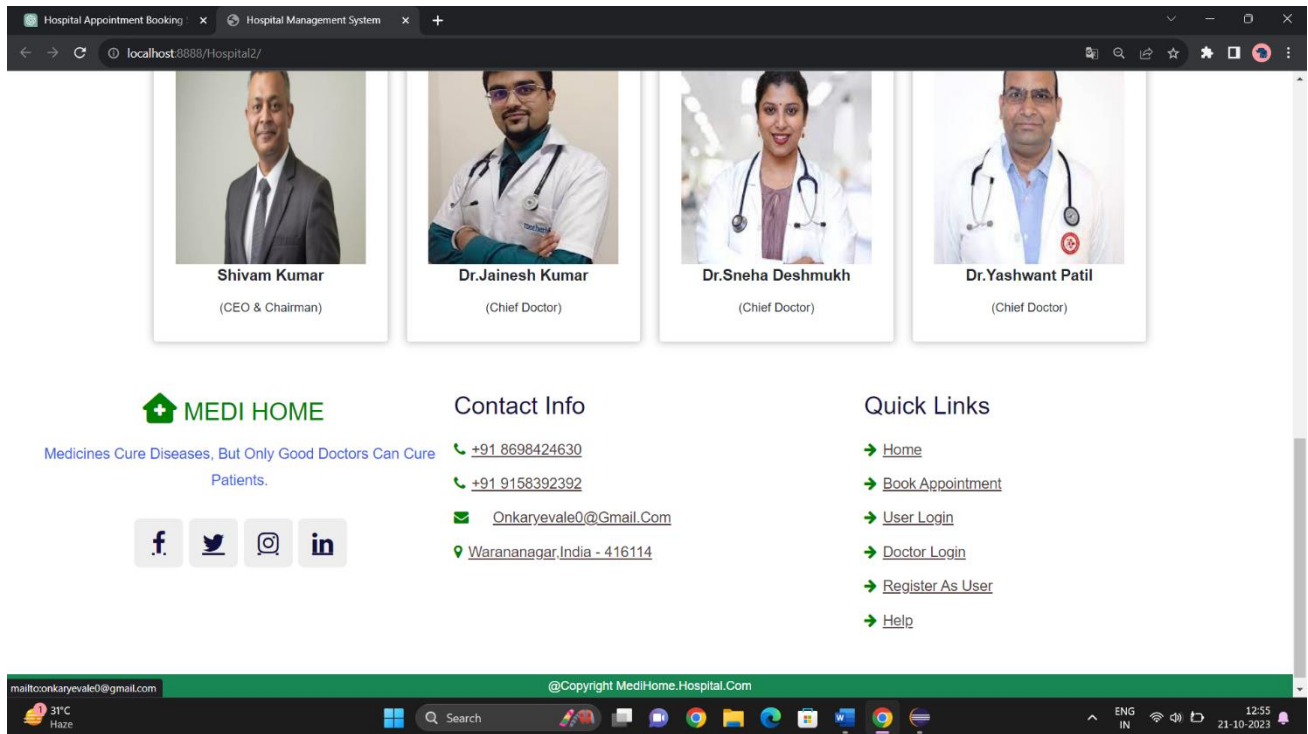
The system is user-friendly, and the hospital staff is prepared to use it effectively. Stakeholders, including hospital staff and patients, are likely to benefit from the system's implementation

OUTPUT DESIGN AND REPORT

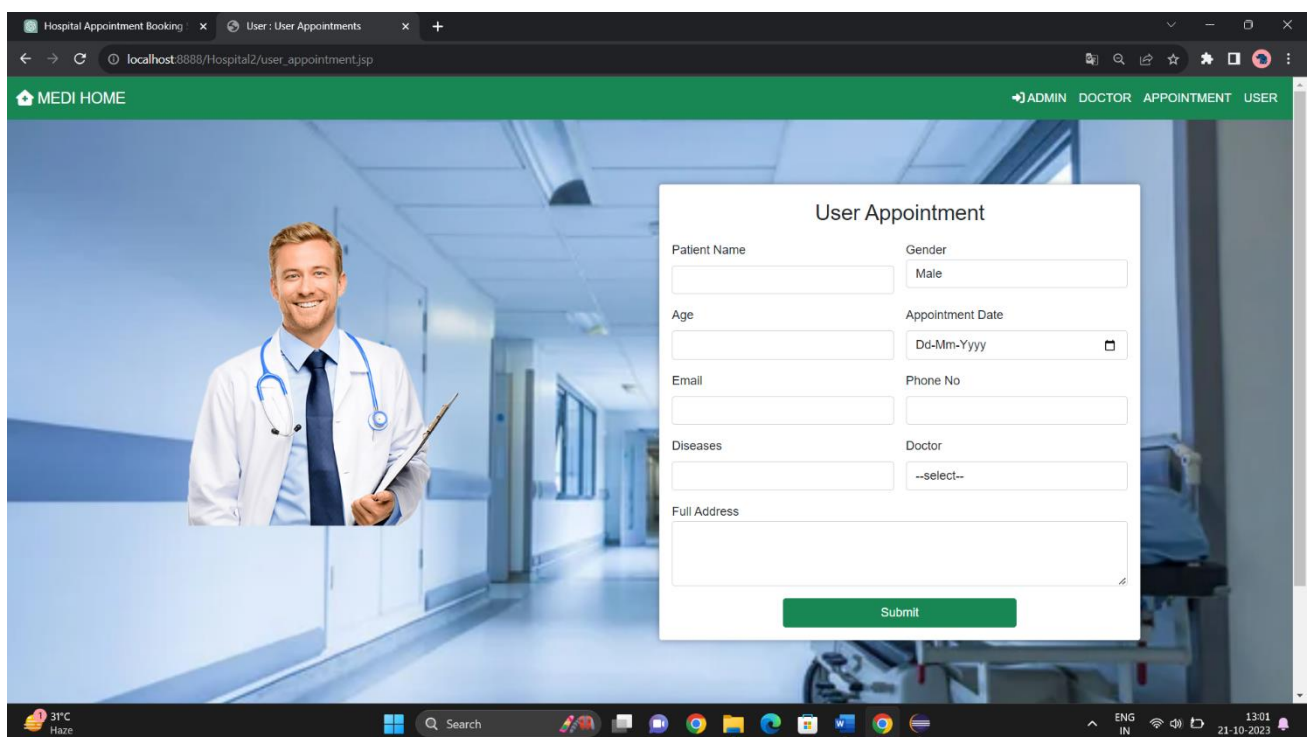
GUIs:

