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A Mini Project Report on Medisaver

submitted by,

Roll No.	Name	Seat No.
15	Abhishek Hajare	T224029
17	Chetan Patil	T224102

Guided By

Dr. Shitalkumar Jain

School of Computer Engineering

MIT Academy of Engineering

(An Autonomous Institute Affiliated to Savitribai Phule Pune University) Alandi (D), Pune – 412105

(2022–2023)

Abstract

The proposed project aims to create a web-based platform that allows medical stores to sell their medicines and offer discounts to users. This platform will serve as a one-stop-shop for users to search for and compare prices of medicines offered by various medical stores in their vicinity. Additionally, the platform will help users to find the location of laboratories offering different tests along with the prices of the tests. The users can also book appointments in pathology labs and hospitals for their treatment through the platform. The platform will be built using modern web technologies, including Django, HTML, CSS, and JavaScript. The user interface will be designed to be user-friendly and easy to navigate, allowing users to search and find the information they need quickly. The platform will also include features such as ratings and reviews for medical stores and laboratories, which will help users make informed decisions. The project is expected to help users save money on medicine purchases and make it easier to find the right medical services for their needs. It will also provide medical stores and laboratories with an additional channel to reach out to potential customers, ultimately benefiting the healthcare industry as a whole.

Contents

Chapter 1 Introduction

1.1 Background

The healthcare industry has been rapidly evolving, with the increasing use of technology to improve patient care and access to medical services. However, the process of purchasing medicines and booking appointments for medical tests and treatments has remained largely unchanged. The need for a reliable and efficient platform that connects medical stores, labs, and hospitals with patients is more pressing than ever. The project aims to create a web platform that serves as a one-stop solution for users to purchase medicines, avail discounts, book appointments for medical tests and treatments, and locate medical stores, labs, and hospitals near them. The platform will allow medical stores to sell their products online, while users can compare prices and avail discounts offered by different stores. Additionally, the platform will provide information on the location and prices of labs for different tests, making it easier for users to choose the best option for their needs.

1.2 Motivation

The motivation behind the project is to provide convenience to the users in the healthcare sector. The traditional method of buying medicines involves visiting multiple medical stores to compare prices, which is time-consuming and often results in paying more than necessary. The same applies to finding labs for different testing and booking appointments in hospitals for treatment. Our platform aims to solve this problem by providing a one-stop solution to all the healthcare-related needs of the users. Users can easily search for medicines and compare prices from various medical stores, which would save their time and money. Additionally, the platform would provide the location of labs for different testing, allowing users to choose the nearest and most affordable option. The feature to book appointments in pathology labs and hospitals would further simplify the process for the users.

Chapter 2 : Problem Definition

2.1 Problem Statement

Medi-Saver: A Simplified Platform for Medicine and Lab Services

A simplified platform that offers complete solutions for purchasing medicines, accessing lab services, and scheduling appointments with hospitals and labs online.

2.2 Objectives

- To create an online platform for medical stores to sell their medicines.
- To allow users to compare prices for specific medicines offered by different stores.
- To provide information about different labs for various tests, their locations, and prices.
- To enable users to book appointments at hospitals and labs through the website.
- To provide an integrated billing system for users' convenience.
- To offer discounts on medicines to users through the platform.

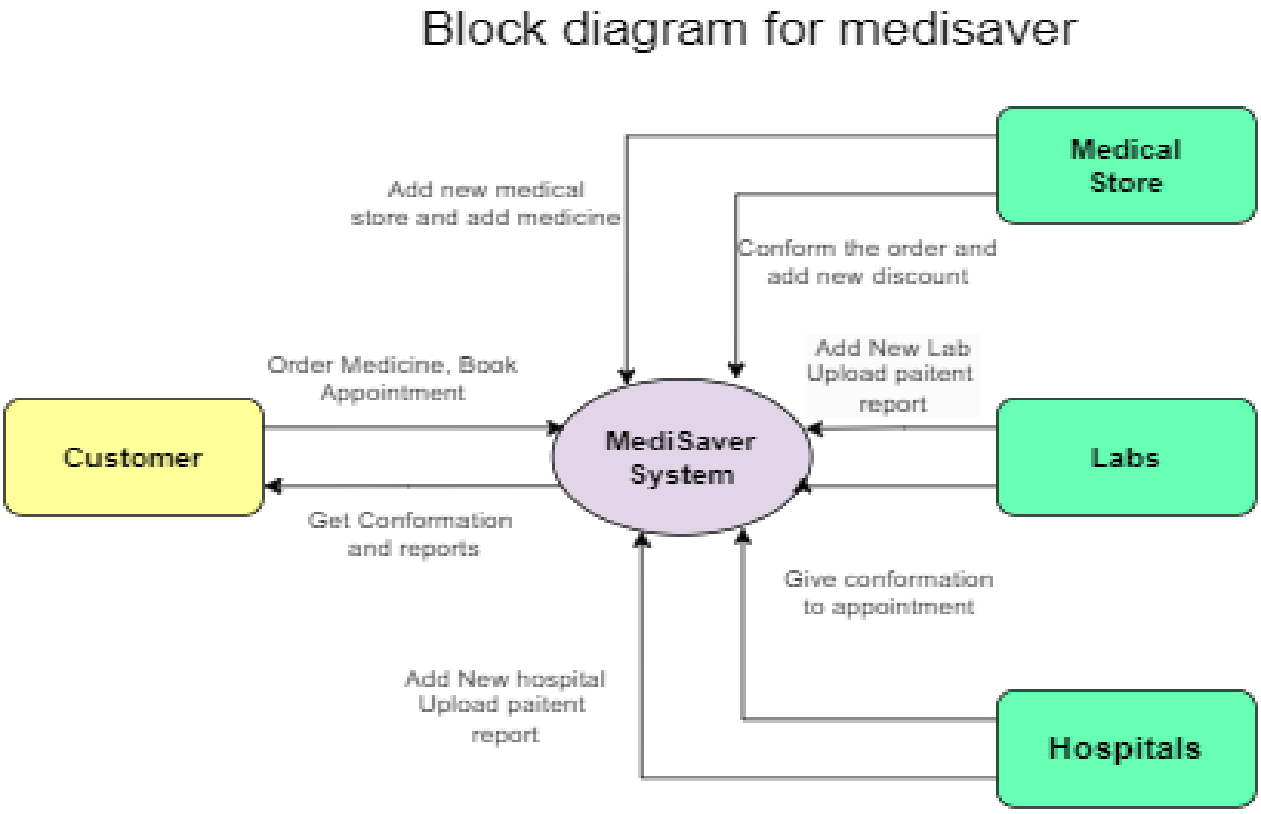
2.3 Features

- Online Medicine Store: All the medical stores can register on the platform and list their medicines for sale.
- Discounted Prices: Users can compare the prices of medicines offered by different stores and get the best deals and discounts.
- Lab Test Finder: The platform provides a directory of labs for different tests along with their locations and prices.
- Book Appointment: Users can book appointments in pathology labs and hospitals for treatment.
- User Profiles: Users can create their profiles and save their medical history and prescriptions for easy access.
- Search Functionality: The platform has a search functionality that allows users to search for specific medicines, labs, or hospitals.

- Secure Payment Gateway: The platform has a secure payment gateway for safe and easy online transactions.

Chapter 3 : System Requirements Specification

3.1 Proposed Block Diagram



3.2 Methodology

1. Requirement Analysis: The first step is to understand the requirements of the project, including the features that need to be included in the platform, such as user registration, search functionality, payment gateway integration, etc.

2. Design: The next step is to design the system architecture, user interface, and database schema. This involves deciding on the technology stack to be used, such as Django, HTML, CSS, JavaScript, and PostgreSQL.

3. Development: Once the design is finalized, the actual development work begins. This involves implementing the features, building the database schema, and testing the system.

4. Testing: After the development work is completed, rigorous testing will be done to ensure that the platform is functioning as expected. This will include both functional and non-functional testing.

5. Deployment: Once the platform is thoroughly tested, it will be deployed on a production server, where it can be accessed by users.

6. Maintenance: The final step is to ensure that the platform is maintained properly, including regular updates, bug fixes, and security patches.

