

BOOK A DOCTOR WITH JAVA SPRINGBOOT

Submitted for the course

SmartBridge

Modern Application Development (Java Spring Boot)

Submitted by

TEAM NO: 79

TEAM MEMBERS

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Project Title

BOOK A DOCTOR WITH JAVA SPRINGBOOT

1 INTRODUCTION

1.1 Overview

Doctor Appointment Booking is a smart web application, this provides a registration and login for both doctors and patients. Doctors can register by giving his/her necessary details like timings, experience, category, etc. After successful registration, the doctor can log in by giving username and password. The doctor can view the booking request by patients and if he accepts the patient requests the status will be shown as booking confirmed to the patient. The patients must be registered and log in to book a doctor basing the category and the type of problem patient is facing. The search results will show the list of doctors matching patients required criteria and he can select one and send a request the request will be forwarded to admin and admin forward to doctor and if he is available, he will send the confirmation request back to admin the admin update the booking request and says confirmed to the patient. the patient can view the status in the status tab and, he will get the message saying the booking is Confirmed.

1.2 Purpose

A " Doctor Appointment Booking " project enables convenient appointment scheduling, saving time and costs. It improves access to healthcare, especially in remote areas, and offers expanded availability beyond regular working hours. Communication is seamless through secure messaging consultations. Digital records enhance healthcare management, while reminders reduce no-shows. Data analysis provides insights, and integration with other systems streamlines processes. Overall, it offers convenience, accessibility, improved communication, and streamlined healthcare management.

2 LITERATURE SURVEY

2.1 Existing problem

In the existing system the patient needs to visit the doctor for booking we need to wait, and the booking will be done manually so to maintain everything is always a problem.

2.2 Proposed solution

In the proposed system the doctors patients are brought to one platform will allow patients to be more flexible they can register and search for the doctors basing on the location the list of doctors will be shown and patient can book by selecting the time slots and the doctor will confirm the booking and admin can maintain the doctors and patients so everything is computerized and done very fast which will save time.

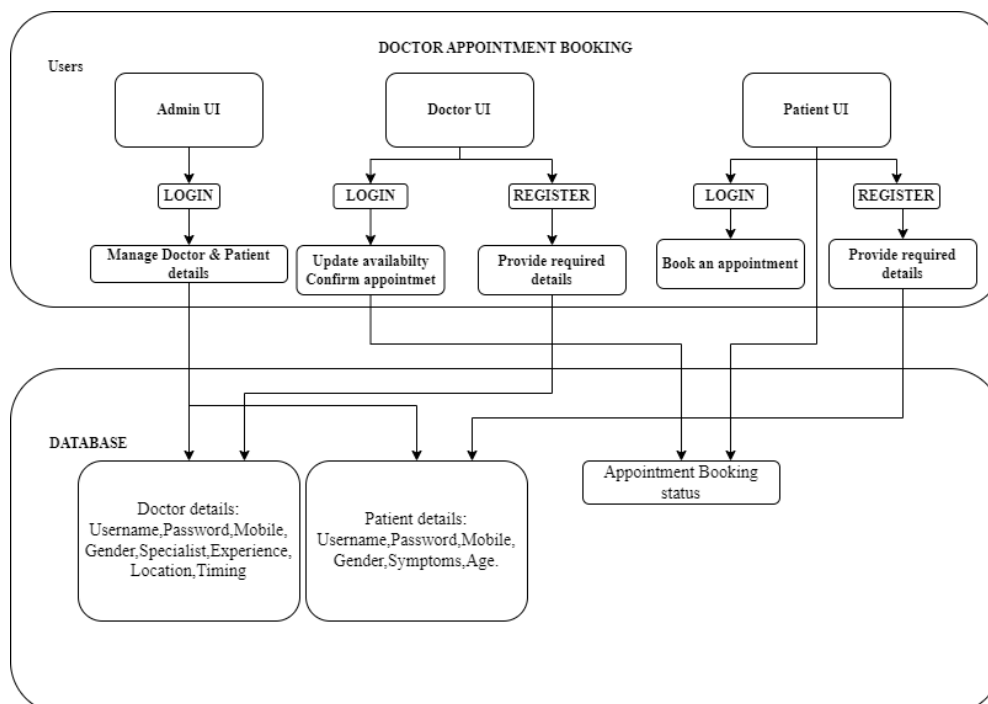
3 THEORITICAL ANALYSIS

3.1 Hardware / Software

Hardware: Computer/server with sufficient RAM and storage space.

Software: JDK, IDE (IntelliJ IDEA, Eclipse, or NetBeans), Spring Boot framework, DBMS (MySQL, PostgreSQL, etc.), database driver, build tools (Maven or Gradle), and optional tools like Docker and CI/CD tools.

