Medi-World

Final Year Project

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Plagiarism Free Certificate

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MediWorld mobile app with AI

Change Record

Author(s)	Version	Date	Notes	Supervisor's Signature
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PROJECT MANAGER

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Date: _____ Signature: _____

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Dedication

We dedicate our work to our beloved parents and our supervisor Miss Amna Zeeshan and Miss Maria Iqbal, whose guidance enable us to complete our project. Both of our supervisors played important role in completion of our project.

They encourage us to make such an efficient product which will help a lot of peoples in coming time. A very thanks to ALLAH ALMIGHTY who gave us such loving parents and intelligent supervisors and also made us able to do such type of work.

Acknowledgements

To the help guidance and sponsorship of mentor, teachers, colleagues, university and relative for this project and acknowledged by the author. I have special thanks to all these members for the participation in my project. I really do have to express our collective gratitude towards Miss Amna Zeeshan, I say big thanks not only for his guidance and patience during this project but also for his monitoring throughout all my project.

Special Thanks to Miss Amna Zeeshan and Miss Maria Iqbal who's lecturing greatly influenced my formal approach towards the project and the abstract analysis on which the final design was based.

A special thanks to Pharmacy Managers for their help in my '**Requirement Gathering** and **Working** of previous System'.

Executive Summary

As the world entered the 21st century, business took off on the Internet with increasingly dynamic and highly competitive features. The proposed of E-Marketing model here is an ECommerce portal for online medicine trading app providing customers the list of nearby medical shops where the particular medicine is available and also online purchasing facility for that medicine. This model is basically proposing a new idea in E-marketing to supply medicines online. The purpose behind making such E-Commerce app providing customers a 24*7 availability of medicines. The shopkeepers will register over the portal and will let their medicine to be sold online. This will play a very important role in providing rare medicines at remote places where there is unavailability of medicine. As of 2022 there is only one Medicine App that can allow you to purchase medicine through a mobile application. But they have limited restrictions. As you have to wait for the response call to confirm your order. And you cannot pay online. You also have to pay delivery fee which is the main reason people doesn’t like to order things.

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Chapter 1
Introduction

Chapter 1: Introduction

We all do online shopping of different products on various E-commerce websites. But there only few websites that allows you to purchase medicines online. And they also have limited medicines which can be used in daily normal life. So, we think of an app that will allows a person to purchase any kind of medicine through an app with minimum delivery (area and. So that if any person is not able to go to a pharmacy, He /She can order the medicine through ease.

1.1. Background

In present time many of the examples can be taken of online medicine delivery apps and webpages, who claims to delivery medicine on time but all in all they do not have any medical store. They also purchase medicine from another vendor and then deliver them to customers, which is really a time taking process. So, we thought of such system in which customers will directly buying medicine and medical equipment from pharmacy that will eliminate the half of the time of getting the medicine delivered.

1.2. Motivations and Challenges

As of 2022 no other medicine delivery application is providing fast reliable and remote delivery options. Customer have to wait for few times to get medicine delivered. User cannot order red label medicines (medicines that are not useable without doctor prescription), customers cannot order general medical equipment. In Medi-World we will be allowing customers to order any medicine and medical equipment through ease.

Every person in every field of life has to face challenges In Medi-World we have and will be facing some challenges.

- Competing with competitors
- Challenge of reaching more customers marketing
- Branding
- Order allocation

- Deliver medicines at the time
- Lack of coordination of various teams
- Challenge of inventory related work

1.3. Goals and Objectives

- To provide the best medicine delivery app in the town
- Medicine delivery through ease
- Eliminating the risk of delivering wrong medicine
- To provide every type of medicine through ease
- Giving users a friendly environment for ordering medicines
- Delivering medicine at remote areas
- Delivering medicines alongside medical equipment needed generally AI Doctor or Assistant (future update) to provide first aid (information) immediately Simple process of returning order or reordering.

1.4. Literature Review/Existing Solutions

As of 2022 there are various websites that allows users to order medicines along with different items but they allow customs to purchase general medicines which can be used in daily households. In 2021 clinic pharmacy take initiative to deliver medicines to their customers on door steps through their E-clinic mobile app. But they also have many drawbacks and limitations in their mobile application. As m. After that you have to wait for the conformation call which can take time up to one hour. They have different branches in different areas but still they can't reach some customers in some rural areas. If a person order medicine through the person might not be in the radius of 4-5km. that person have to wait about an hour or two, for their medicine.

1.5. Gap Analysis

Existing Solution	Medi World App
Small Delivery Area. Closed pharmacy. Required multiple information for delivery. Person has to go through multiple calls to conform the order. Slow process. Complex process of returning a medicine. Not Chat support	Delivering Medicine at remote Places. Multiple pharmacy. Required only one source to understand and for delivery. Doesn't required to call after uploading the information. Fast and more efficient process. Chat Support

1.6. Proposed Solution

Purposed Solution is to provide multifunctional and use friendly application which provides not only ease to customer who can order in two different ways one is upload prescription and (convert image to text) and second is buy product from your desired nearby pharmacy which is registered also provide business opportunity to small level pharmacies that they can sell their products in their area. Also providing additional features within a single to like chat support with shop keeper and customer and chat with AI chat bot nearby places and many more.

1.7. Project Plan

Medi World is an e-commerce Application for online medicine trading and searching, providing customers the list of nearby medical shops where the particular medicine is available and also online purchasing facility for that medicine. This model is basically proposing a new idea in eMarketing to supply medicines online and the customer can search the medicine's availability in nearby medical shops and can purchase online.