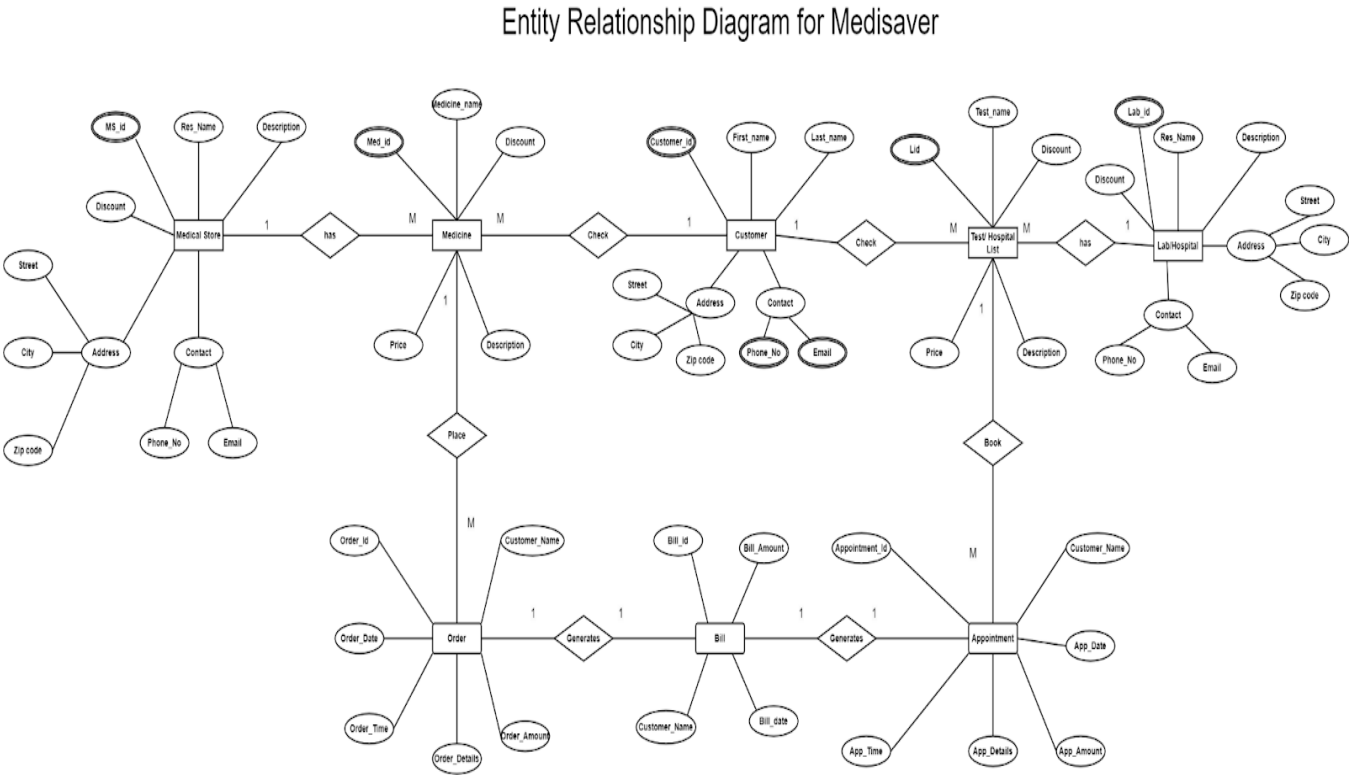
3.3 Functional Requirements

1. User registration and login system for both customers and medical stores
2. Search function for finding specific medicines based on name, brand, or ailment
3. A way for medical stores to upload and manage their inventory
4. Display of medicine prices from various stores, sorted from lowest to highest
5. Ability for customers to compare prices and select their preferred store for purchase
6. Integration with Google Maps or a similar service to display lab locations and directions
7. A system for booking appointments with labs or hospitals
8. Online payment system for medicine purchases and appointment booking

3.4 Non-Functional Requirements

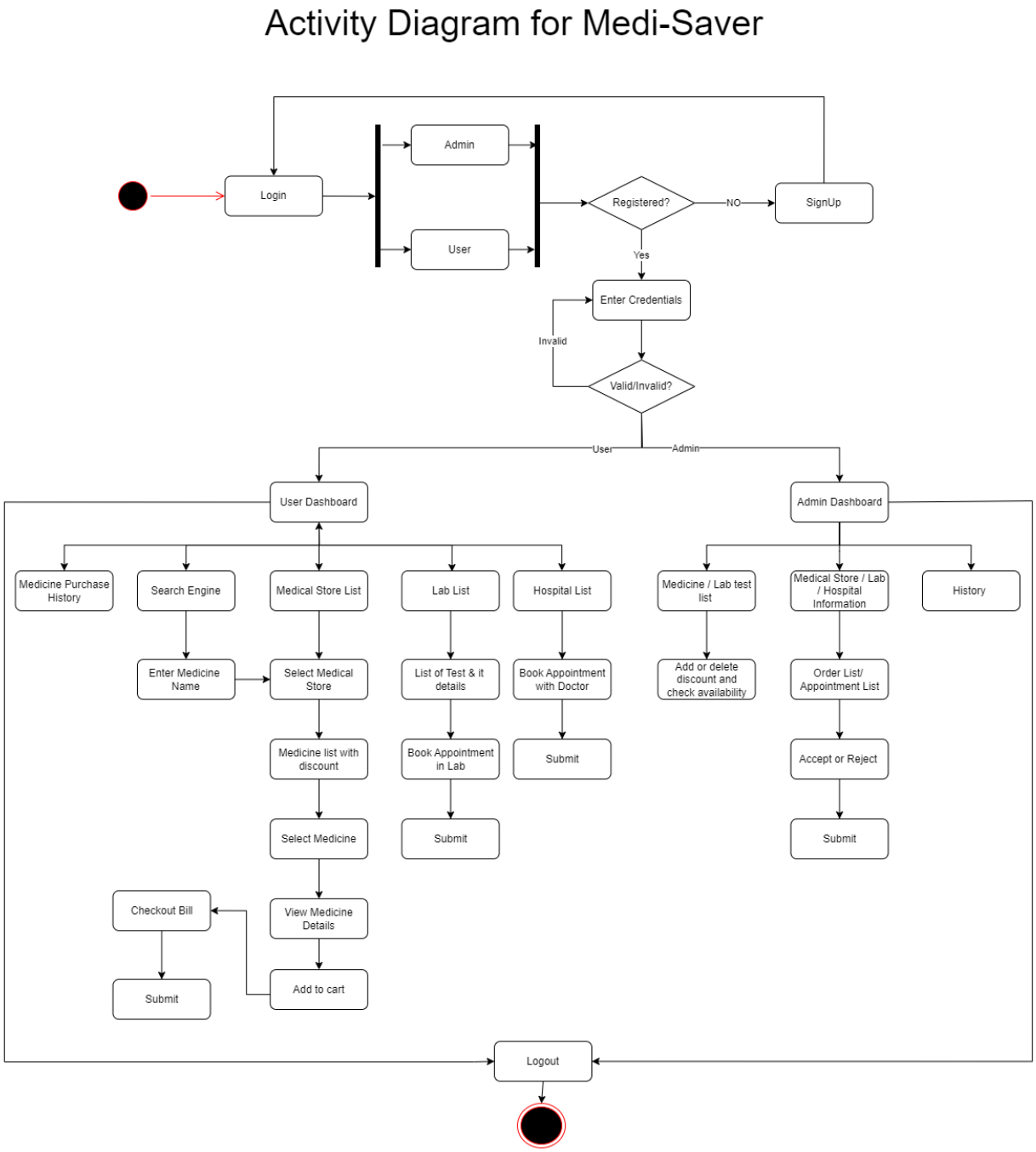
1. Performance: The system should be able to handle a large number of concurrent users without any performance issues.
2. Security: The platform must ensure the privacy and security of user data, including personal information and medical records.
3. Usability: The user interface should be intuitive and user-friendly, so that users can easily navigate and access the required information.
4. Availability: The platform should be available 24/7 to ensure that users can access it at any time.
5. Reliability: The platform should be reliable and ensure the accuracy of data, so that users can rely on it for making important medical decisions.
6. Scalability: The system should be designed in such a way that it can easily accommodate new features and functionalities as the platform grows.