1. Landing Page

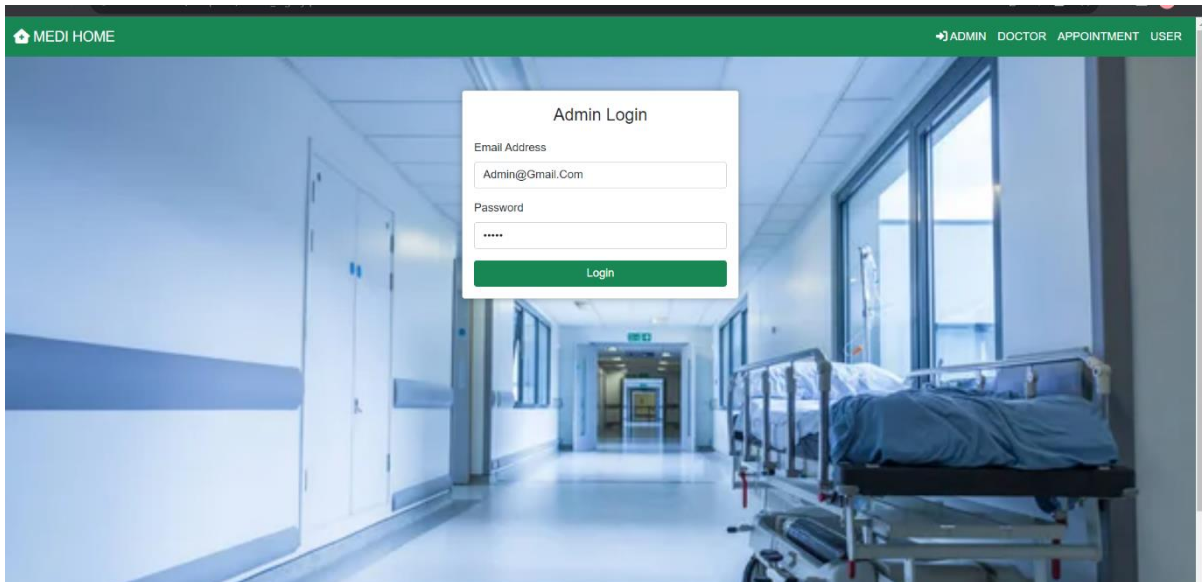




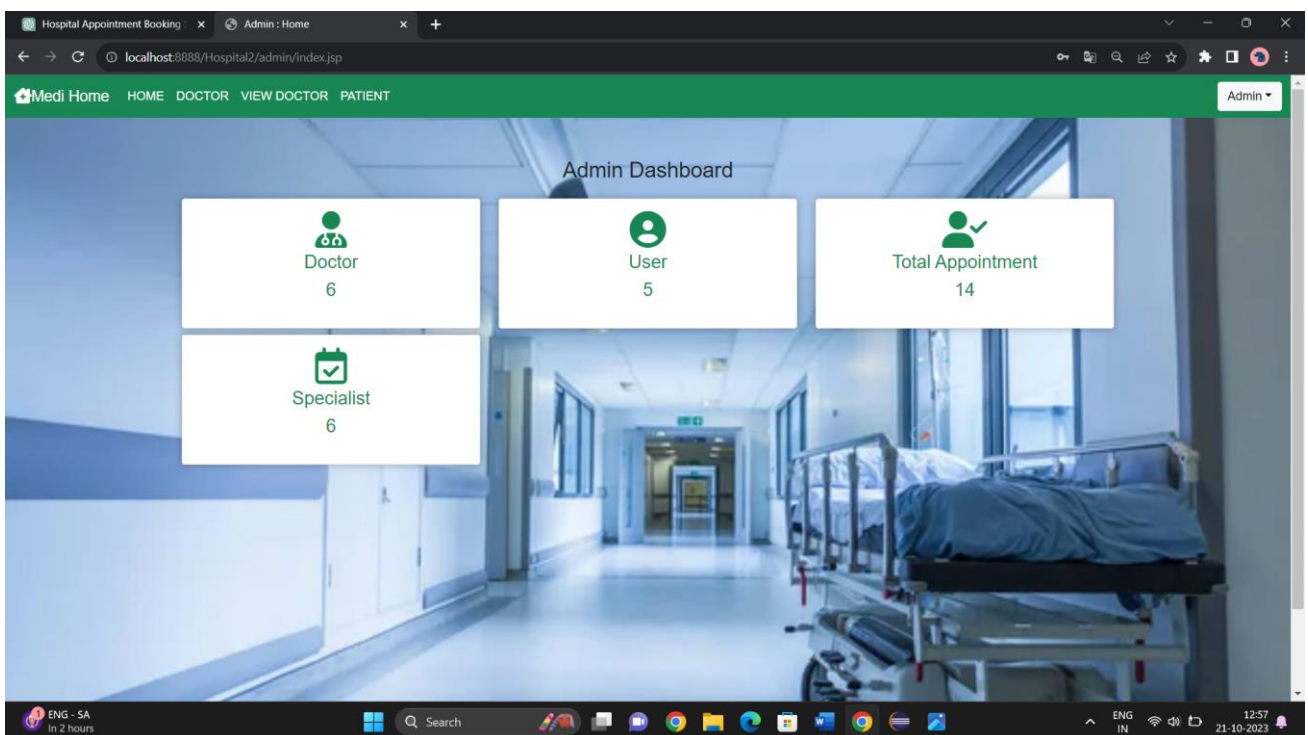
1. Landing Page: Appointment Booking Form Without Login