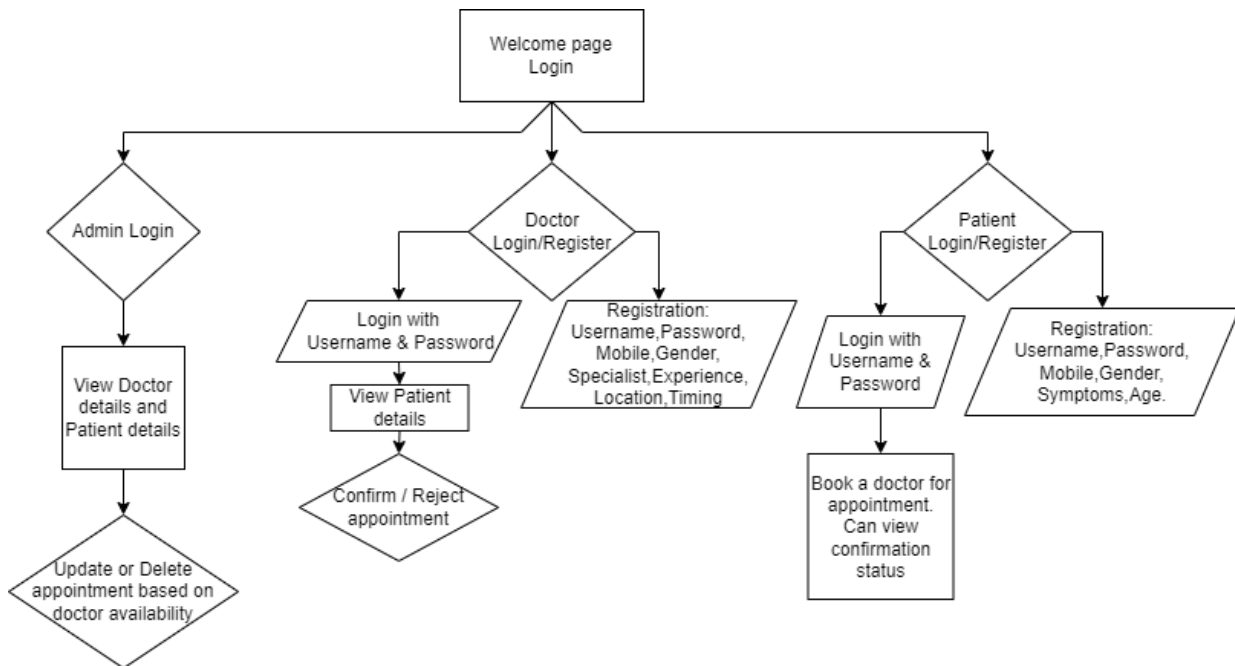
3.2 Block diagram



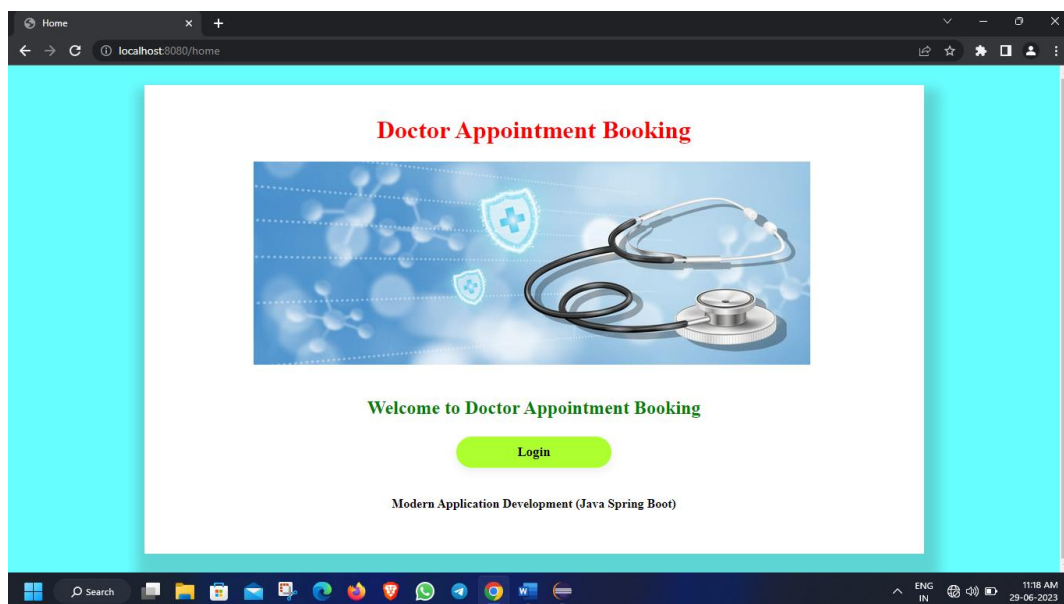
4 EXPERIMENTAL INVESTIGATIONS

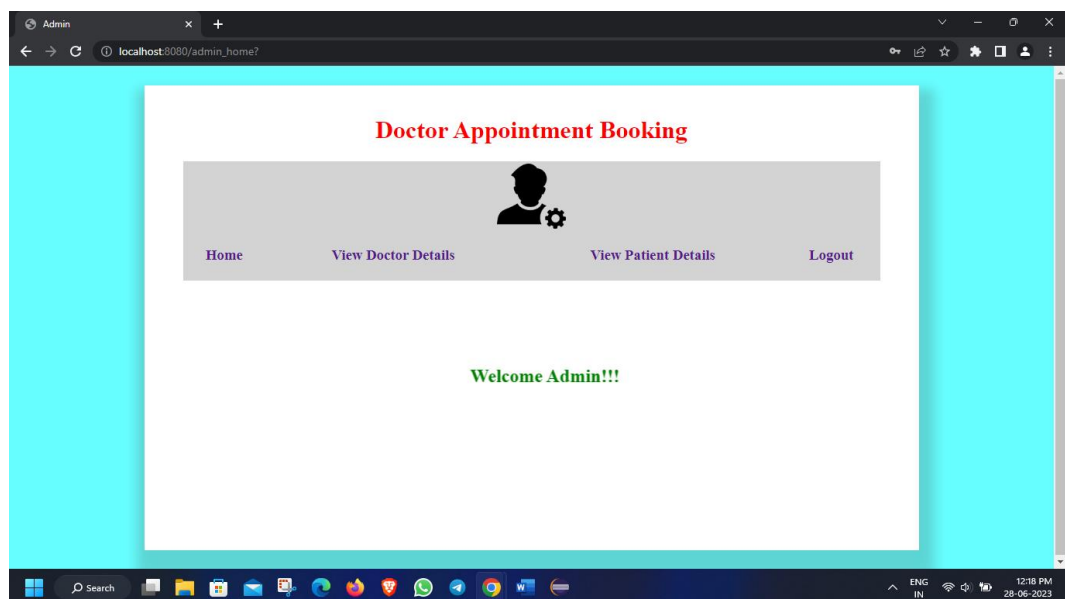
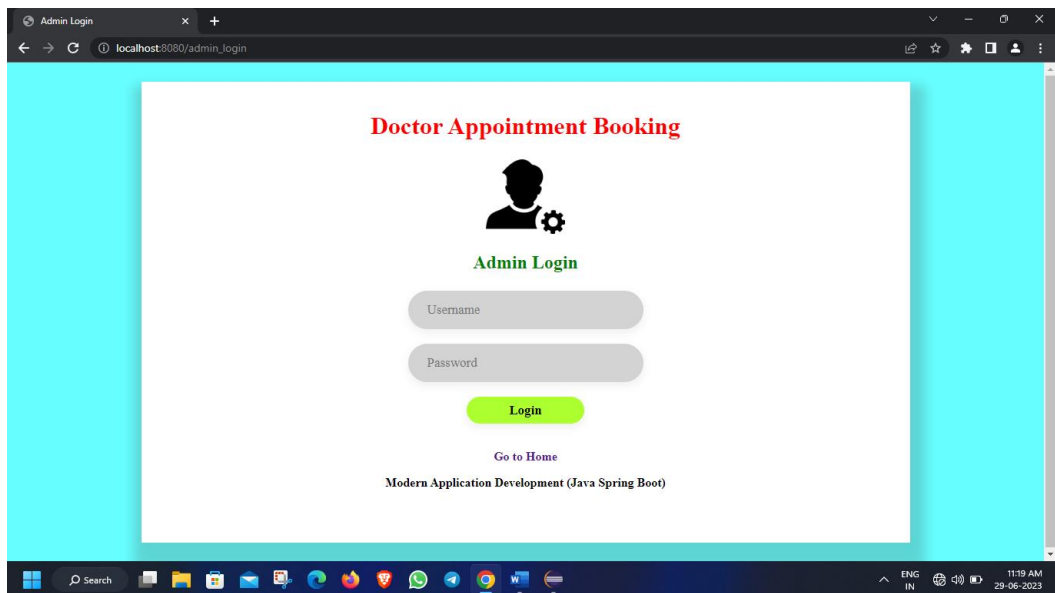
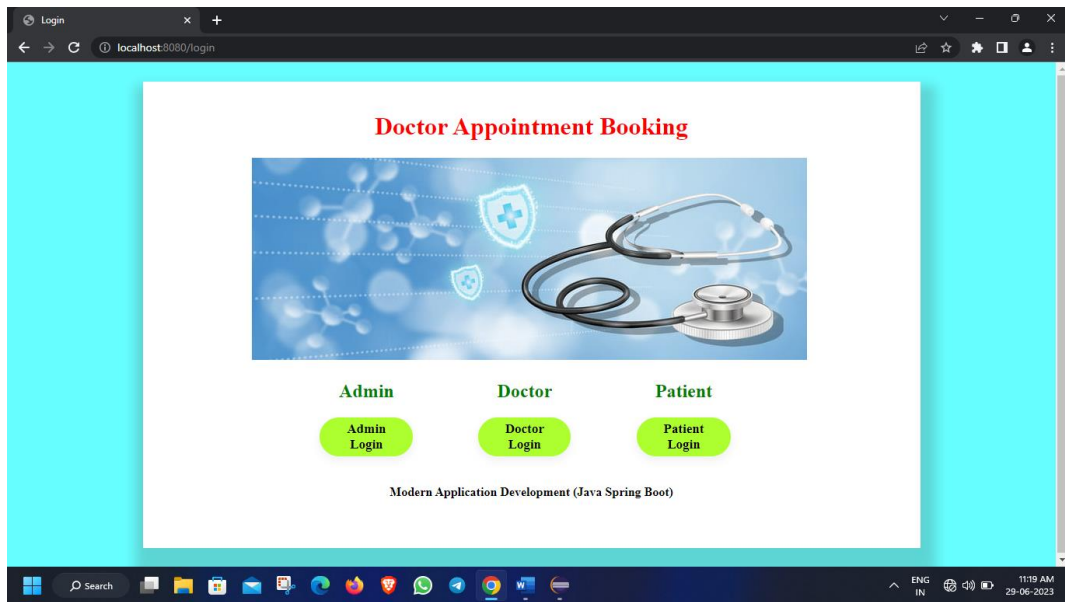
Understanding user needs, market research, technical feasibility assessment, security and privacy analysis, scalability assessment, usability testing, integration analysis, and feedback iteration. These ensure the solution meets user requirements, complies with regulations, integrates effectively, and delivers a seamless user experience.

5 FLOWCHART




6 RESULTS





Admin localhost:8080/view_doctor

Doctor Appointment Booking



Home View Doctor Details View Patient Details Logout


Doctor Details

ID	Name	Gender	Mobile	Specialty	Experience	Location	Time	Status
128764	Dr. Hari	Male	9362221823	Allergist	23 years	Andhara	12-09-2023 10:15am	Inactive
258760	Dr. John Doe	Female	9862300823	Cardiology	10 years	Chennai	02-01-2023 10:30am	Active
228361	Dr. Jane Smith	Male	9862371876	Pediatrics	8 years	Karnadaka	12-09-2023 11:15am	Inactive
728702	Dr. Janany	Female	8862371823	Dentist	22 years	Delhi	10-09-2023 12:30pm	Active

03:31 PM 28-06-2023

Admin localhost:8080/view_patient

Doctor Appointment Booking



Home View Doctor Details View Patient Details Logout


Patient Details

Name	Age	Gender	Mobile	Symptoms	Action
Smith	23 years	Female	9862564323	Skin Problem	View Delete
sivani	34 years	Female	9062371823	Cold	View Delete

12:19 PM 28-06-2023

Doctor Login localhost:8080/doctor_login

Doctor Appointment Booking



Doctor Login

Username

Password

Login

Don't have account? [Create account](#)

[Go to Home](#)