Main Modules

- Registration
- Manage Accounts
- Purchase
- Checkout
- Search Product in nearest medical store
- Chat support
- Chat with Ai

1.7.1. Work Breakdown Structure

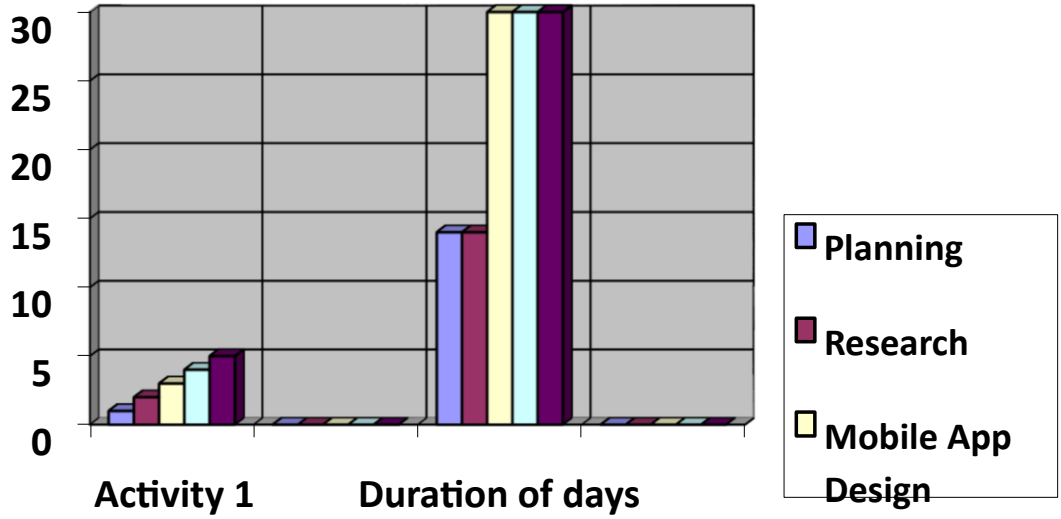
- Requirements Analysis
- Gathering
- Validation
- Verification
- Working
- Free testing
- Changes
- Requirement feasibility analysis.

1.7.2. Roles & Responsibility Matrix

The purpose of roles & responsibility matrix is to identify who will do what.

WBS #	WBS Deliverable	Activity #	Activity to Complete the Deliverable	Duration (# of Days)	Responsible Team Member(s) & Role(s)
1	Planning	1	2 Weeks	14	Zain, Ali, Abdullah
2	Research	2	2 weeks	14	Zain, Ali, Abdullah
3	Mobile App Design	3	1 month	30	Ali
4	Database/ Backend	4	2 month	30	Zain, Abdullah
5	Documentation	5	1.5 Month	30	Zain, Ali, Abdullah

1.7.3. Gantt chart



1.8. Report Outline

Report organization is as follows:

- **Chapter 1:** In chapter 1, background of the project, problems statement of the project, gap analysis of the project and project breakdown structure are discussed in detail. This chapter will give complete details of the system and will ensure the user understands the system after going through this chapter.
- **Chapter 2:** In chapter 2, purpose is explained briefly. The motive was to identify each and every problem which can be eradicated by the use of this system.
- **Chapter 3:** In Chapter 3, Use case diagram of the system is explained in detail.
- **Chapter 4:** In chapter 4, architecture of the system is explained in detail with the help of UML diagrams. In order, any further development, maintenance or updates are required then this chapter will play an important role in understanding the architecture of the system.
- **Chapter 5:** In chapter 5, all the implementation methods and testing methods are discussed and documented.
- **Chapter 6:** In chapter 6, testing all the system with the help of tester in future testing and project managers to identify issues and all results were discussed to understand the outcomes of the system.
- **Chapter 7:** In chapter 7, whole documentation is concluded and future work which was not carried out in the current version of the system is discussed.
- **References and Appendices:** This shows all the references from where the data was gathered.

1.9. Empathy Map

Say:

Customer Relief

Easy ordering

Display nearest Stores

Do:

Satisfy the customer

improving the system

Profit

Think:

Customer satisfaction

Ease of customer

Time Saving

Feel:

Exhausted

Surprised

Excited

Chapter 2
Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.1. Introduction

In this part we analyse and make decisions of how the system will be performing in different environment. It is usually signed of at the end of engineering phase.

2.1.1. Purpose

The main purpose of Medi-World Application is to Deliver medicines through ease without going anywhere using latest technology have multi-functional app to provide medicines in your door step and buy medicines from your nearby pharmacies without going there and also assist with AI chat bot also and can have chat within the app between customer and shopkeeper this ensure not only ease also ensures privacy for customer to not providing phone number and chat inside the app also have many more features that's why is multifunctional app which is different than other solutions. Purpose of app in points are

- Use AI and Image Processing Provide Multi-functional app which provide chat support with AI
- Order Medicine through ease
- Provide Business Opportunity for shopkeepers
- User Friendly Application
- Privacy Issue Resolve by Providing Chat Supports between shopkeeper and user without going outside
- Buy products from nearby store not specific store
- Independency for both user and customer

2.1.2. Document Conventions

In this Document, different type of fonts is used for clear doubts. For example, the overall main headings are numbered with whole numbers like:

1. Introduction.
2. Description.

And subheadings are numbered with decimal numbers:

1.1 Purpose.

1.2 Document explanations.

The text style which is used in the documentation is Calibri and the spaces between the texts is single space. Text size for the main headings is 16 and the size of subheading is 14 and the text size for the text is 12.

2.1.3. Intended Audience and Reading Suggestions

This documentation is for the team involved in making the Medi-World app for reviewing the app and see if any changes are required.

- **Project manager** use the document in case of any up gradation.
- **Developers** use the documentation for version update, maintenance, and for future updates.
- **Testers** to review the product to see if things are working properly.
- **Stakeholders** use the document for further expansion of the plan.