2. Admin: Login



2. Admin: Home



2) Admin: Doctor Details

Doctor Details

| Full Name | DOB | Qualification | Specialist | Email | Mob No | Action |
|-------------------|------------|---------------|---------------|--------------------------|------------|---|
| Ankita Kumar | 2023-08-10 | M.S | Dermatologist | Ankita@Gmail.Com | 7858789658 | Edit Delete |
| Jaywant Patil | 1979-07-11 | MBBS | Cardiologist | Jaywant123@Gmail.Com | 7898568569 | Edit Delete |
| S Kumar | 2001-08-15 | MBBS | Fever | Sk@Gmail.Com | 9856985658 | Edit Delete |
| Snehaldatta Khade | 1983-06-07 | MD | Neurologist | Skhade.Health@Gmail.Com | 7856821586 | Edit Delete |
| Sunil Nadkarni | 1978-02-02 | MD | Cardiologist | Snadkarni.Help@Gmail.Com | 9900856984 | Edit Delete |
| Suvama Patil | 1984-07-04 | M.S | Dermatologist | Drsuvarnapatil@Gmail.Com | 8698569245 | Edit Delete |

2) Admin: User Details

User Details

| User Id | User Name | Email |
|---------|-------------------|--------------------------|
| 1 | Onkar Yevale | Onkaryevale0@Gmail.Com |
| 2 | Manashri Jadhav | Manu123@Gmail.Com |
| 4 | Shreyash Abdagire | Ssabdagire7474@Gmail.Com |
| 5 | Suraj Raut | Suraj@Gmail.Com |
| 6 | Ravsaheb Patil | Ravsaheb123@Gmail.Com |

2) Admin: Patient Details

| Patient Name | Gender | Age | Appointment | Email | Mob No | Disease | Doctor Name | Address | Status |
|-------------------|--------|-----|-------------|---------------------------|------------|--------------|-------------------|---------------------------------|-----------|
| Rahul Hujare | Male | 25 | 2023-10-28 | Rahul@gmail.Com | 7856985698 | Dandruff | Suvarna Patil | A/P Kolhapur | Pending |
| Shreyash Abdagire | Male | 22 | 2023-10-26 | Ssabdagire7474@gmail.Com | 8695457859 | Fever | S Kumar | A/P Kagal, Kolhapur | Pending |
| Sharad Patil | Male | 30 | 2023-10-23 | Sharad@gmail.Com | 9658965236 | Headache | Snehaldatta Khade | A/P Radhanagari, Kolhapur | Pending |
| Ravsaheb Patil | Male | 23 | 2023-10-21 | Ravsaheb123@gmail | 8568956856 | Skin Problem | Suvarna Patil | A/P Akurde Kolhapur | Pending |
| Sourabh Khude | Male | 23 | 2023-10-16 | Sourabhkhude@gmail.Com | 8568956325 | Dengue | S Kumar | Kakhe Tal-Panhala Dist-Kolhapur | Completed |
| Rohit Ghadage | Male | 21 | 2023-09-10 | Rohitghadage40@gmail.Com | 8695685698 | Corona | S Kumar | A/P Satara | Completed |
| Swapnali Shinde | Female | 24 | 2023-09-07 | Swapnali123@gmail.Com | 8568956895 | Cough | S Kumar | Kolhapur | Completed |
| Abhi Khude | Male | 25 | 2023-09-05 | Akdreamhouse123@gmail.Com | 9675845896 | Fungal | Ankita Kumar | Kakhe Kolhapur | Pending |
| Atul Khude | Male | 24 | 2023-09-05 | Atul@123gmail.Com | 8551819213 | Fever | S Kumar | Kakhe Kolhapur | Pending |
| Tushar Gurav | Male | 23 | 2023-09-04 | Tushar123@gmail.Com | 8695632538 | Fever | S Kumar | Kolhapur | Completed |
| Tahir Sanadi | Male | 22 | 2023-09-02 | Tahir123@gmail.Com | 8659689568 | Dandruff | Ankita Kumar | A/P Sangli | Completed |