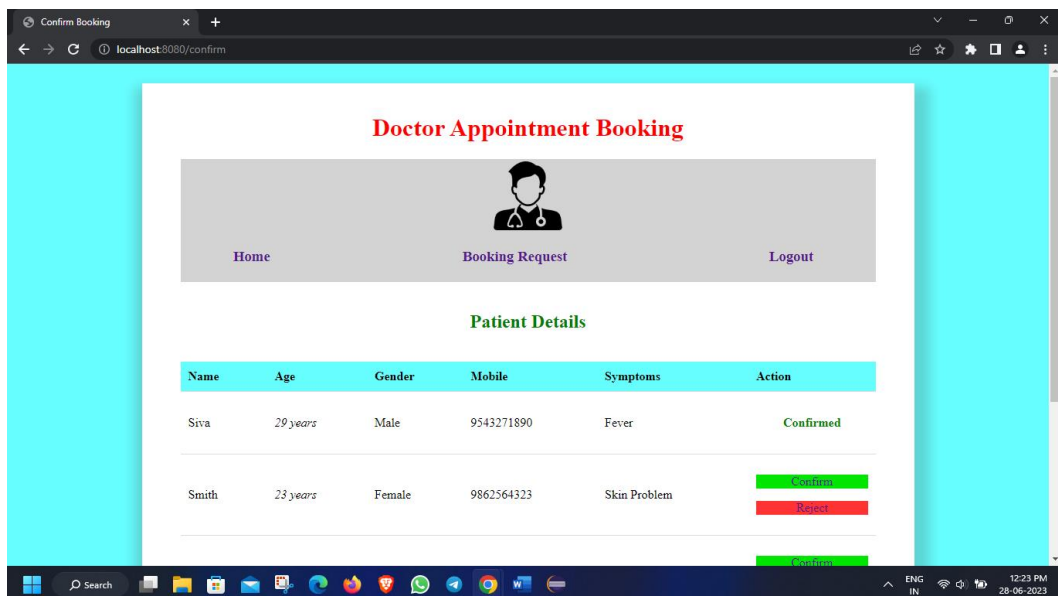
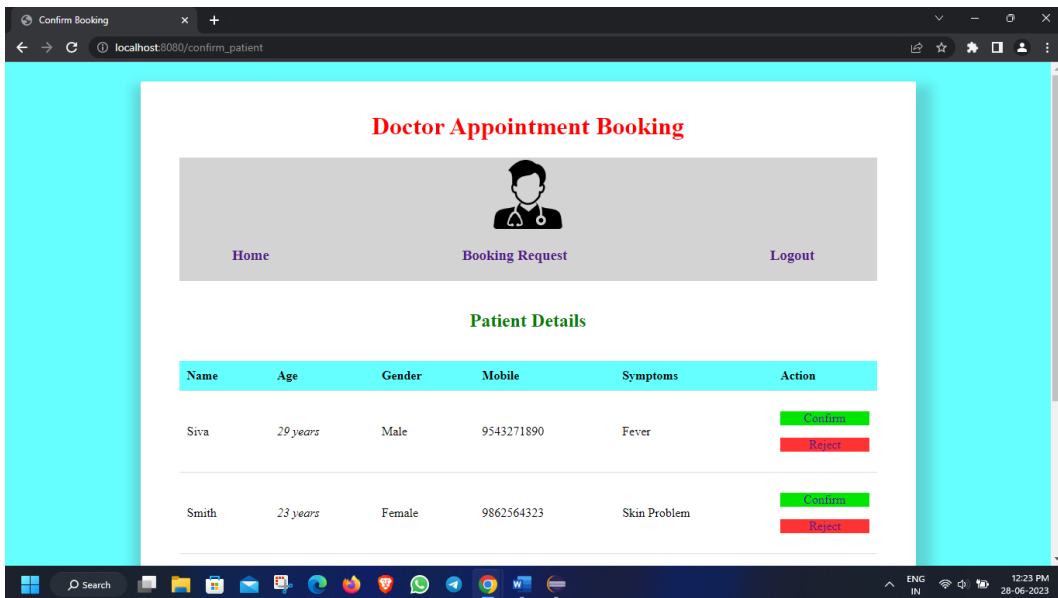
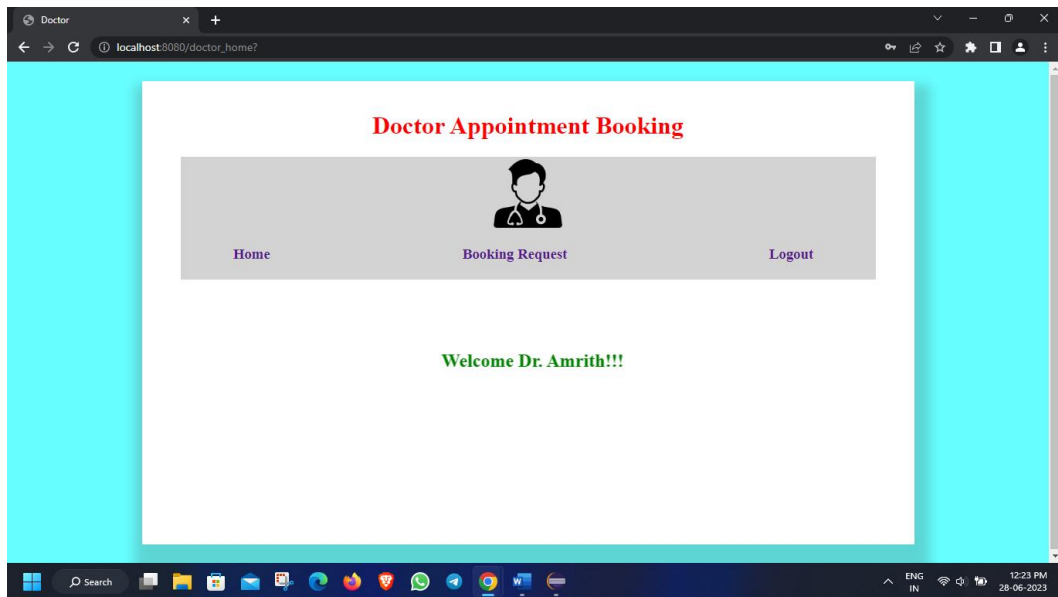
Modern Application Development (Java Spring Boot)