3.5 Entity Relationship Diagram

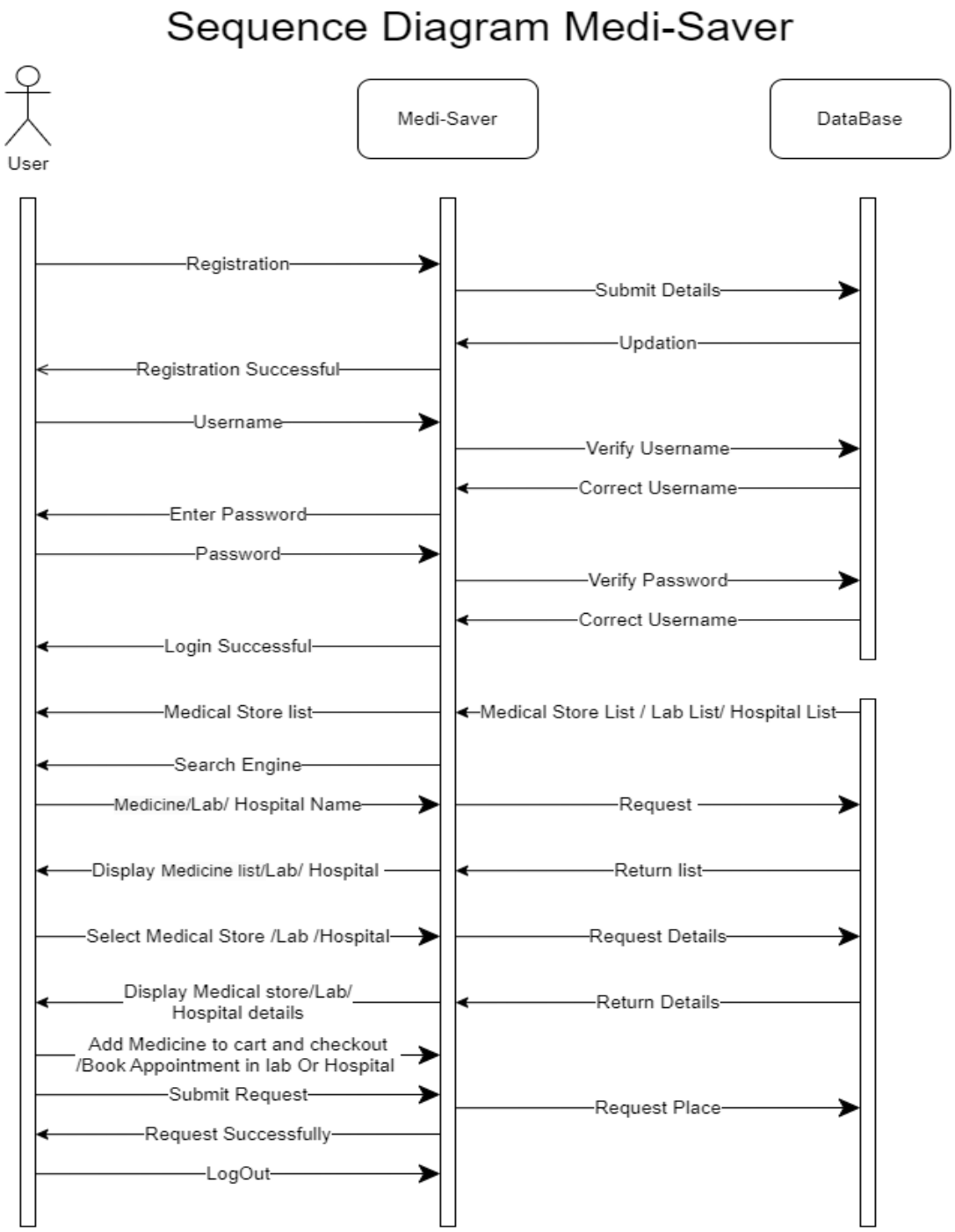


3.6 Use Case Diagram

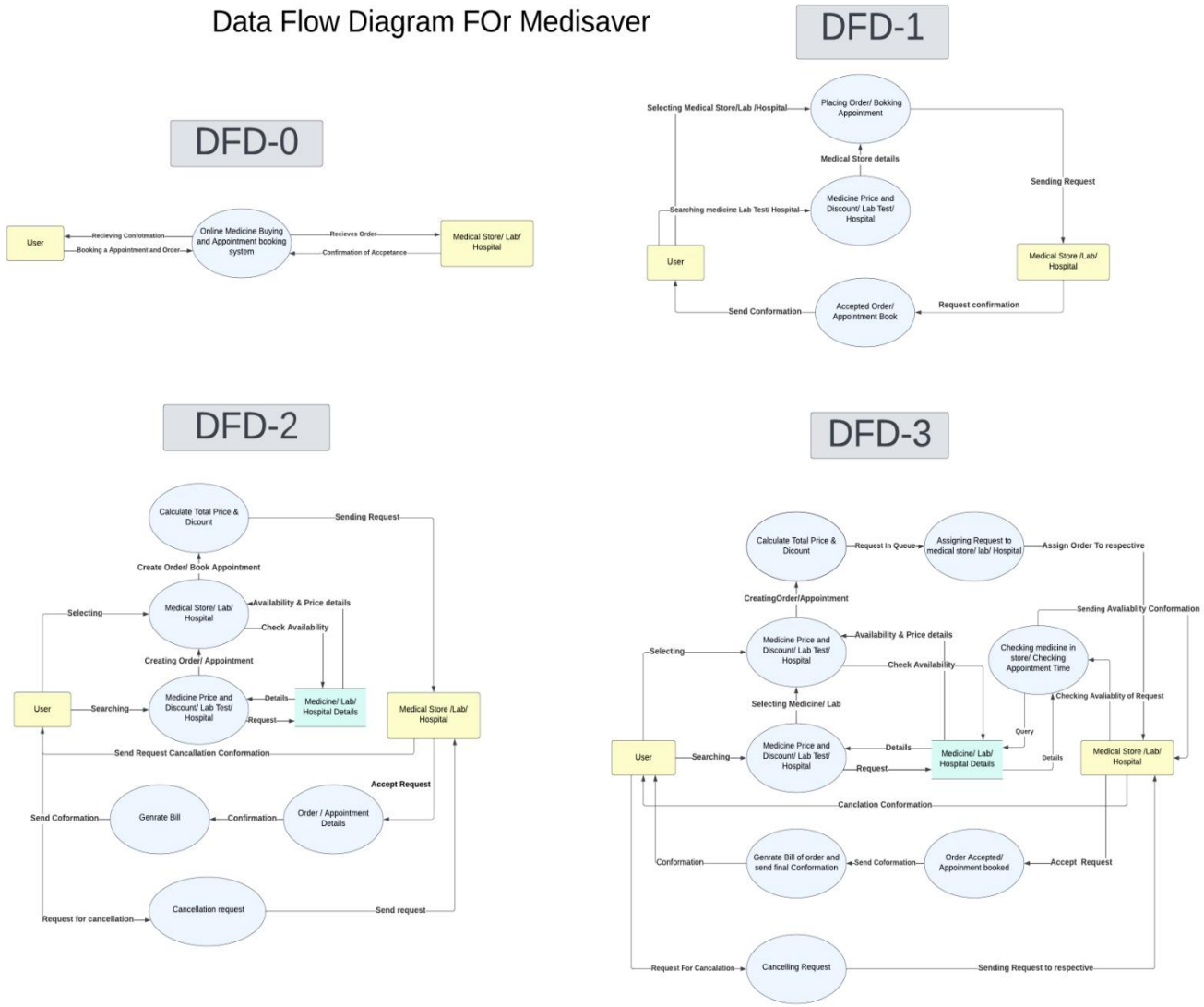
3.7 Activity Diagram



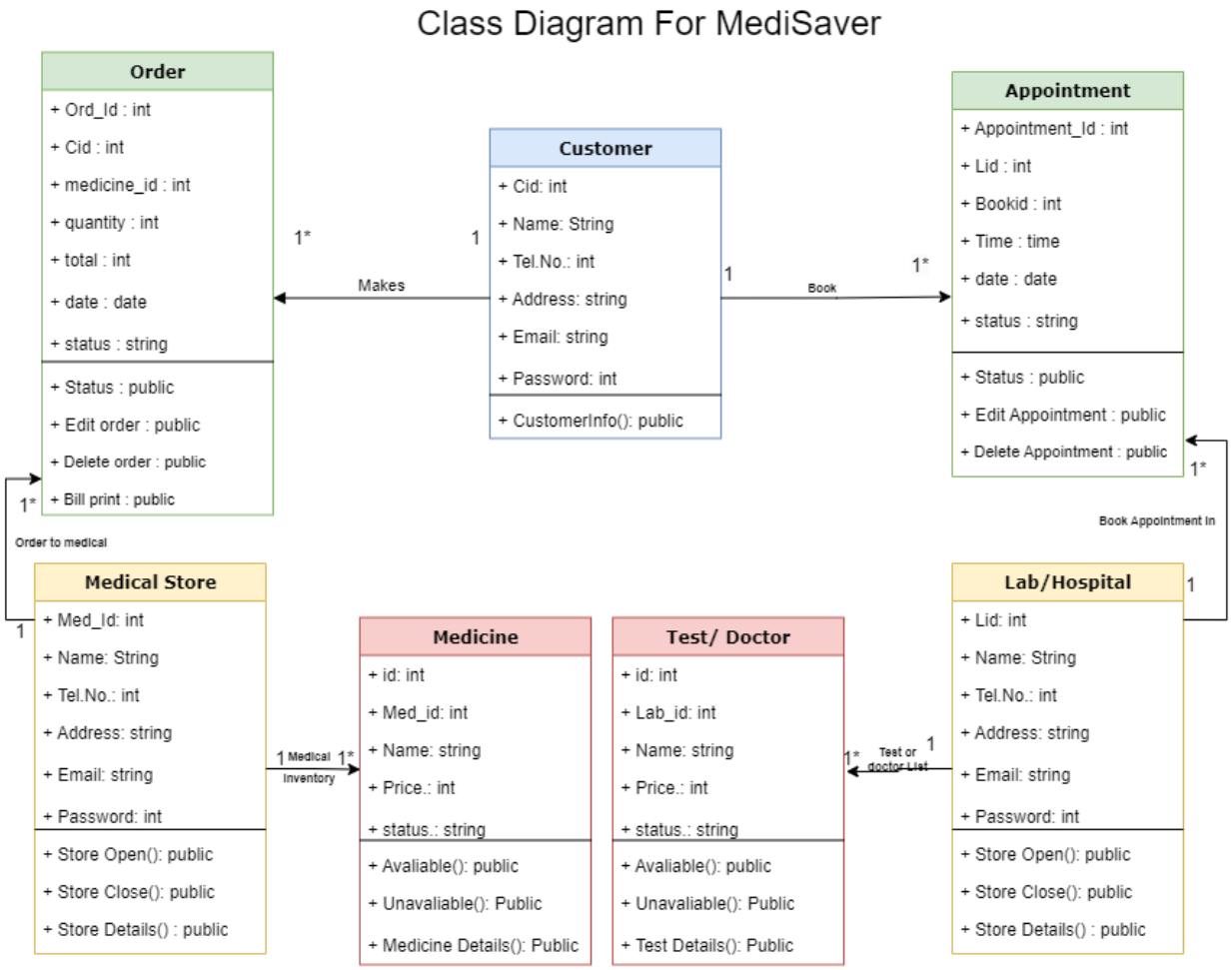
3.8 Sequence Diagram



3.9 Data flow Diagram



3.10 Class Diagram



Chapter 4 : Tools and Technology

4.1 Technology

- **HTML**
  To structure a web-pages and its content.
- **CSS**
  To style and layout web pages.
- **Java-script**
  To make webpages dynamic and interactive.
- **Django**
  To give proper backend to website.
- **SQL-Lite**
  For Database

4.2 Tools Used