2) Admin: Add Specialist

Modal Title

Enter Specialist Name

Add

Close

Doctor 6

Specialist 6

Total Appointment 14

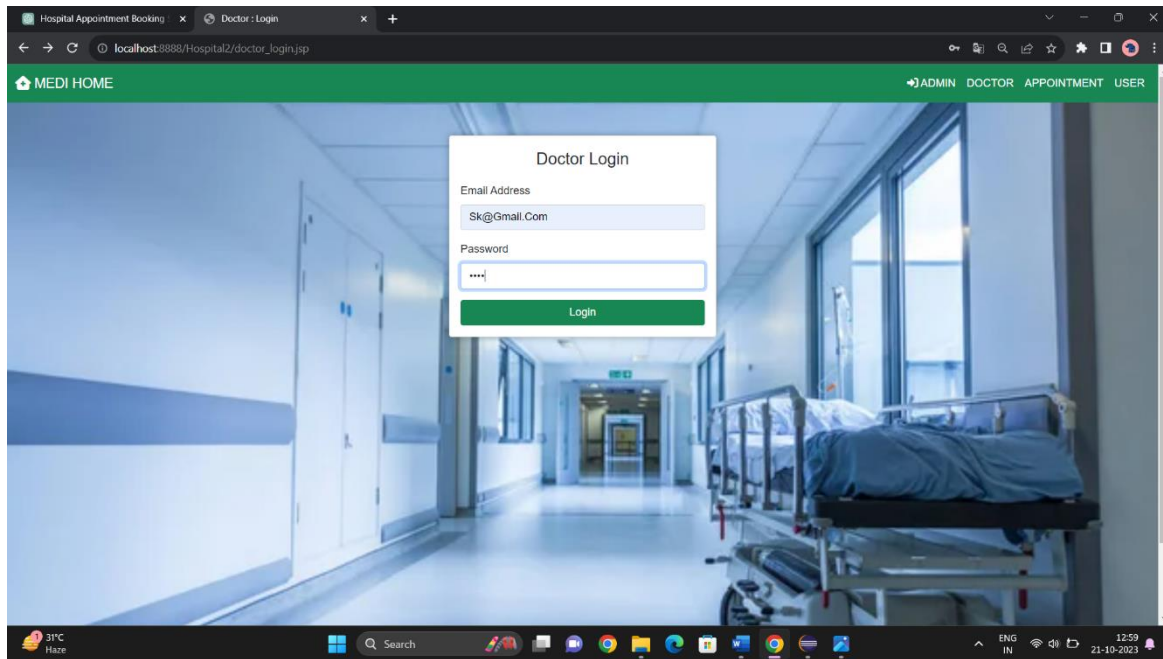
2) Admin: Add Doctor

The screenshot shows a web browser window with the URL `localhost:8888/Hospital2/admin/doctor.jsp`. The page has a green header with navigation links: **Medi Home**, **HOME**, **DOCTOR**, **VIEW DOCTOR**, and **PATIENT**. A dropdown menu labeled **Admin** is in the top right. The main content area features a light blue background image of a hospital corridor. Overlaid on this is a white modal form titled **Add Doctor**. The form contains the following fields: **Full Name** (text input), **DOB** (date picker showing `Dd-Mm-Yyyy`), **Qualification** (text input), **Specialist** (dropdown menu with `--select--`), **Email** (text input), **Mob No** (text input), and **Password** (password input). A blue **Submit** button is at the bottom of the form. The Windows taskbar at the bottom shows the date as 21-10-2023 and the time as 12:58.