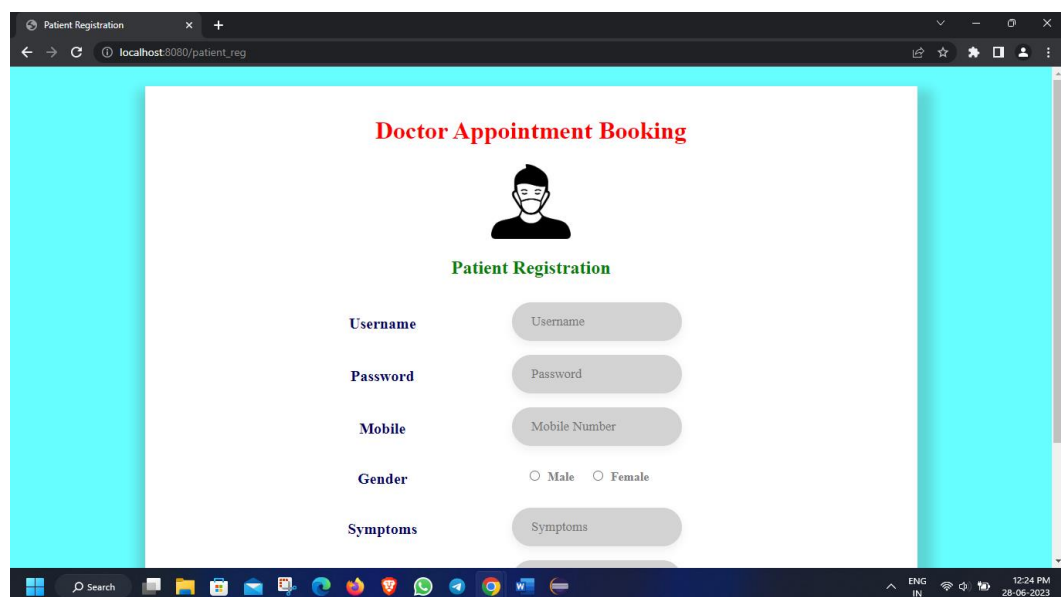
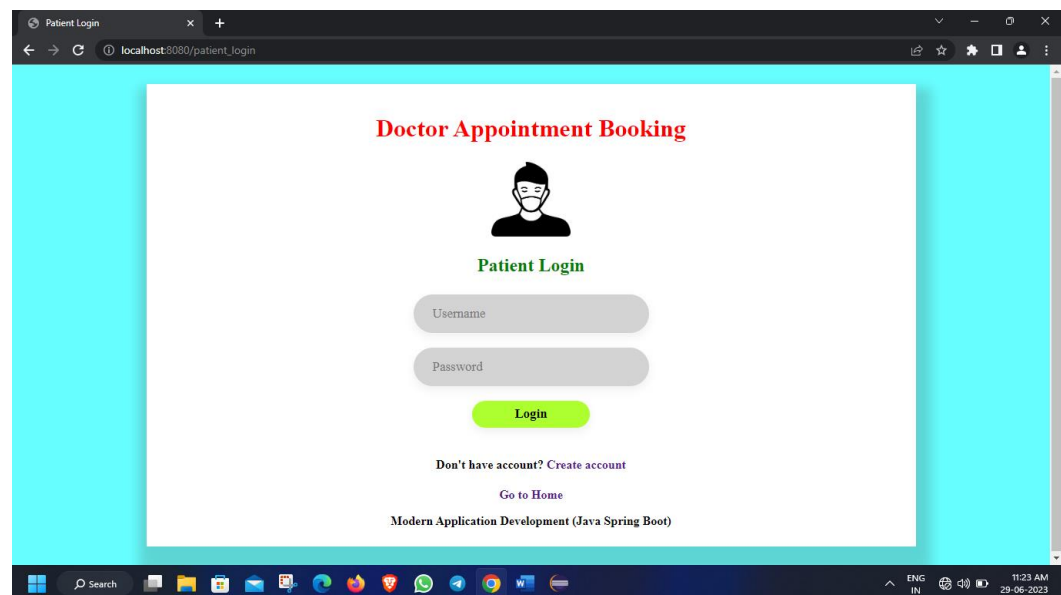
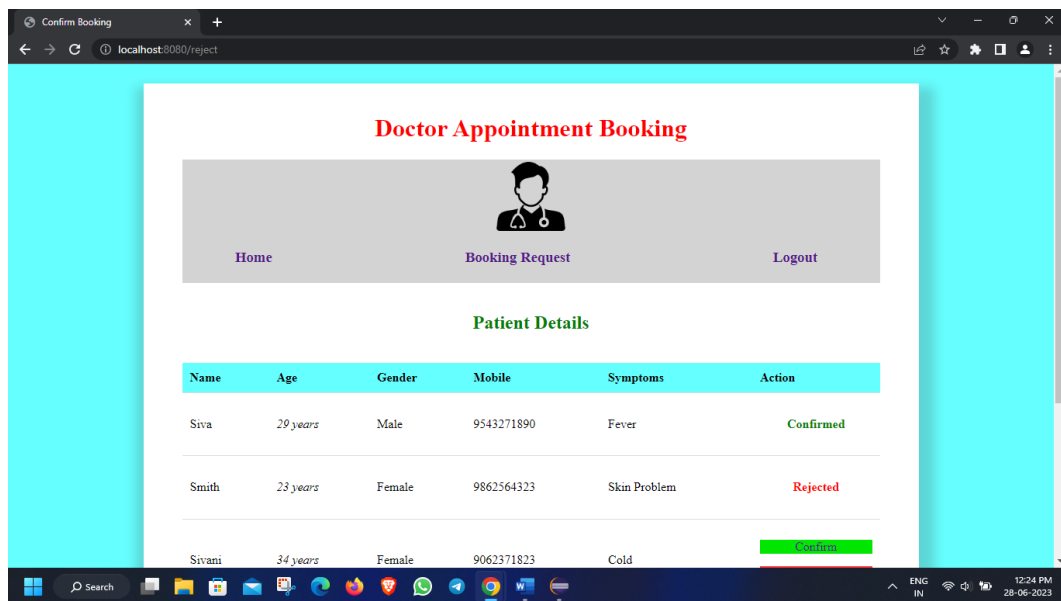
11:21 AM 29-06-2023

The screenshot displays a web browser window with the title 'Reg Success'. The address bar shows the URL 'localhost:8080/d_success?gender=on'. The main content area has a light blue background and features the following elements:

- Doctor Appointment Booking**: Text in a bold, red, serif font.
- Registered Successfully**: Text in a green, italicized, serif font.
- Checkmark Icon**: A large green checkmark inside a dark gray circular outline.
- Go to login**: A green button with white text.
- Modern Application Development (Java Spring Boot)**: Text in a black, sans-serif font at the bottom.