This documentation is organized mainly in three main parts:

- Introduction.
- Software Requirements Specifications.
- Use case Analysis.

2.1.4. Product Scope

- E –medicine is a part of the e-commerce and has very close relationship with e commerce.
- In E-medicine to supply medicines online with 24*7 facilities.
- We had also kept in mind the needs of customers and their ease in ordering medicine. This will play a very important role in providing medicines at remote places where there is unavailability of medicines.
- There will be a detailed list of medicines available in the stock. There will be a list of all medical shops present in the customer's area.

2.1.5. References

- IEEE STD 610.12-1990, IEEE Standard Glossary for Software Engineering Terminology.
- IEEE STD 730-1998, IEEE Standard Glossary for Software Quality Assurance Plans.
- IEEE STD 730.1-1995, IEEE Standard Glossary for Software Quality Assurance Planning.
- IEEE STD 1028-1997, IEEE Standard Glossary for Software Reviews.

2.2. Overall Description

2.2.1. Product Perspective

As of 2022 there are various websites that allows users to order medicines along with different items but they allow customs to purchase general medicines which can be used in daily households. In 2021 clinic pharmacy take initiative to deliver medicines to their customers on door steps through their E-clinic mobile app. But they also have many drawbacks and limitations in their mobile application.

Our E medicine is the replacement of the existing solutions like:

- E clinix

- Oladoc
- Tabiyat.pk

2.2.2. User Classes and Characteristics

When developing Medi-World mobile app we kept in mind the layman using this app for both shopkeeper and customer will use this mobile app with ease. This app will be available to download on play store.

Customer should be able to perform different actions

- Profile creation/editing
- Ordering
- Visiting e store
- Chat with shopkeeper
- Chat with AI bot

2.2.3. Operating Environment

As far as operating system is concern a user has to have some basic things such as:

- A mobile phone having camera
- A mobile having maps and location (GPS)
- Operating system (Android 9 or above)
- Tolls (Android studio, java framework)
- Database Firebase
- Language (java)

2.2.4. Design and Implementation Constraints

- This app is being developed by using java
- Application will be integrated through API with database including camera and GPS Moreover the app will be required

2.2.5. Assumptions and Dependencies

AS all of the features and user features have discussed previously. The user may get incontinent due to bad connection or high demand in special circumstances as follow:

- Selected medicine is in high demand
- Any viral infection
- Situations like (corona virus)

2.3. External Interface Requirements

2.3.1. User Interfaces

- Splash/Intro Screens
- Login/Signup for both user and vendor sides /Forget Password Screens
- Home dashboard for both user and vendor side
- Ordering Pages History/View orders/ Manage Orders/
- Drawer Fragments About/Contact Us/Privacy for both user and vendor side
- Maps screens for Nearby Hospitals/ Nearby Pharmacies
- Pharmacies Screens / Products Screens/Product Detail Screens
- Inbox and Chat Screens
- Profile Screens for both User and Vendor Side/Update Profiles /Update Password Screens
- Add Products Screens/ View Products Screens in/ Vendor Side

2.3.2. Hardware Interfaces

As far as hardware is concern user may need

- Android mobile/ tablet
- Working internet connection

2.3.3. Software Interfaces

- Android 9 or above
- Camera software in mobile
- Wi-Fi connection option

2.3.4. Communications Interfaces

- Login/Registration Allow Users to create Account With firebase
- Chat and Inbox with firebase
- Google Maps Communicate with google API key
- Products Add and View Firebase
- Image Processing Communicate with firebase Machine Learning
- Open AI for AI Assistant

2.4. System Features

System features are types of functional requirements. These are features that are required in order for a system to function.

2.4.1. System Features

User Side:

User Registration and Authentication

User Can Register and Authenticate custom authentication feature and validation

Order Medicines and Products

Can place order by uploading prescription **Image covert to text** using **image processing** and buy products directly from nearby registered pharmacies registered with our products

Maps and nearby places

Multi featured mobile application to show nearby pharmacies nearby hospitals and current location

Emergency Numbers

Features of emergency number and directly call-in emergency if needed

Chat with Vendor/Shop keeper

Customer can chat with shopkeeper directly without sending your personal number or WhatsApp using single application

Profile and Password Updating

Update your profile in an easy way and also update your passwords

Your Personal AI Assistant

Update your profile in an easy way and also update your passwords

Shop Side:

User Registration and Authentication

User Can Register and Authenticate custom authentication feature and validation

Add Medicines and Products

Can add products price, discount, images etc. and get your nearby customers

View and Delete Products

Can delete products and also can view products

Profile and Password Updating

Update your profile in an easy way and also update your passwords

Chat with your customer

Easy chat with your customer without using any other application.

2.5. Functional Requirements

- **User/Shop Registration**: The application should allow users to create an account with their personal information and business information required usernames, phones , mails, passwords for depending upon scenario user or shop side
- **Have two sides user and register**: Users and shopkeeper have their separate accounts and allow to access their features
- **Have Access have features**: User should Place Order through ease, chat support, add products and all features
- **Image Process Text Continuation**: Uploaded Prescription should convert the image into text

- **Prescription Upload**: Users should be able to upload their prescription for verification and to place an order for medicines
- **Have two sides user and register**: Users and shopkeeper have their separate accounts and allow to access their features
- **Artificial Intelligence:** Chat With chat bot in a single application
- **Profile Management:** User and shopkeeper should update their profiles and business and also them
- **Product Management:** Shopkeeper should manage products should delete and view produces

2.6. Non-functional Requirements

- Performance
- Responsiveness
- Use-ability
- Security
- Documentation
- Availability

2.5.1. Performance Requirements

Response Times: Response and result should be fast user should not be in delay

Scalability: Should handle large number of users concurrently

Network efficacy: should be designed to consume minimize network usage

Load Handling: Should handle large number of customers registered more shopkeepers add more products application should not be crashed

2.5.2. Safety Requirements

- The application must ensure the privacy and security of user's personal and medical information
- Provided data will not get lost or misused in any case
- The application should adhere to regulatory guidelines and standards related to online medicine sales and delivery.