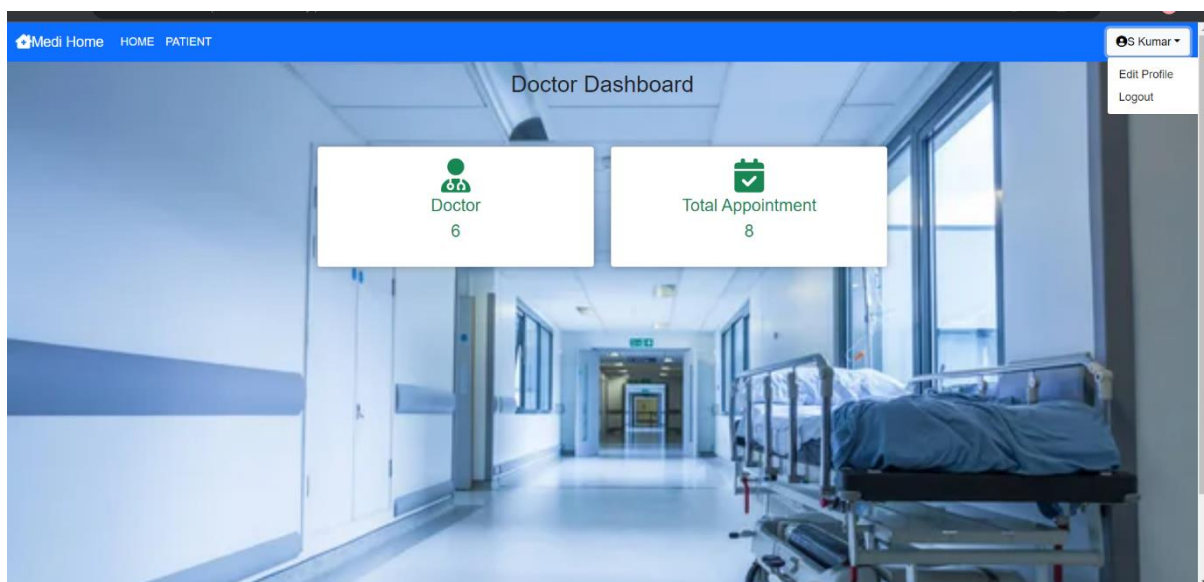
2) Admin: Edit Doctor

The screenshot shows a web browser window with the URL `localhost:8888/Hospital2/admin/edit_doctor.jsp?id=6`. The page layout is identical to the previous one, with the same green header and navigation links. The main content area features a light blue background image of a hospital room. Overlaid on this is a white modal form titled **Edit Doctor Details**. The form contains the following fields, all of which are pre-filled with data: **Full Name** (Ankita Kumar), **DOB** (10-08-2023), **Qualification** (M.S), **Specialist** (Dermatologist), **Email** (Ankita@Gmail.Com), **Mob No** (7858789658), and **Password** (masked with `****`). A blue **Update** button is at the bottom of the form. The Windows taskbar at the bottom shows the date as 21-10-2023 and the time as 13:58.