The browser's taskbar at the bottom shows various application icons, including Windows, Search, File Explorer, Mail, and several web browsers. The system clock in the bottom right corner indicates the time is 11:22 AM on 29-05-2024.





Patient Registration

Username

Password

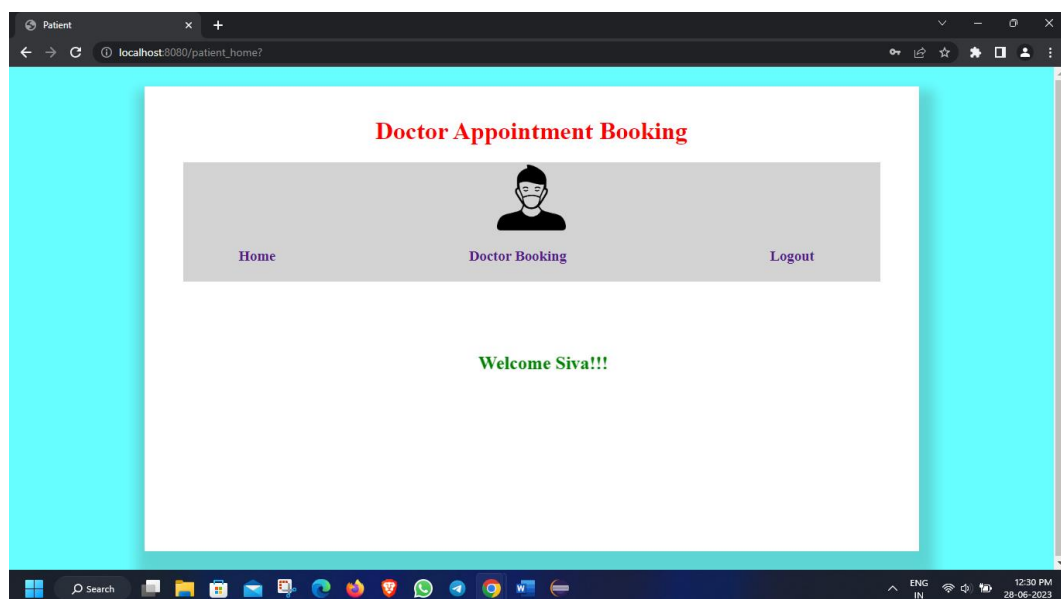
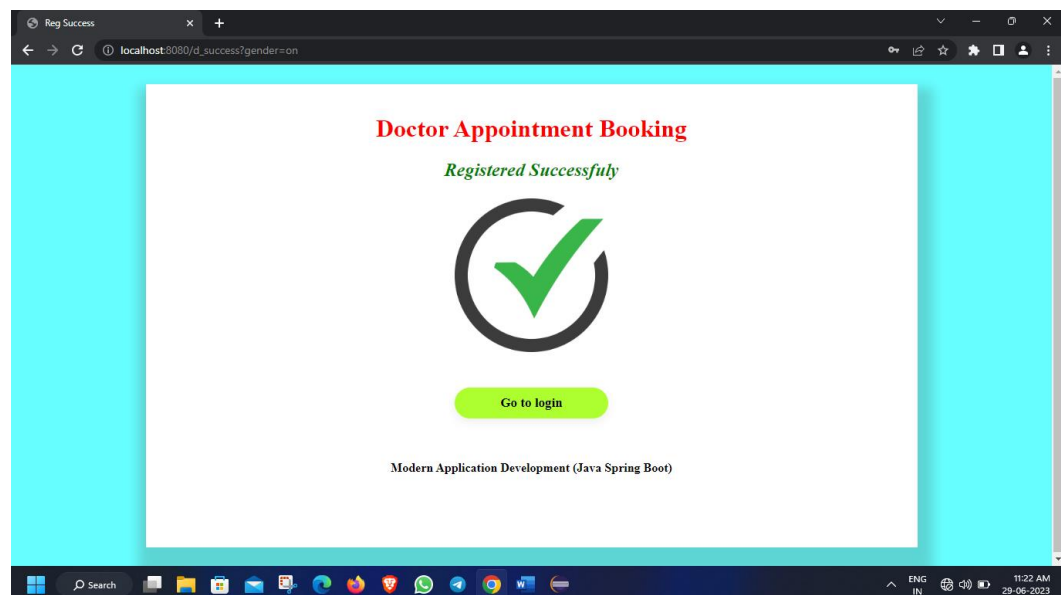
Mobile