- **Web server** : Localhost
- **Development Platform** : Visual Studio Code

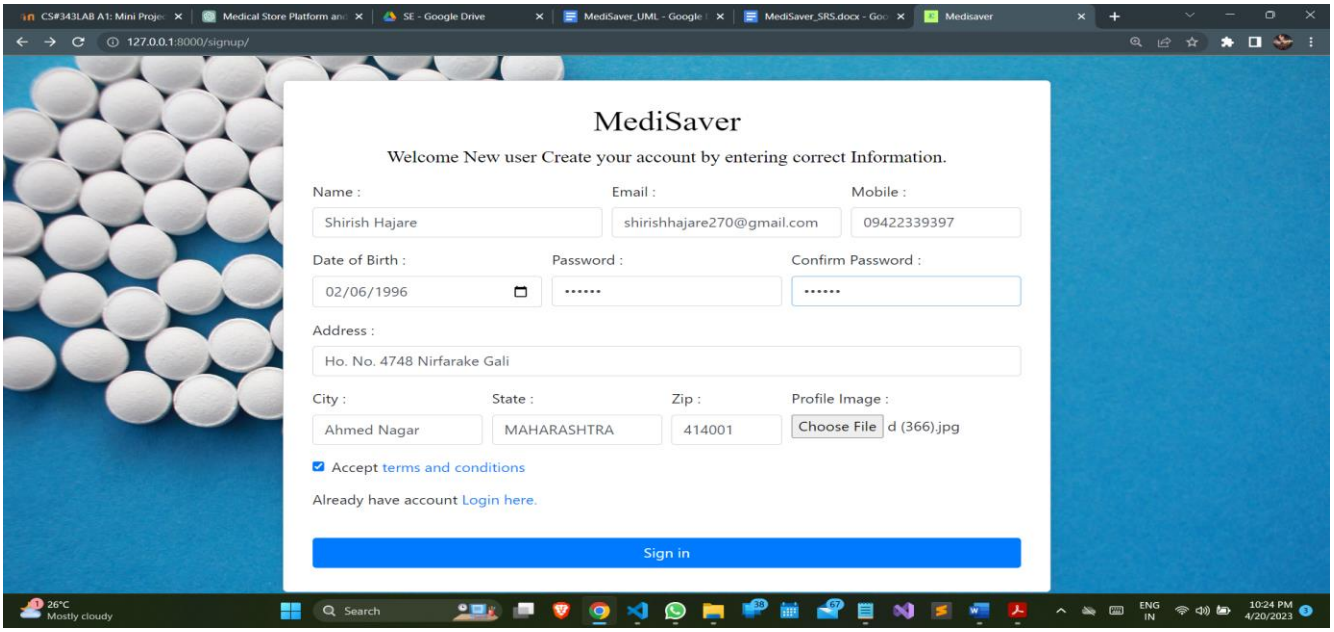
4.3 Hardware and Software requirements

- Processor: Intel Core i5 or equivalent
- RAM: 4GB or more
- Hard Disk: 100 GB or more
- Display: Minimum 1366x768 resolution
- Operating System: Windows 10 or Linux
- Web Server: Apache or Nginx
- Database Server: MySQL or PostgreSQL
- Programming Language: Python 3.x
- Framework: Django 3.x
- Front-end Technologies: HTML5, CSS3, JavaScript, Bootstrap
- Other Libraries: Pillow, Django Rest Framework, Celery, Redis, Google Maps API