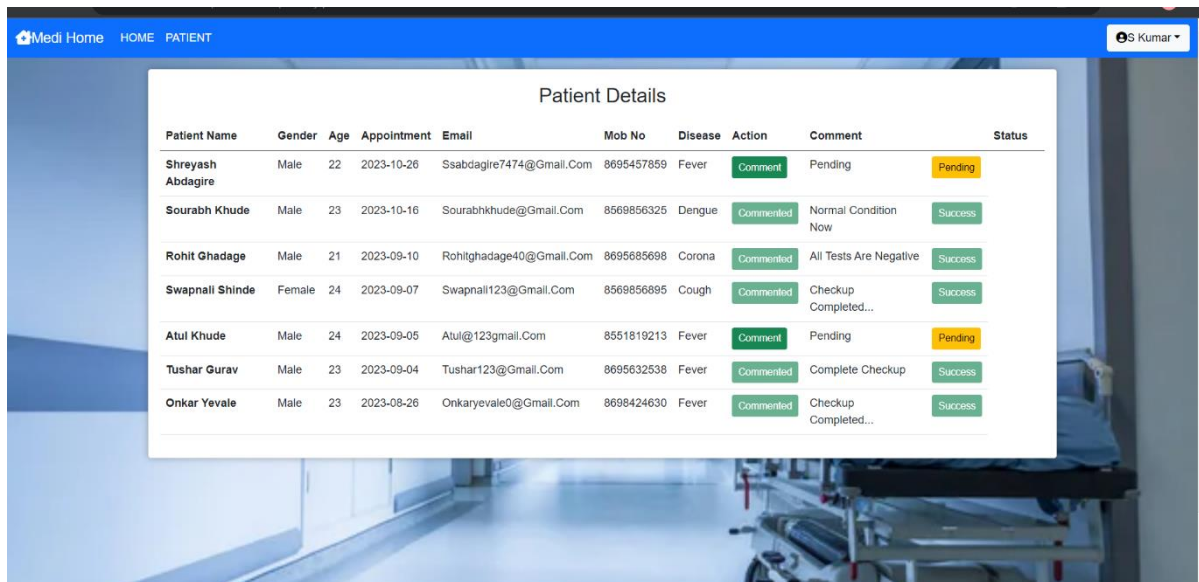
3. Doctor: Login



3. Doctor: Home

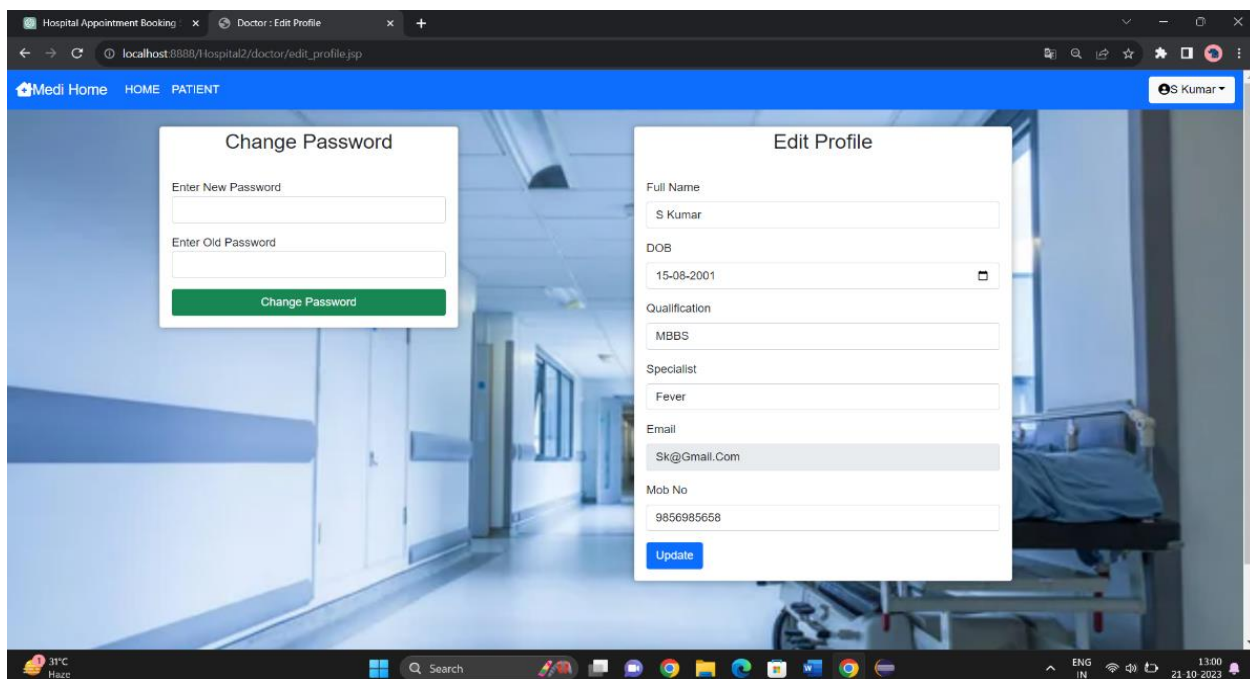


3. Doctor: Appointments



| Patient Name | Gender | Age | Appointment | Email | Mob No | Disease | Action | Comment | Status |
|-------------------|--------|-----|-------------|--------------------------|------------|---------|----------------------------|------------------------|--------------------------|
| Shreyash Abdagire | Male | 22 | 2023-10-26 | Ssabdagire7474@Gmail.Com | 8695457859 | Fever | <button>Comment</button> | Pending | <button>Pending</button> |
| Sourabh Khude | Male | 23 | 2023-10-16 | Sourabhkhude@Gmail.Com | 8569856325 | Dengue | <button>Commented</button> | Normal Condition Now | <button>Success</button> |
| Rohit Ghadage | Male | 21 | 2023-09-10 | Rohitghadage40@Gmail.Com | 8695685698 | Corona | <button>Commented</button> | All Tests Are Negative | <button>Success</button> |
| Swapnali Shinde | Female | 24 | 2023-09-07 | Swapnali123@Gmail.Com | 8569856895 | Cough | <button>Commented</button> | Checkup Completed... | <button>Success</button> |
| Atul Khude | Male | 24 | 2023-09-05 | Atul@123gmail.Com | 8551819213 | Fever | <button>Comment</button> | Pending | <button>Pending</button> |
| Tushar Gurav | Male | 23 | 2023-09-04 | Tushar123@Gmail.Com | 8695632538 | Fever | <button>Commented</button> | Complete Checkup | <button>Success</button> |
| Onkar Yevale | Male | 23 | 2023-08-26 | Onkaryevale0@Gmail.Com | 8698424630 | Fever | <button>Commented</button> | Checkup Completed... | <button>Success</button> |

3. Doctor: Update Doctor Profile



Change Password

Enter New Password

Enter Old Password

Change Password

Edit Profile

Full Name

DOB

Qualification

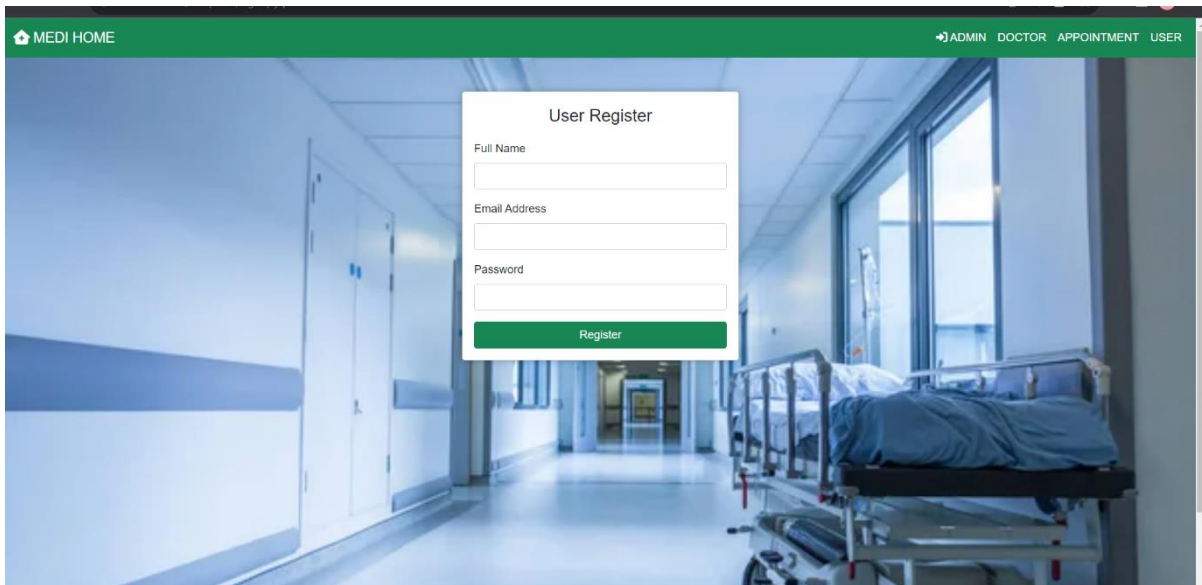
Specialist

Email

Mob No

Update

4. User: Registration Form



The screenshot shows a web application interface for a hospital. At the top, there is a green navigation bar with the text "MEDI HOME" on the left and a menu with "ADMIN", "DOCTOR", "APPOINTMENT", and "USER" on the right. The background of the page is a blurred image of a hospital hallway with a gurney in the foreground. Overlaid on this background is a white "User Register" form. The form contains three input fields: "Full Name", "Email Address", and "Password". Below these fields is a green "Register" button.