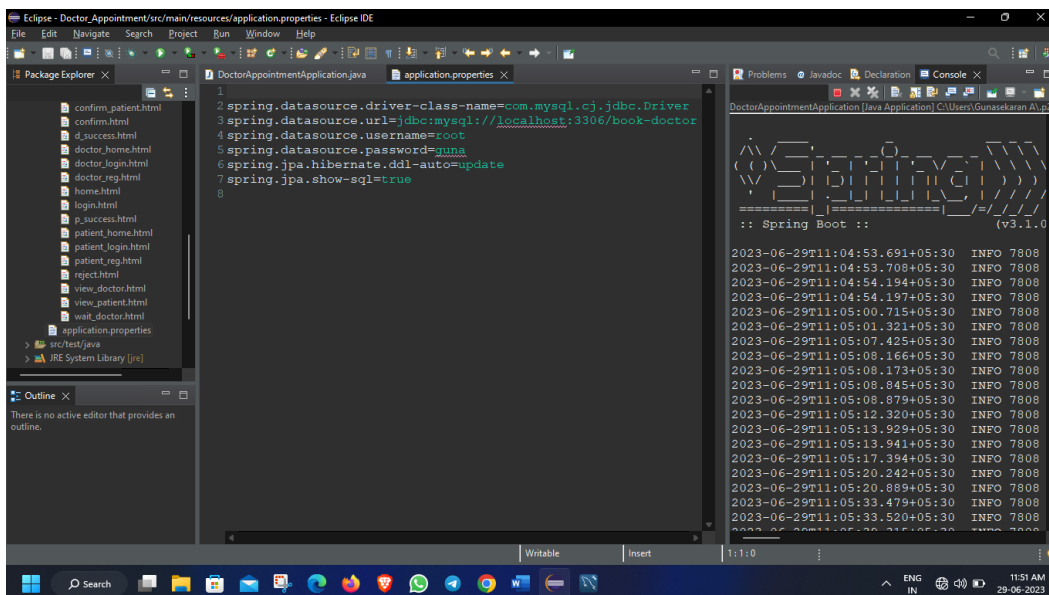
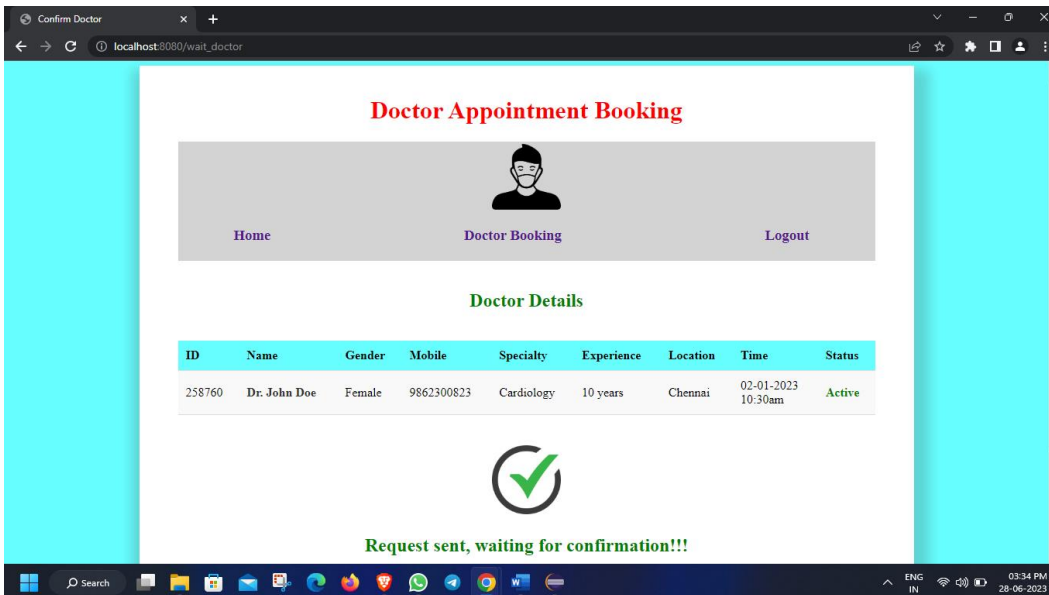
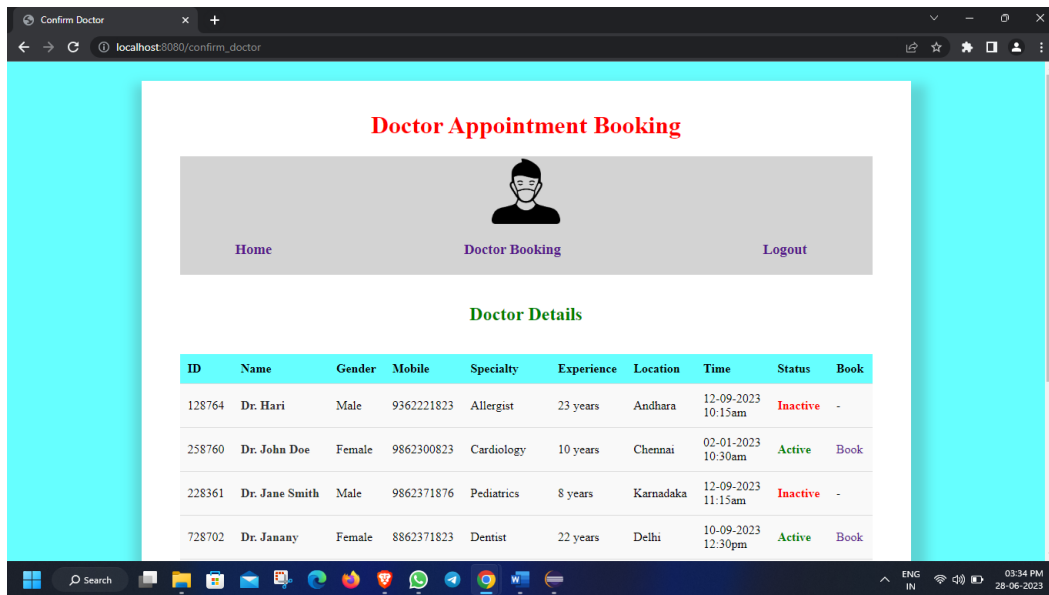
Gender ☐ Male ☐ Female

Symptoms

Age

[Register](#)





MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Filter objects

SCHEMAS

book-doctor

Tables

doctor

doctor_seq

patient

patient_seq

Views

Stored Procedures

Functions

sys

Administration Schemas

Information

Table: patient

Columns:

username varchar(255) PK

age varchar(255)

gender varchar(255)

mobile varchar(255)

password varchar(255)

symptoms varchar(255)

Query 1 doctor patient

1 SELECT * FROM `book-doctor`.patient;

Result Grid

username	age	gender	mobile	password	symptoms
Amrith	29 years	Male	9943271890	amrith.123	Fever
Janany	30 years	Female	6362371823	janany.123	Brain problem
Marry Smith	33 years	Female	8062371824	marry.123	Cold
Sivani	34 years	Female	9062371823	sivani.123	Cold
Smith	23 years	Female	9862564323	smith.123	Skin Problem

patient 8 x

Output

Action Output

Time Action Message Duration / Fetch

1 11:29:54 SELECT * FROM `book-doctor`.doctor LIMIT 0, 1000 0 row(s) returned 0.032 sec / 0.000 sec