2.5.3. Security Requirements

- Saving previous orders
- Saving bills record
- Saving online bank card info

 Saving personal record

2.5.4. Usability

Requirements

- **Accuracy:**

  The correctness of data inputs to the system was ensured

Availability:

Medi-World will be available on play store

Efficiency:

AI/Image processing is used to give more efficiency to the system

- **Privacy**

  Confidentiality of data is most important thing

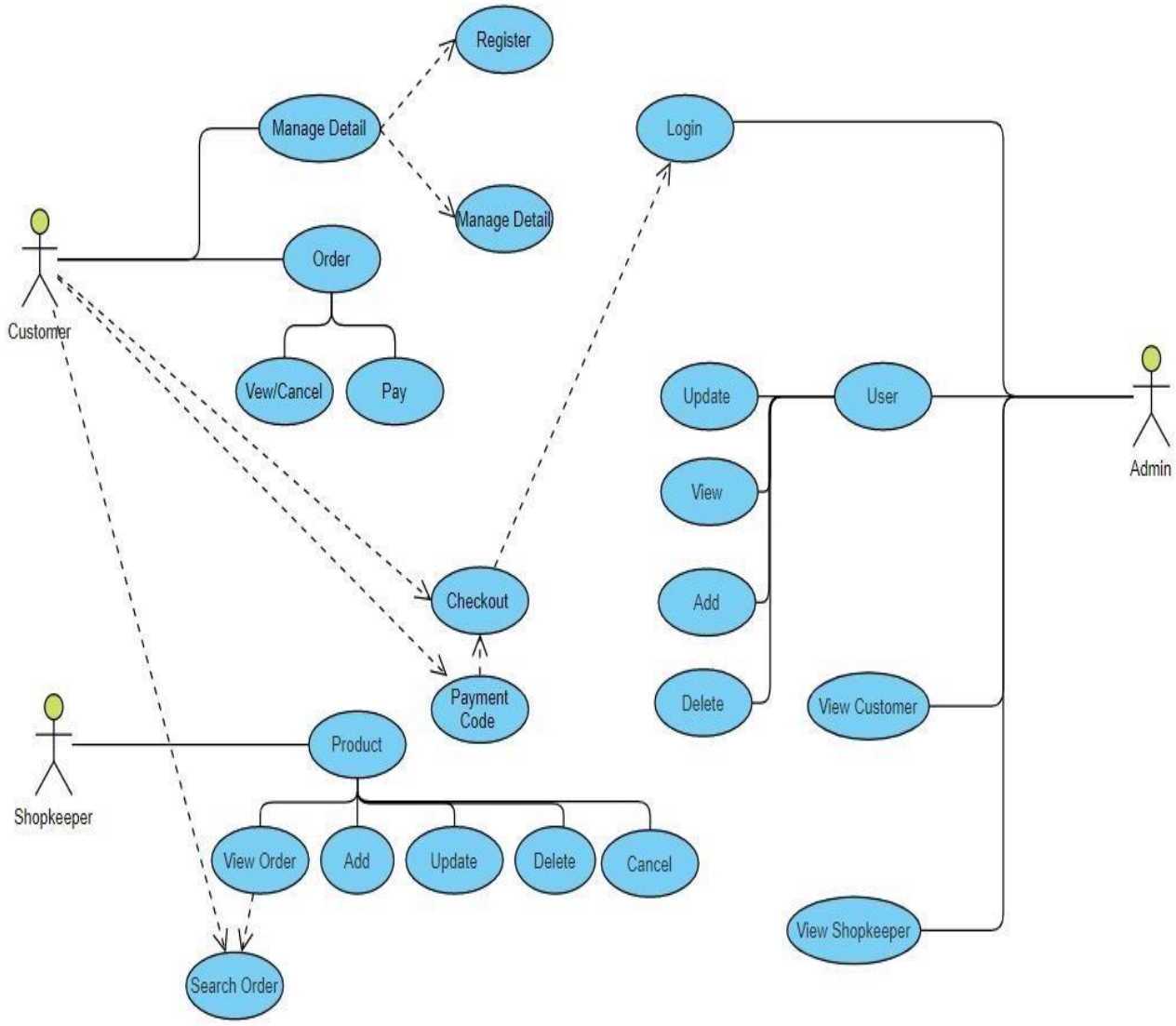
Chapter 3
Use Case Analysis

Chapter 3: Use Case Analysis

The use case is a written description of how the user will perform tasks in our application.

In this use case the diagram represents sequence of steps so that anyone can determine the flow of the application use case diagram.

3.1. Use Case Model



3.2. Use Cases Description

4. **Use Case Id:** 02	**Use Case Name:** Login Admin
Priority: High	
Actors: Admin	
Use Case Summary	System will login the admin.
Pre-Condition	Admin should be registered.

Normal Course of Events	**Alternative Paths**
The use case starts when the admin wants to login.	
Admin shall press the login button.	
The system shall ask for valid login username and password.	
	If user name or password is incorrect system will ask to provide the correct id and password.
System shall login the admin.	
This use case ends.	

Post Condition
Admin logged in successfully.