User Register

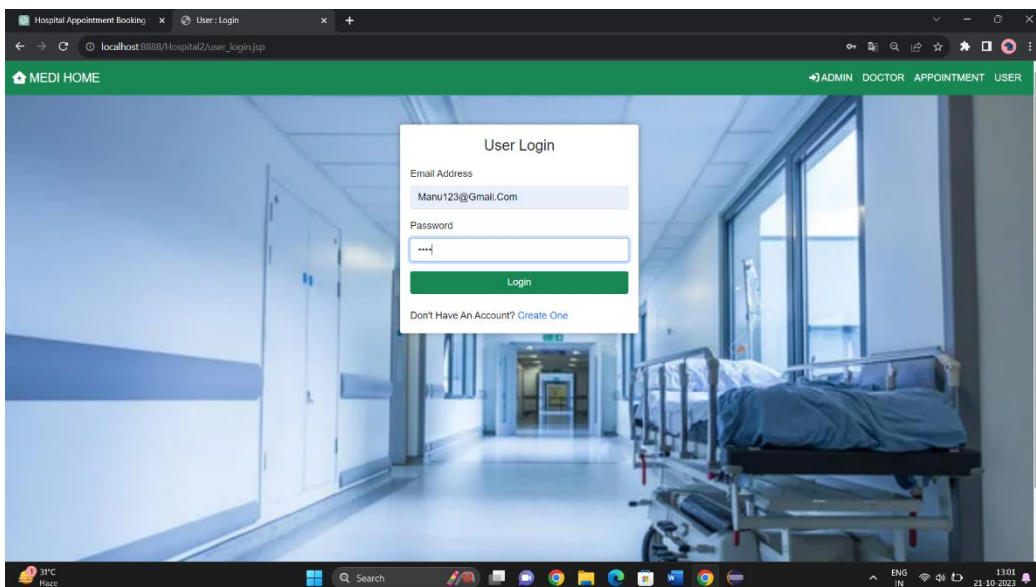
Full Name

Email Address

Password

[Register](#)

4. User: Login



The screenshot shows the same web application interface as the registration form, but with the "User Login" form overlaid. The form contains two input fields: "Email Address" (with the text "Manu123@Gmail.Com" entered) and "Password" (with masked characters "****" entered). Below these fields is a green "Login" button. At the bottom of the form, there is a link that says "Don't Have An Account? Create One". The browser's address bar shows "localhost:8888/hospital2/user_login.jsp". The Windows taskbar at the bottom indicates a temperature of 31°C, a "Haze" weather condition, and the date "21/10/2023".

User Login

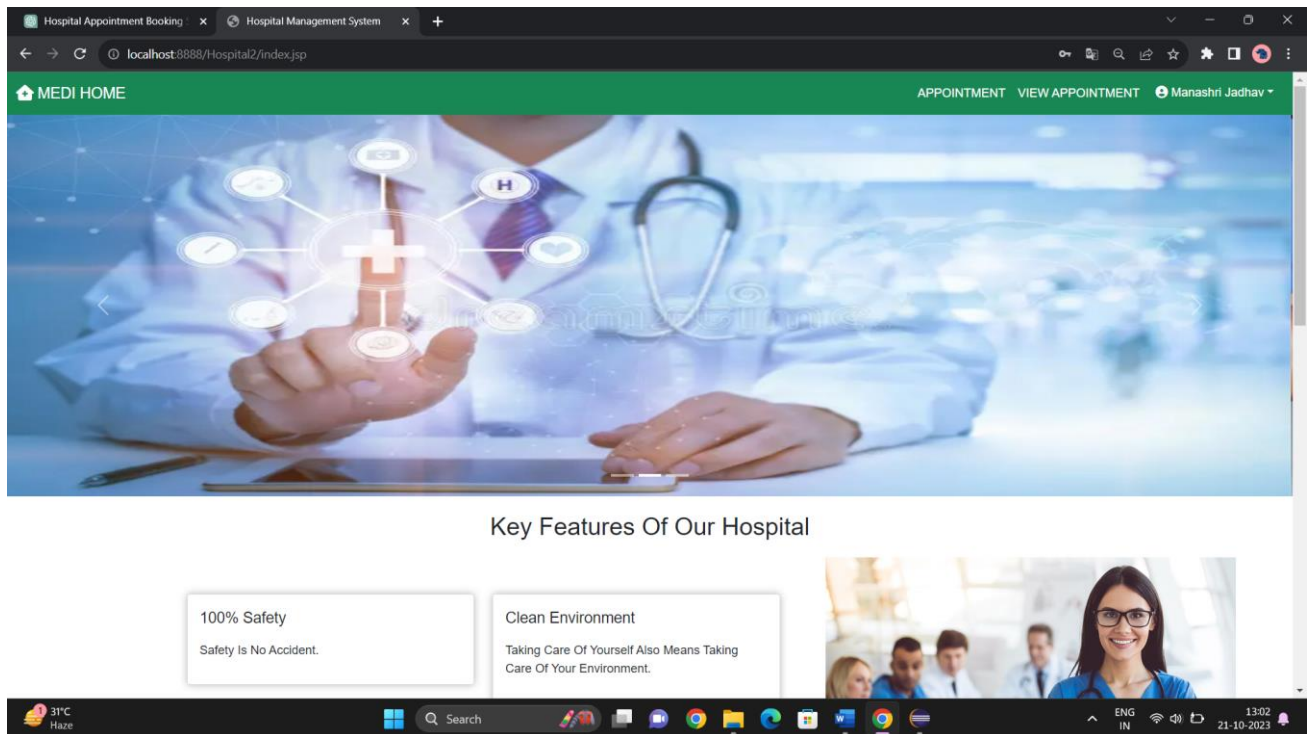
Email Address

Password

[Login](#)