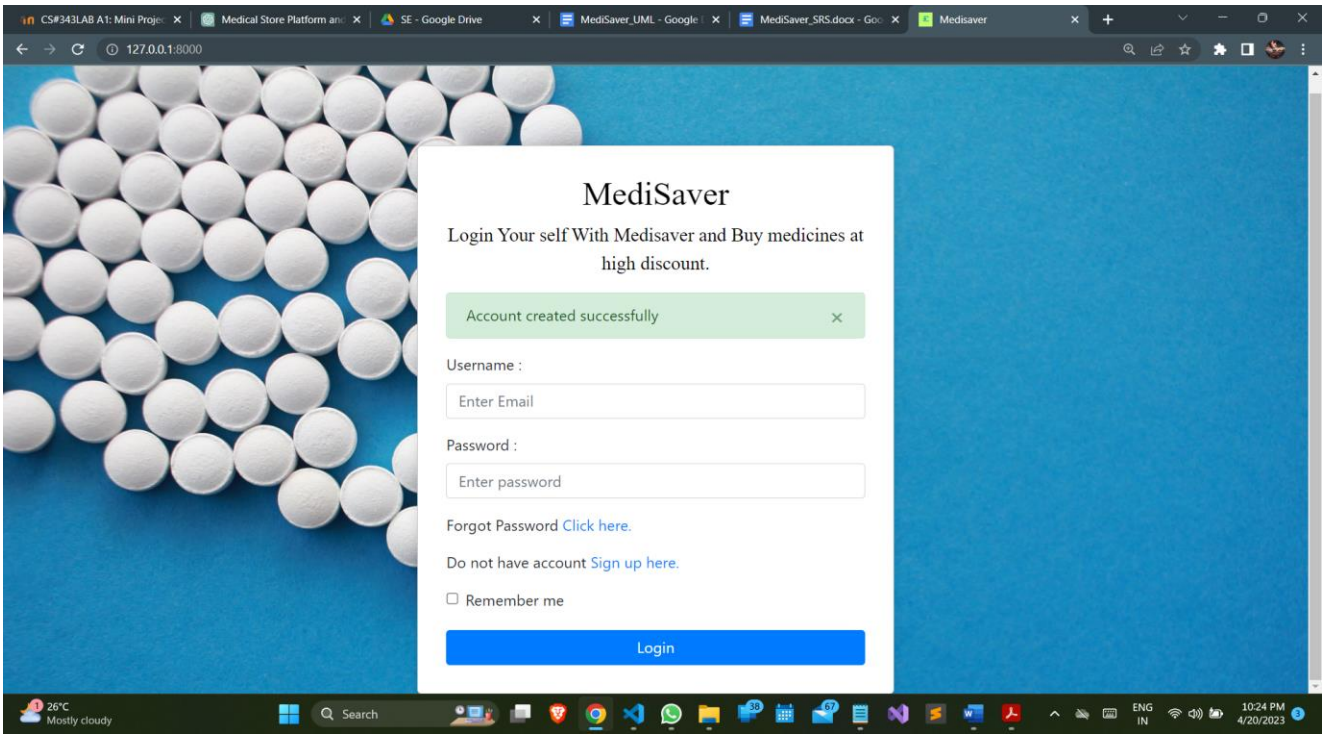
Chapter 5 : Implementation and Testing

5.1 User Interface Login Page

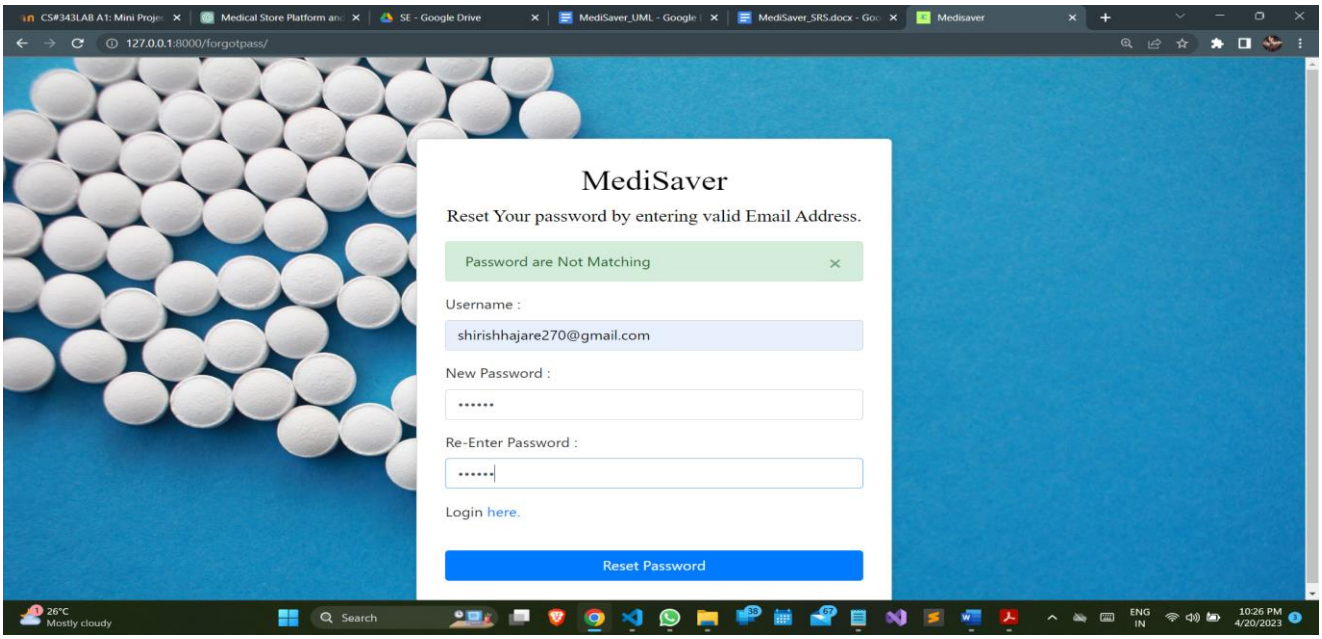
Signup Page



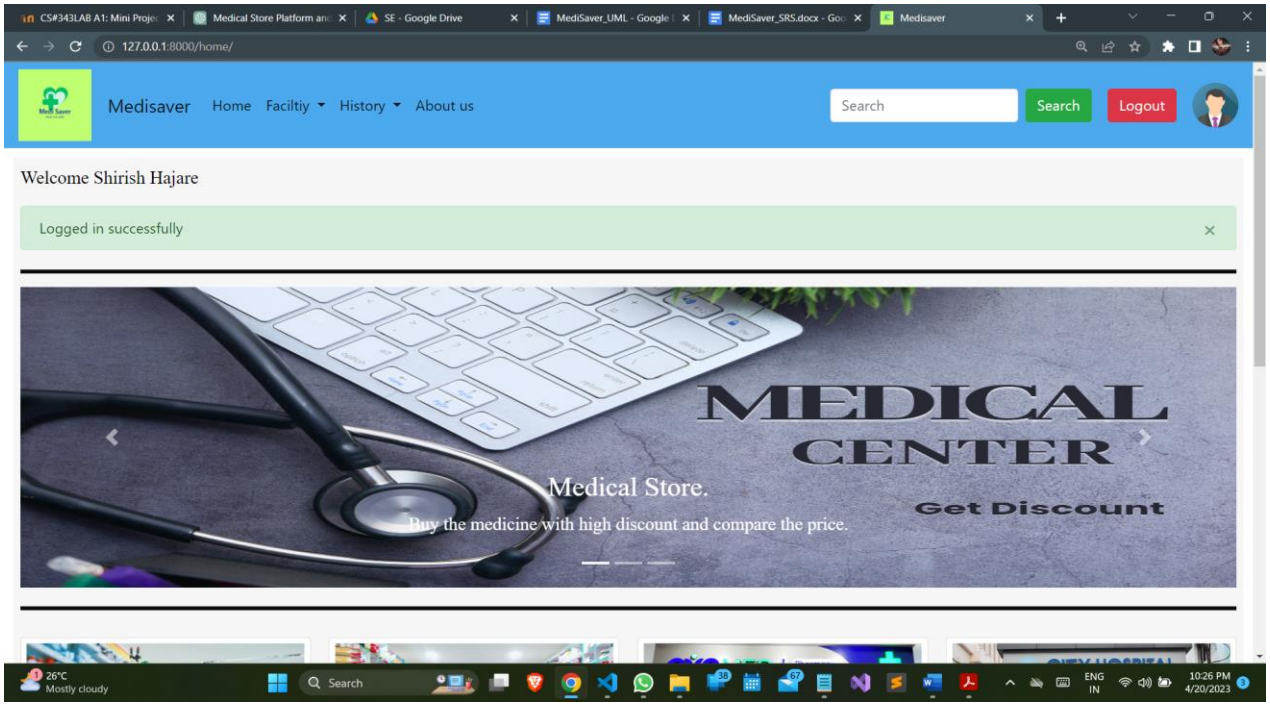
Login Page

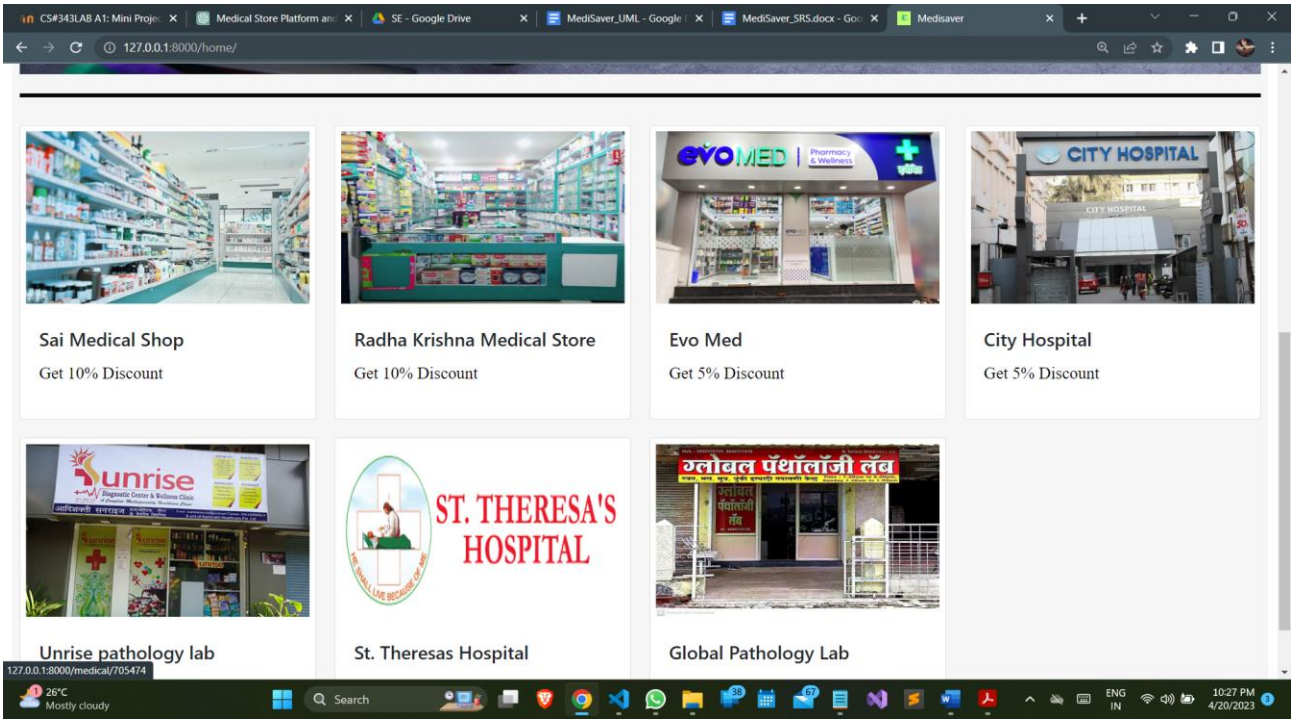


Forgot Password Page

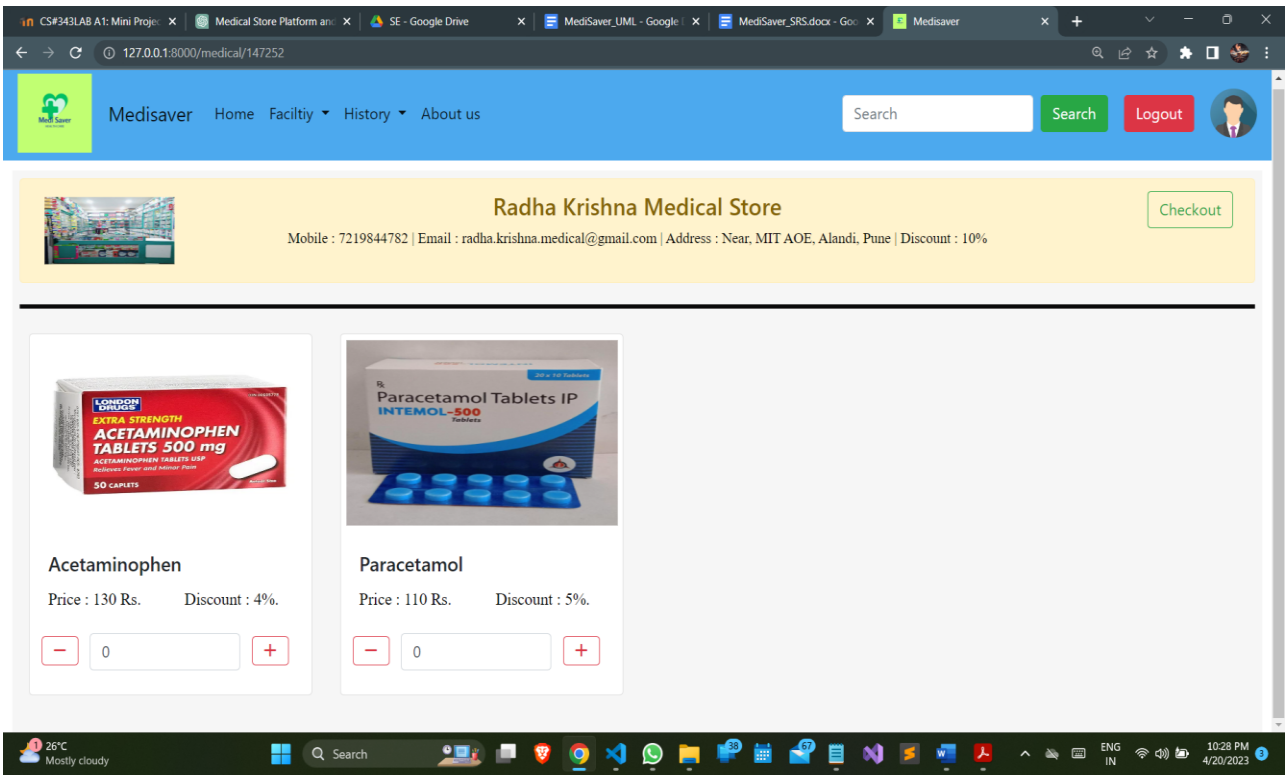


Home Page

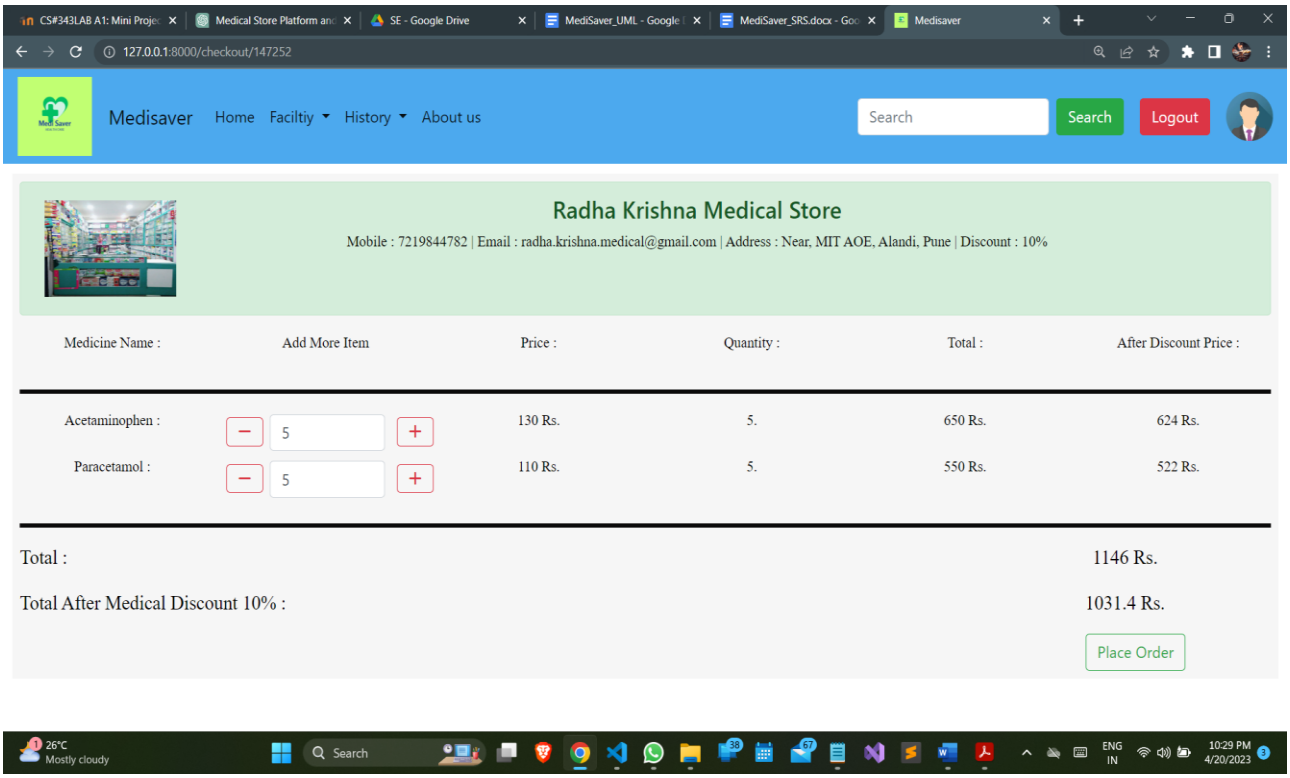




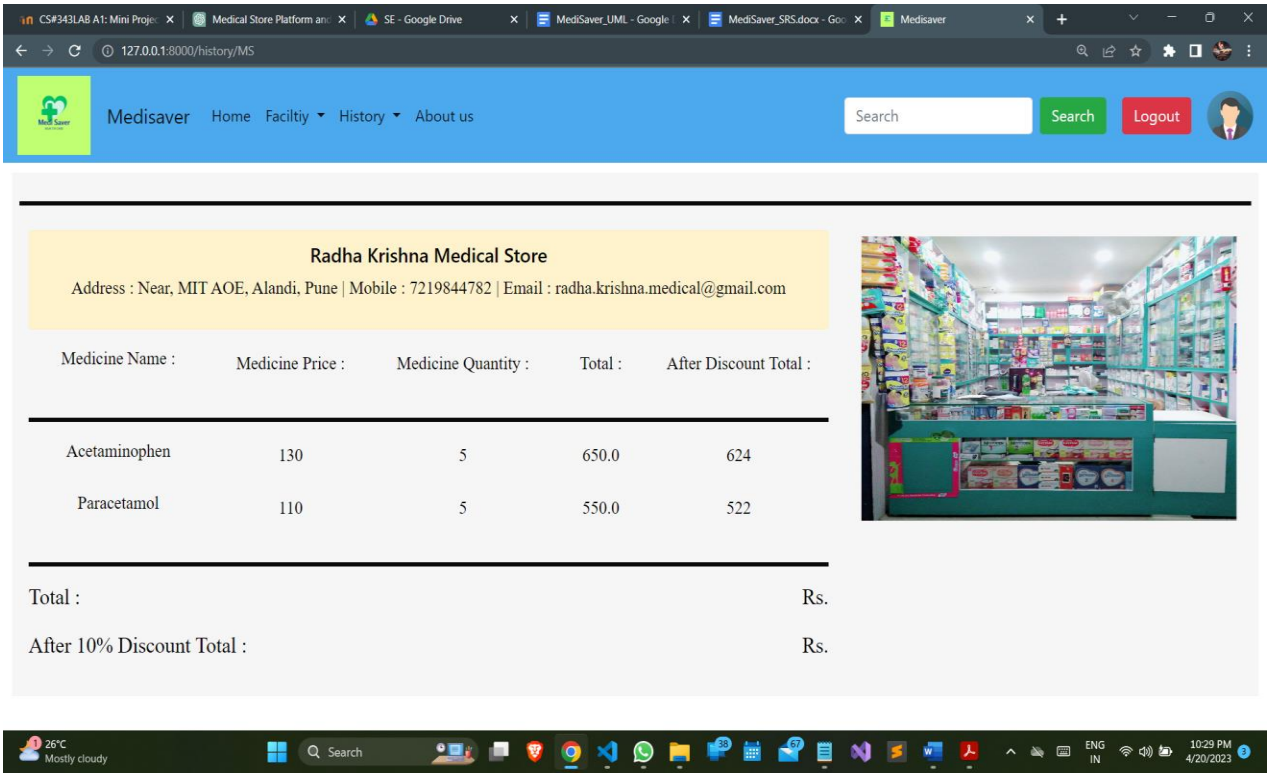
Medical Page



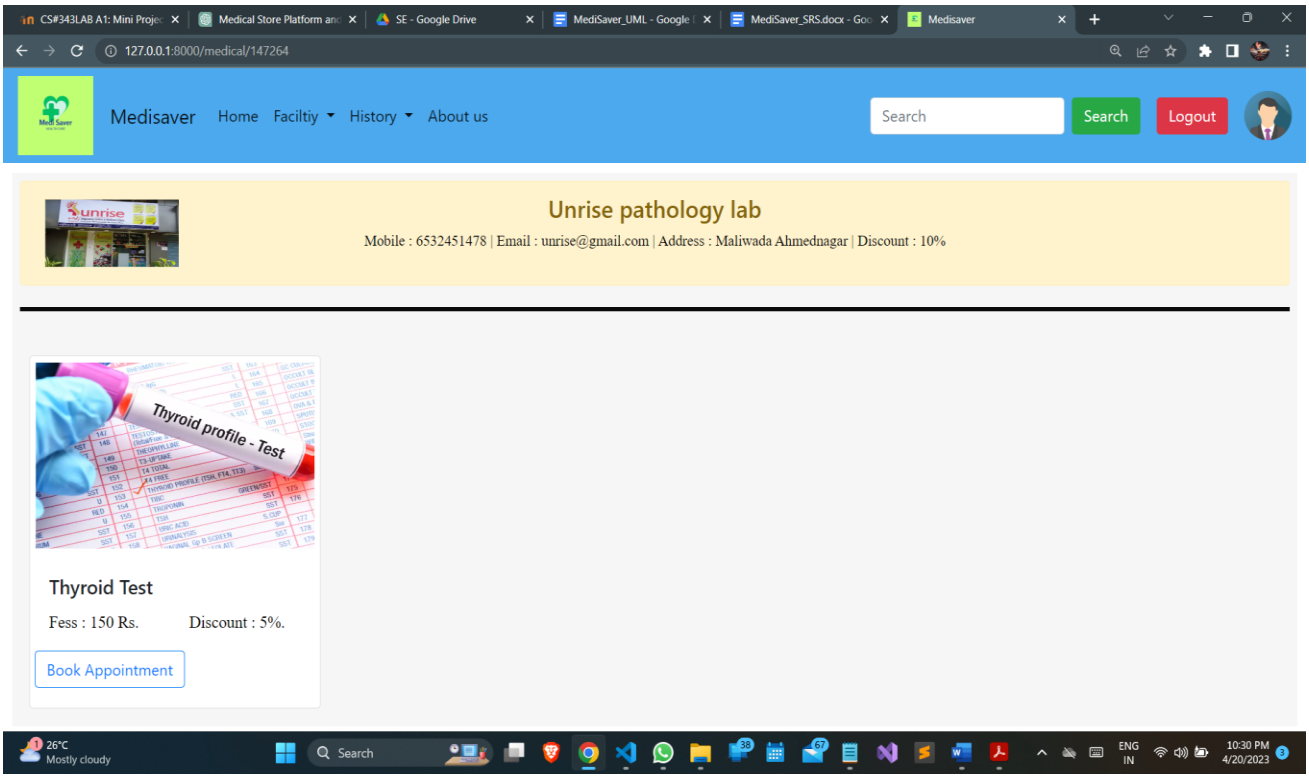
Checkout Page



History Page



Lab Page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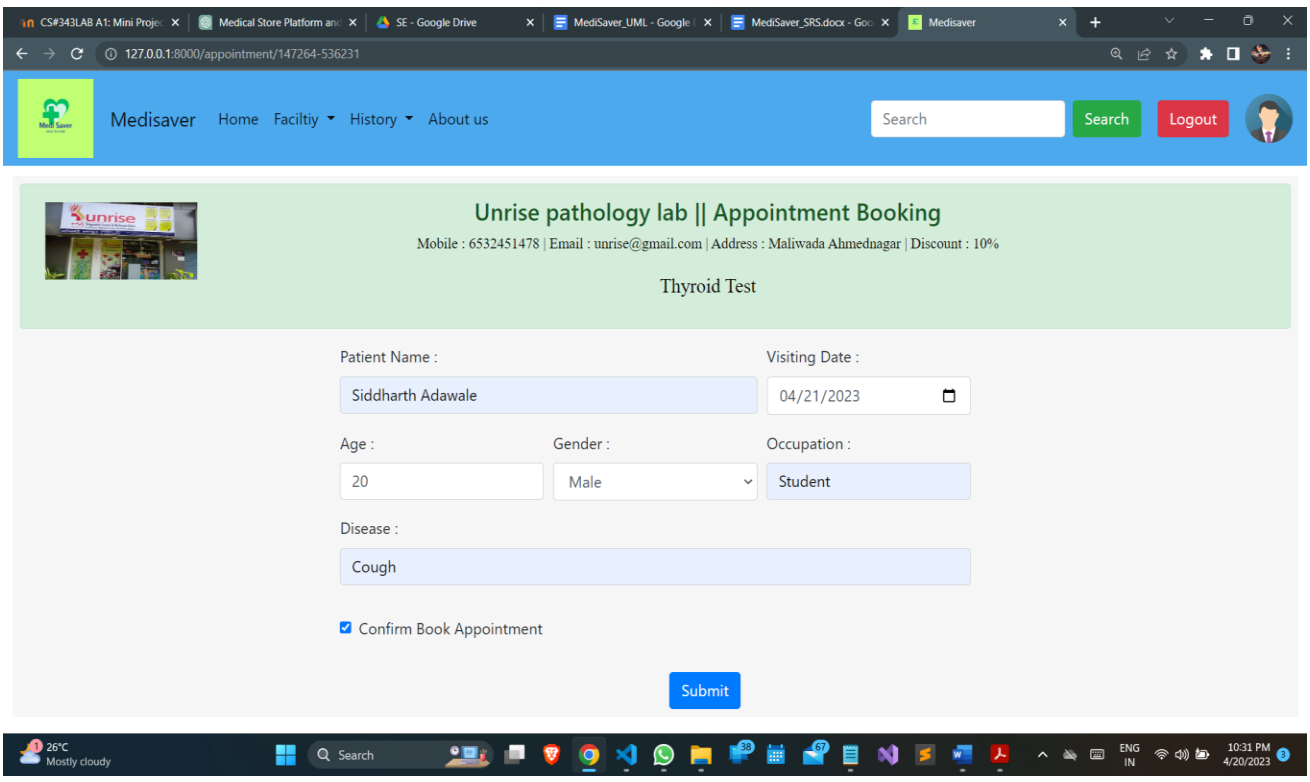
Book Appointment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Visiting Date :
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Age :
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Gender :
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Occupation :
Student
Disease :
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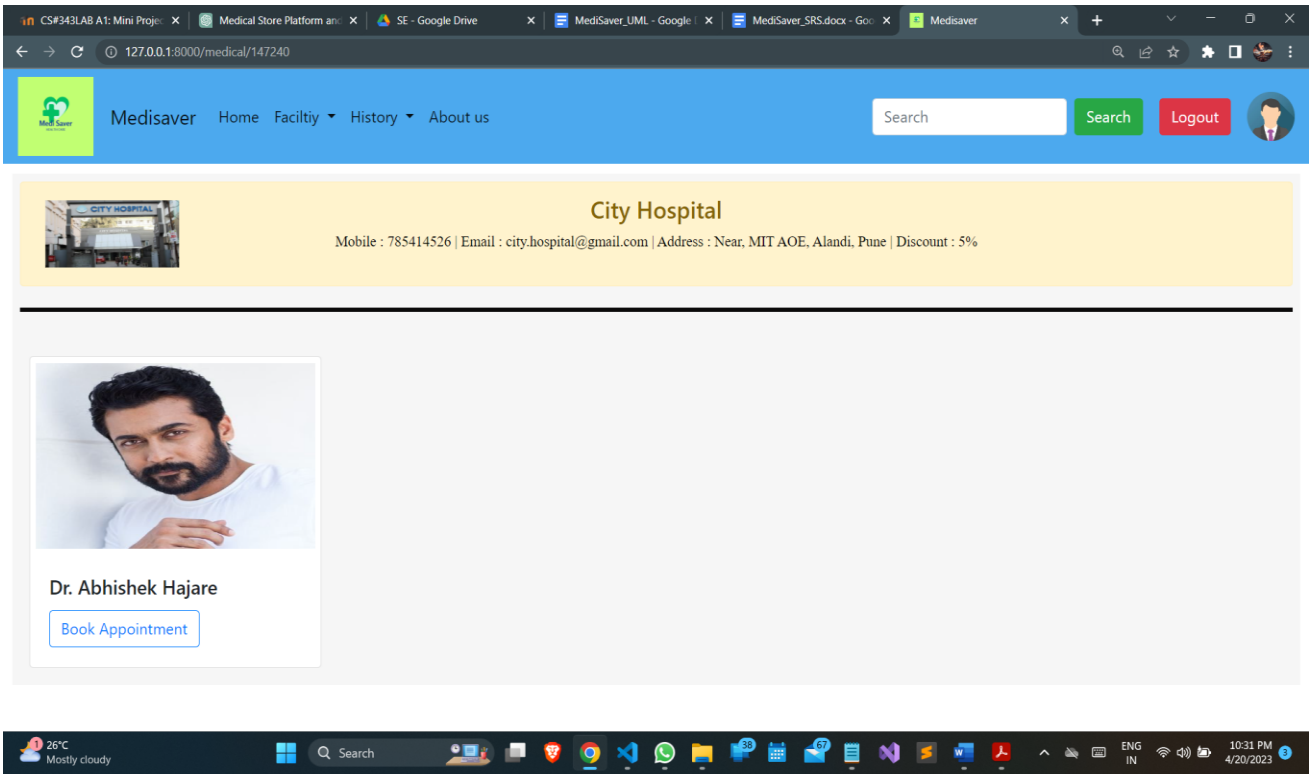
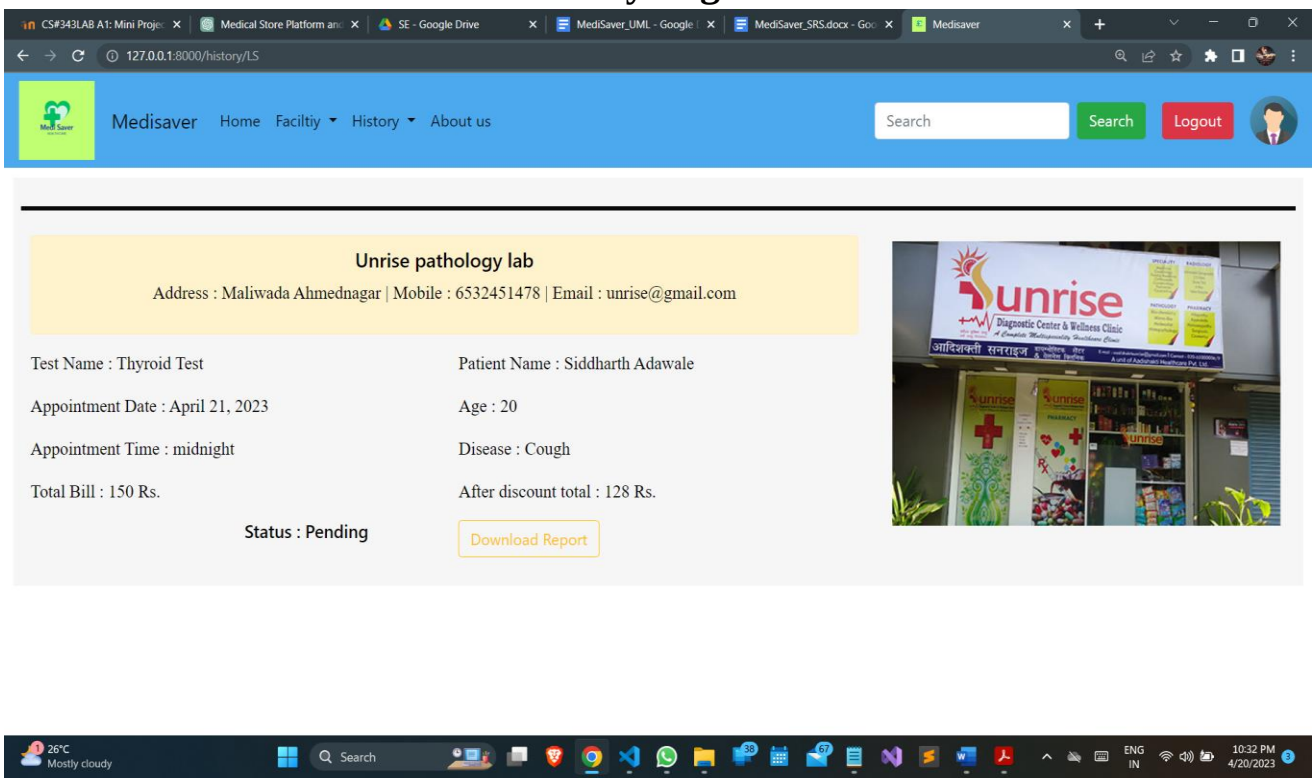
Confirm Book Appointment
Submit