UC-02 Add User

Use Case Id: 02	**Use Case Name:** Add User
Priority: Medium	
Actors: Admin	
Use Case Summary	System will allow the admin to add user.
Pre-Condition	Admin should be logged in.

Normal Course of Events	**Alternative Paths**

The use case starts when the admin wants to add a new user.	
Admin shall press the add user button.	
Add user form shall display.	
The admin shall fill the form and shall press the button add user.	
This use case ends.	
Post Condition	
User added successfully	

UC-03 Update User

Use Case Id: 03	**Use Case Name:** Update User
Priority: Medium	
Actors: Admin	
Use Case Summary	System will allow the admin to update user.
Pre-Condition	Admin should be logged in.
Normal Course of Events	**Alternative Paths**
The use case starts when the admin wants to edit user.	
Admin shall press the edit button.	
The admin shall update the user information.	
This use case ends.	
Post Condition	
User updated successfully	

UC-
04 Delete Product

Use Case Id: 04	**Use Case Name:** Delete User
Priority: Medium	
Actors: Admin	
Use Case Summary	System will allow the admin to delete user.
Pre-Condition	Admin should be logged in.

Normal Course of Events	**Alternative Paths**
The use case starts when the admin wants to delete user.	
Admin shall press the delete product button.	
This use case ends.	
Post Condition	
User deleted successfully	

UC-05 View Users

Use Case Id: 05	**Use Case Name:** View Users
Priority: Medium	
Actors: Admin	
Use Case Summary	System will allow the admin to view users.
Pre-Condition	Users should be added in the system.

Normal Course of Events	**Alternative Paths**
The use case starts when the admin wants to view user details.	
Users will be shown to the admin.	
This use case ends.	
Post Condition	
Admin viewed users successfully.	

UC-06 View Customers

Use Case Id: 06	**Use Case Name:** View Users
Priority: Medium	
Actors: Admin	
Use Case Summary	System will allow the admin to view customers.
Pre-Condition	Customer should be registered in the system.

Normal Course of Events	**Alternative Paths**
The use case starts when the admin wants to view customer details.	
Customer's data will be shown to the admin.	
This use case ends.	
Post Condition	
Admin viewed customers successfully.	

UC-07 View Shopkeepers

Use Case Id: 07	**Use Case Name:** View Shopkeepers
Priority: Medium	
Actors: Admin	
Use Case Summary	System will allow the admin to view shopkeepers.
Pre-Condition	Shopkeeper should be registered in the system.

Normal Course of Events	**Alternative Paths**
The use case starts when the admin wants to view shopkeeper details.	
Shopkeeper data will be shown to the admin.	
This use case ends.	
Post Condition	
Admin viewed shopkeepers successfully.	

UC-

08 Register Customer

Use Case Id: 08	**Use Case Name:** Register Customer
Priority: High	
Actors: Customer	
Use Case Summary	System will register the customer.
Pre-Condition	Customer shall request for registration.

Normal Course of Events	**Alternative Paths**
The use case starts when the customer wants to register himself on App,	
Customer shall press the register button.	
The system shall ask for information.	
System shall register the customer.	
This use case ends.	
Post Condition	
Customer successfully registered.	

UC-09 Login Customer

Use Case Id: 09	**Use Case Name:** Login Customer
Priority: High	
Actors: Customer	
Use Case Summary	System will login the customer.
Pre-Condition	Customer should be registered.

Normal Course of Events	**Alternative Paths**
The use case starts when the customer wants to login.	

Customer shall press the login button.	
The system shall ask for valid login user name and password.	If user name or password is incorrect system will ask to provide the correct id and password.
System shall login the customer.	
This use case ends.	
Post Condition	
Customer logged in successfully.	

UC-10 Register Shopkeeper

Use Case Id: 10	**Use Case Name:** Register Shopkeeper
Priority: High	
Actors: Shopkeeper	
Use Case Summary	System will register the shopkeeper.
Pre-Condition	Shopkeeper shall request for registration.
Normal Course of Events	**Alternative Paths**
The use case starts when the shopkeeper wants to register himself on App.	
Shopkeeper shall press the register button.	
The system shall ask for information.	
System shall register the shopkeeper.	
This use case ends.	
Post Condition	
Shopkeeper successfully registered.	

UC-

11 Login Shopkeeper

Use Case Id: 11	**Use Case Name:** Login Shopkeeper
Priority: High	
Actors: Shopkeeper	
Use Case Summary	System will login the shopkeeper.
Pre-Condition	Shopkeeper should be registered.

Normal Course of Events	**Alternative Paths**
The use case starts when the shopkeeper wants to login.	
Shopkeeper shall press the login button.	
The system shall ask for valid login user name and password.	If user name or password is incorrect system will ask to provide the correct id and password.
System shall login the shopkeeper.	
This use case ends.	

Post Condition
Shopkeeper logged in successfully.

UC-12 Add Product

Use Case Id: 12	**Use Case Name:** Add Product
Priority: High	
Actors: Shopkeeper	
Use Case Summary	System will allow the shopkeeper to add product.
Pre-Condition	Shopkeeper should be logged in.

Normal Course of Events	**Alternative Paths**

The use case starts when the shopkeeper wants to add product.	
Shopkeeper shall press the add product button.	
Add product page shall display.	
The shopkeeper shall fill the form and shall press the button add product.	
This use case ends.	
Post Condition	
Product added successfully	

UC-13 Update Product

Use Case Id: 13	**Use Case Name:** Update Product
Priority: High	
Actors: Shopkeeper	
Use Case Summary	System will allow the shopkeeper to update product.
Pre-Condition	Shopkeeper should be logged in.
Normal Course of Events	**Alternative Paths**
The use case starts when the shopkeeper wants to edit product.	
Shopkeeper shall press the edit product button.	
The shopkeeper shall update the product information.	
This use case ends.	
Post Condition	

UC-

Product updated successfully

14 Delete Product

Use Case Id: 14	**Use Case Name:** Delete Product
Priority: High	
Actors: Shopkeeper	
Use Case Summary	System will allow the shopkeeper to delete product.
Pre-Condition	Shopkeeper should be logged in.