[Don't Have An Account? Create One](#)

User: Home



User: Appointment Booking Form

The screenshot displays the 'User Appointment' form overlaid on a background image of a doctor in a white coat holding a clipboard in a hospital hallway. The form is titled 'User Appointment' and contains the following fields:

- Patient Name:
- Gender:
- Age:
- Appointment Date: with a calendar icon
- Email:
- Phone No:
- Diseases:
- Doctor:
- Full Address:

A green 'Submit' button is located at the bottom of the form.

User: View Appointments

The screenshot shows a web browser window with the URL `localhost:8888/hospital2/view_appointment.jsp`. The page has a green header with 'MEDI HOME' and navigation links 'APPOINTMENT' and 'VIEW APPOINTMENT'. The user 'Manashri Jadhav' is logged in. The main content area features an 'Appointment List' table and a doctor's profile image.

| Patient Name | Gender | Age | Appoint Date | Diseases | Doctor Name | Status |
|-----------------|--------|-----|--------------|----------|--------------|---------|
| Manashri Jadhav | Female | 21 | 2023-10-27 | Fever | S Kumar | Pending |
| Harsh Jadhav | Male | 25 | 2023-10-31 | Dry Skin | Ankita Kumar | Pending |

The doctor's profile image shows a male doctor in a white coat and stethoscope, holding a clipboard.

User: Change Password

The screenshot shows a web browser window with the URL `localhost:8888/hospital2/change_password.jsp`. The page has a green header with 'MEDI HOME' and navigation links 'APPOINTMENT' and 'VIEW APPOINTMENT'. The user 'Manashri Jadhav' is logged in. The main content area features a 'Change Password' form and a background image of a hospital hallway.

Change Password

Enter Old Password

Enter New Password

Change Password

The background image shows a hospital hallway with a patient bed and a window.

FEATURES

A hospital appointment booking system is a crucial tool for managing patient appointments efficiently and improving the overall patient experience. Here are some of the key features typically found in such a system:

➤ User Registration and Authentication:

- User registration for both patients and healthcare providers/staff.
- Secure login/authentication mechanisms to protect patient information.

➤ Patient Profile Management:

- Patient profiles with personal information, medical history, and contact details.
- The ability for patients to update their profiles and medical information.

➤ Search and Match:

- A search feature to find healthcare providers by specialty, location, and availability.
- Matching algorithms to connect patients with appropriate healthcare providers.

➤ Notifications and Reminders:

- Automated email or SMS reminders for upcoming appointments.
- Notifications for any changes or cancellations in appointments.

➤ Waiting List Management:

- Option for patients to join a waiting list for earlier appointments if they become available.
- Priority system for patients with urgent needs.

➤ Multi-Channel Booking:

- Support for online booking through a website or mobile app.
- Phone or in-person booking by hospital staff for patients without internet access.

➤ Appointment Confirmation:

- Automated confirmation of appointments to patients and healthcare providers.

➤ Access Control and Permissions:

- Role-based access control to ensure that only authorized personnel can make

changes or access sensitive data.

➤ Feedback and Reviews:

- Allow patients to leave feedback and reviews about their experiences.

➤ Mobile-Friendly Interface:

- A responsive design to ensure the system is accessible on mobile devices.

➤ Security and Privacy:

- Robust data encryption to protect patient information.

➤ Scalability:

- The ability to handle a growing number of patients, doctors and healthcare providers.

➤ Technical Support:

- Ongoing technical support and maintenance to address issues and updates.

A well-designed hospital appointment booking system should streamline the appointment booking process, reduce administrative workload, and enhance the patient's experience while ensuring the privacy and security of their health information.

CONCLUSION

The main goal of this project was to develop an online invoicing system based on the Software as a Service model. This has almost been accomplished, although wider distribution of the product has not commenced. The front-end website that will handle customer subscriptions is currently under development at the time of writing and bugs are still being fixed on the back-end administration panel. This is done in close cooperation with a few early customers whose ongoing use of the system exposed some previously hidden bugs.

Personally, have acquired a significant amount of professional experience and exposure to company environments and work ethics. I have also made progress in personal adaption to teamwork.

There are plans to build the system into a full ERP solution in the future that would serve even the most advanced enterprises and be able to scale with the growing needs of each company. This requires high level enhancements to the system and addition of improved hardware infrastructure. With growing appetite for convenience among the wider population, companies are compelled to be more flexible and innovative in their product implementation and service delivery.

REFERENCE

Books:

Complete reference of PHP & MySQL

Websites:

1. www.stackoverflow.Com
2. www.docs.oracle.com
3. www.youtube.com