Hospital Page



History Page



Testing

Test No.	Test Case	Input	Expected Output	Actual Output
1	Login	Provide valid Username and Password	User should be able to login	As expected
2	Medical Store	Add new Medical Store and enter information of Medicine	The information should store to the data base and User should view Medicine name in medical store list	As expected
3	Order Medicine	Select Medical store then select medicine and quantity and proceed to checkout and place the order	The order should process successfully	As expected
4	Search	Select search and enter the name of the Medical store, labs, Hospital.	Medical store, labs, Hospital should be shown	As expected
5	Book Appointment	Select Lab, Hospital then select Test and book appointment	The Appointment booked successfully	As expected

Conclusion

As the healthcare industry continues to grow, the need for efficient and accessible healthcare services also increases. Our project aims to provide a web platform that bridges the gap between medical stores, labs, and users. The platform provides users with an easy way to search for medicines and compare prices from different medical stores. The platform also helps users find the nearest labs for different testing and displays prices for each test.

Furthermore, the platform also allows users to book appointments for pathology labs and hospitals. With the help of this platform, users can save time and money while searching for healthcare services. The project will help improve the efficiency of the healthcare industry by providing a central platform for users to find healthcare services and medical stores to promote their products.

Overall, this project offers a cost-effective and efficient solution for healthcare service providers and users. The web platform aims to revolutionize the healthcare industry by providing a convenient and accessible platform for all.

References

1. "Building Web Applications with Django" by Tom Aratyn - this book provides a comprehensive guide to building web applications using Django, including the use of Django's built-in authentication system and working with databases.

2. "Healthcare Information Technology Exam Guide for CompTIA Healthcare IT Technician and HIT Pro Certifications" by Kathleen McCormick - this book provides an overview of healthcare IT systems, standards, and regulations, with a focus on the technical skills needed to work in the healthcare IT industry.

3. "Developing Cloud-Based Applications with Oracle Cloud" by Andrew Nickel - this book provides an overview of the Oracle Cloud platform, including its capabilities for building web applications, integrating with databases, and deploying and scaling applications in the cloud.

4. "The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses" by Eric Ries - this book provides guidance on how to build a startup using a lean methodology, which emphasizes testing and iterating on ideas to build successful businesses.

5. "The Checklist Manifesto: How to Get Things Right" by Atul Gawande - this book provides guidance on how to develop checklists to improve workflow processes and reduce errors, which can be applied to healthcare web platforms to ensure quality and safety.