Normal Course of Events	**Alternative Paths**
The use case starts when the shopkeeper wants to delete product.	
Shopkeeper shall press the delete product button.	System will ask the shopkeeper do he really want to delete product or not
This use case ends.	
Post Condition	
Product deleted successfully	

UC-15 View Product

Use Case Id: 15	**Use Case Name:** View Product
Priority: High	
Actors: Shopkeeper	
Use Case Summary	System will allow the shopkeeper to view product.
Pre-Condition	Shopkeeper should be logged into the system.

Normal Course of Events	**Alternative Paths**
The use case starts when the shopkeeper wants to view products.	
Number of products will be shown to the shopkeeper.	
This use case ends.	
Post Condition	

Shopkeeper viewed products successfully.

UC-16 View Payments

Use Case Id: 16	**Use Case Name:** View Product

Priority: High	
Actors: Shopkeeper	
Use Case Summary	System will allow the shopkeeper to view payment details.
Pre-Condition	Shopkeeper should be logged into the system.

Normal Course of Events	**Alternative Paths**
The use case starts when the shopkeeper wants to view payment details	
Payment data will be shown to the shopkeeper.	
This use case ends.	

Post Condition
Shopkeeper viewed payment details successfully.

UC-17 View Product

Use Case Id: 17	**Use Case Name:** View Product
Priority: High	
Actors: Customer	
Use Case Summary	System will allow the customer to view product.
Pre-Condition	Products should be added in the system.

Normal Course of Events	**Alternative Paths**
The use case starts when the customer visits the App.	
Number of products will be shown to the customer.	
This use case ends.	

UC-

Post Condition
Customers viewed products successfully.

UC-18 Add To Cart

Use Case Id: 18	**Use Case Name:** Add to Cart
Priority: High	

Actors: Customer	
Use Case Summary	System will allow the customer to add products into cart.
Pre-Condition	Products should be added in the system.

Normal Course of Events	**Alternative Paths**
The use case starts when the customer wants to buy product.	
Customer shall press add to cart button.	
Product details page will be show.	
Customer will select the desired quantity of the product and press add to cart button.	
This use case ends	
Post Condition	
Product added into cart successfully.	

UC-19 Add To Cart

UC-20 Search Product

Use Case Id:21	**Use Case Name:** Search Product
Priority: High	
Actors: Customer	
Use Case Summary	System will allow the customer to search the product.
Pre-Condition	

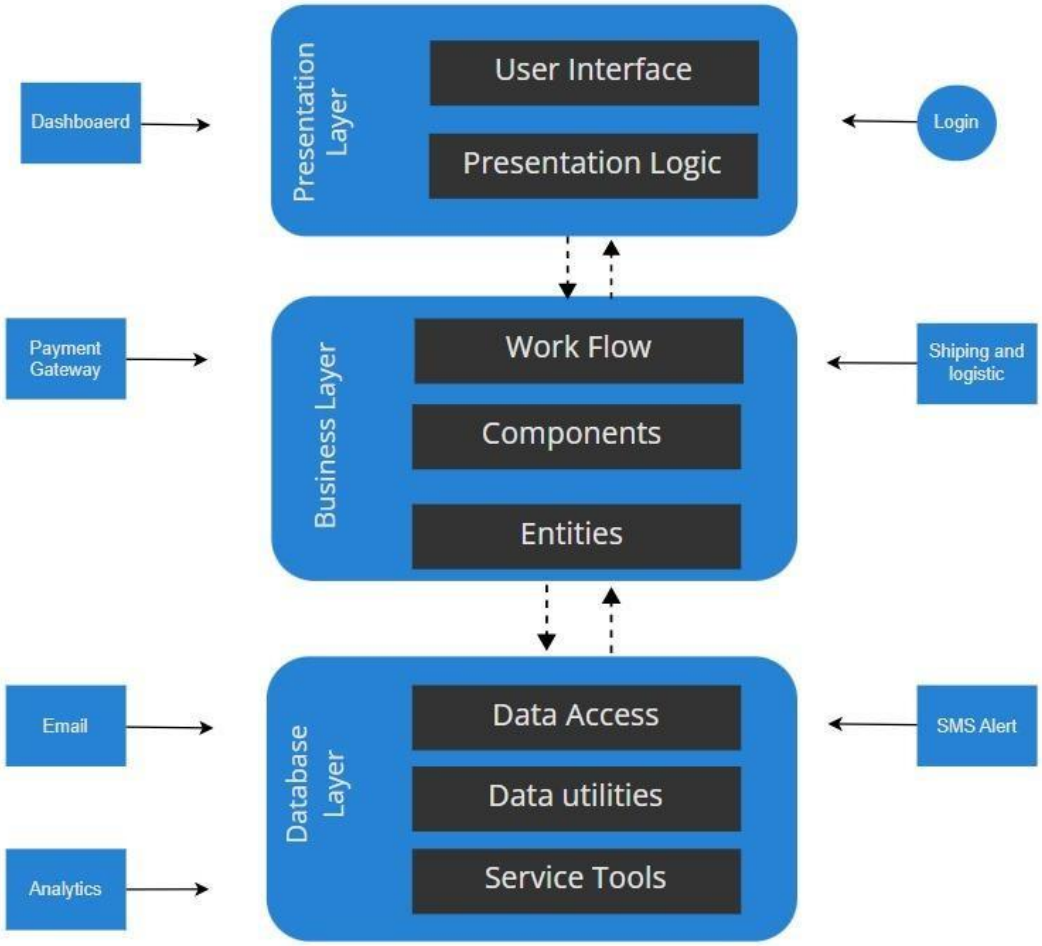
Normal Course of Events	**Alternative Paths**
The use case starts when the customer wants to search product.	
Customer shall enter name of product in search box.	
Customer shall press search button after entering name of the product	If name of product not added system will ask to enter the name of product.
This use case ends	

Post Condition
System display the products or “Product not found” if the system could not find products.