2 11:30:06 DROP DATABASE sample 2 row(s) affected 0.609 sec

ENG IN 11:50 AM 29-06-2023

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Filter objects

SCHEMAS

book-doctor

Tables

doctor

doctor_seq

patient

patient_seq

Views

Stored Procedures

Functions

sys

Administration Schemas

Information

Table: patient

Columns:

username varchar(255) PK

age varchar(255)

gender varchar(255)

mobile varchar(255)

password varchar(255)

symptoms varchar(255)

Query 1 doctor patient

1 SELECT * FROM `book-doctor`.doctor;

Result Grid

id	experience	gender	location	mobile	password	specialist	time	username
110764	10 years	Male	Mumbai	6362371823	jony.123	Neurologist	30-12-2023 09:30am	Dr. Jony
128764	23 years	Male	Andhara	9362221823	han.123	Allergist	12-09-2023 10:15am	Dr. Han
228361	8 years	Male	Karnadaka	9862371876	jane.123	Pediatrics	12-09-2023 11:15am	Dr. Jane Smith
258760	10 years	Female	Chennai	9862300823	john.123	Cardiology	02-01-2023 10:30am	Dr. John Doe
350761	8 years	Male	Kerala	9862331823	sunny.123	Neurologist	12-06-2023 04:15pm	Dr. Sunny
529764	13 years	Male	Pune	7262371823	amrith.123	Psychiatrist	12-07-2023 01:15pm	Dr. Amrith
626763	16 years	Female	Chennai	9352370823	priya.123	Dermatologist	24-05-2023 03:30pm	Dr. Priya
728702	22 years	Female	Delhi	8862371823	janany.123	Dentist	10-09-2023 12:30pm	Dr. Janany
903364	18 years	Male	Kovai	9362371023	smith.123	Psychiatrist	22-10-2023 11:45am	Dr. Smith

doctor 4 x

Output

Action Output

ENG IN 12:29 PM 29-06-2023

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

Filter objects

SCHEMAS

book-doctor

Tables

admin

doctor

doctor_seq

patient

patient_seq

Views

Stored Procedures

Functions

sys

Administration Schemas

Information

Schema: book-doctor

Query 1 doctor patient admin

1 SELECT * FROM `book-doctor`.admin;

Result Grid

username	password
Admin	123
Admin1	1234

admin 2 x

Output

Action Output

ENG IN 12:23 PM 29-06-2023

7 ADVANTAGES & DISADVANTAGES

Advantages of Doctor Appointment Booking application:

- Patients can book appointments anytime, anywhere, eliminating the need for physical visits or phone calls.
- Patients can save time and reduce travel costs by avoiding long waiting times and unnecessary visits.
- The application enhances access to healthcare, particularly for individuals in remote or underserved areas.
- Doctors can manage their schedules more effectively, reducing the risk of overbooking or missed appointments.
- The application streamlines the booking process, provides appointment reminders, and facilitates communication, leading to improved patient satisfaction.
- Digital records and communication tools enable seamless coordination between healthcare providers, ensuring consistent and comprehensive care for patients.

Disadvantages of Doctor Appointment Booking application:

- Development and maintenance of the application require technical expertise, and system failures or glitches could disrupt the booking process.
- Some patients may prefer face-to-face consultations and feel that the application lacks the personal touch of traditional appointments.
- Patients with limited technological literacy or lack of access to reliable internet may face challenges in using the application.
- Storing and transmitting sensitive healthcare data online introduces potential privacy and security vulnerabilities that must be adequately addressed.
- System outages, internet connectivity issues, or technological failures could hinder the functioning of the application, impacting patient access and appointment management.
- Not all healthcare services or specialties may be suitable for remote appointments, limiting the scope of the application's usefulness.

8 APPLICATIONS

A Doctor Appointment Booking application solution can be applied in various areas within the healthcare industry, including primary care, specialist consultations, telemedicine, hospital services, mental health services, rehabilitation, preventive screenings, wellness services, dental care, and home healthcare. It improves access and efficiency for patients and healthcare providers.

9 CONCLUSION

In conclusion, the Doctor Appointment Booking application streamlines appointment scheduling, improves access to healthcare, and enhances the patient experience. Despite potential challenges, such as technical issues and limited personal interaction, the application offers convenience, cost savings, and better care coordination. With continuous improvement and robust security measures, it has the potential to revolutionize healthcare delivery.

10 FUTURE SCOPE

Future enhancements for the Doctor Appointment Booking application include advanced notifications, telemedicine integration, real-time availability, patient feedback and ratings, electronic prescriptions, telemonitoring and wearable integration, multilingual support, insurance integration, data analytics and insights, and enhanced security and privacy measures. These improvements aim to enhance user experience, expand functionality, and stay at the forefront of healthcare innovation.

11 BIBLIOGRAPHY

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[2] Agarwal, N., & Biswas, B. (2020). Doctor consultation through mobile applications in India: An overview, challenges and the way forward. *Healthcare Informatics Research*, 26(2), 153-158.

- [3] Chauhan, U., Jha, H., Singh, D., & Chauhan, S. P. S. (2022, February). Doctor Finder and Appointment Booking Website using DJANGO. In *2022 2nd International Conference on Innovative Practices in Technology and Management (ICIPTM)* (Vol. 2, pp. 397-400). IEEE.
- [4] Gupta, D., & Denton, B. (2008). Appointment scheduling in health care: Challenges and opportunities. *IIE transactions*, 40(9), 800-819.
- [5] Haro-Sosa, G., & Venkatesan, S. (2023). Personified Health Care Transitions with Automated Doctor Appointment System: Logistics. *Journal of Pharmaceutical Negative Results*, 2832-2839.

APPENDIX

A. Source Code

<https://github.com/smartinternz02/SI-GuidedProject-526608-1688106363>