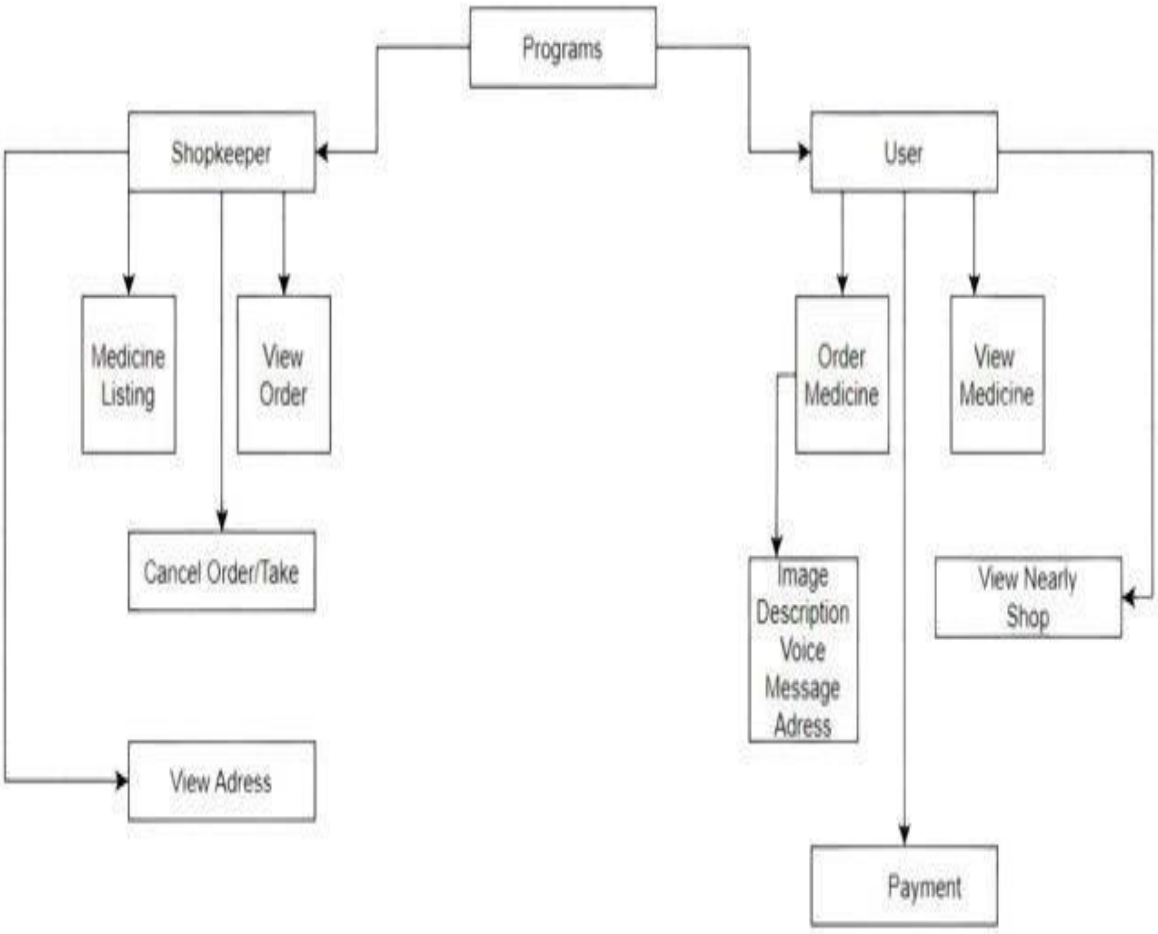
Chapter 4
System Design

Chapter 4: System Design

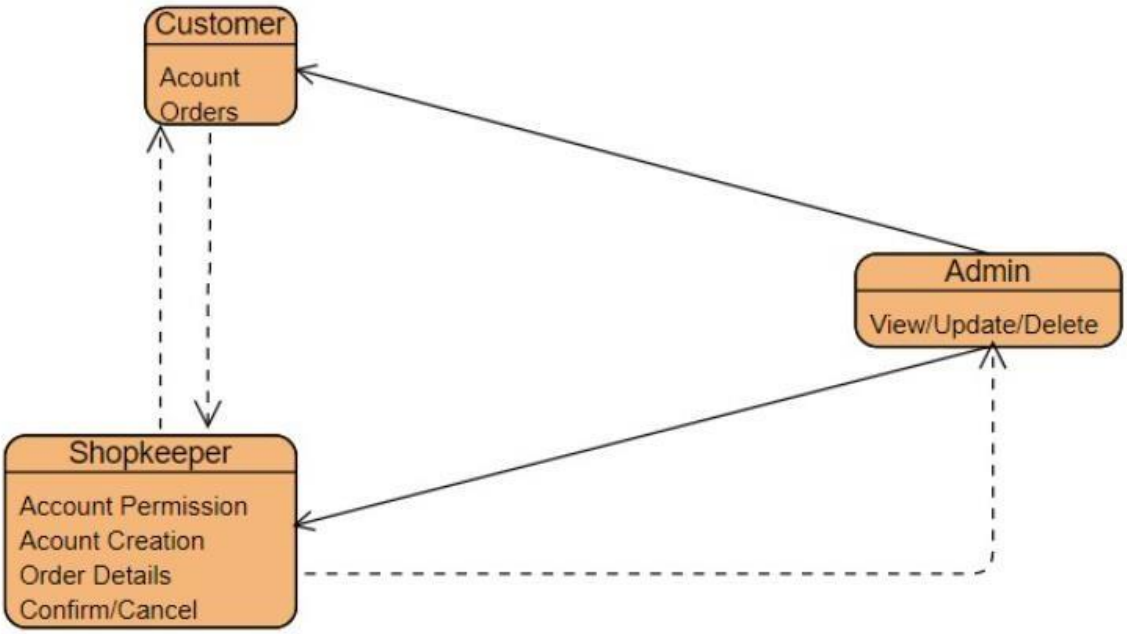
4.1. Architecture Diagram



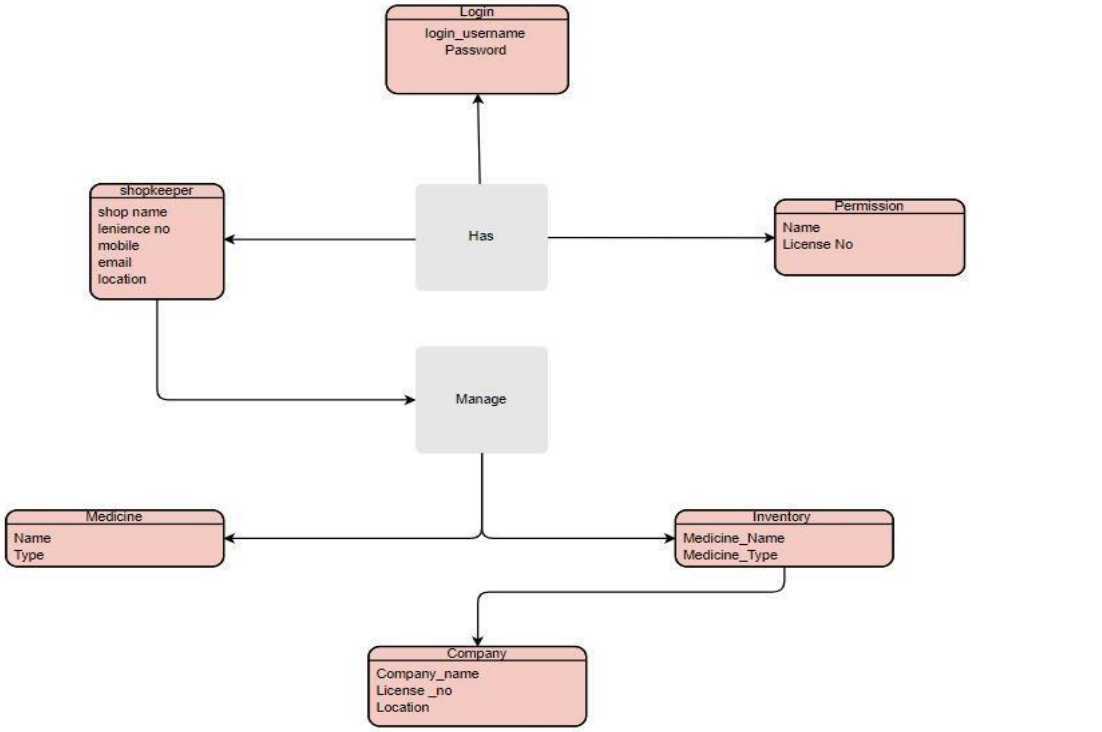
4.2. Domain Model



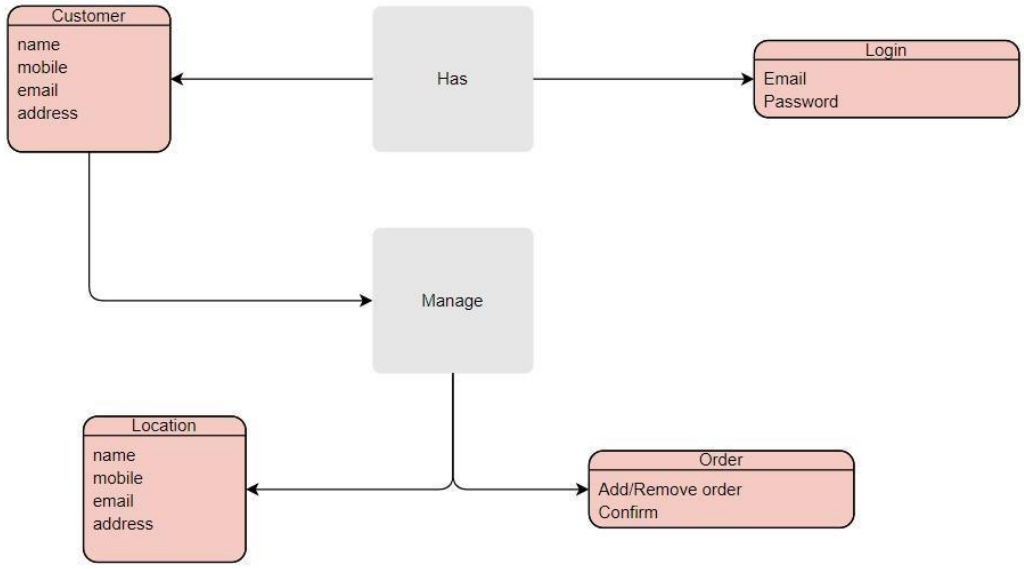
4.3. Entity Relationship Diagram with data dictionary



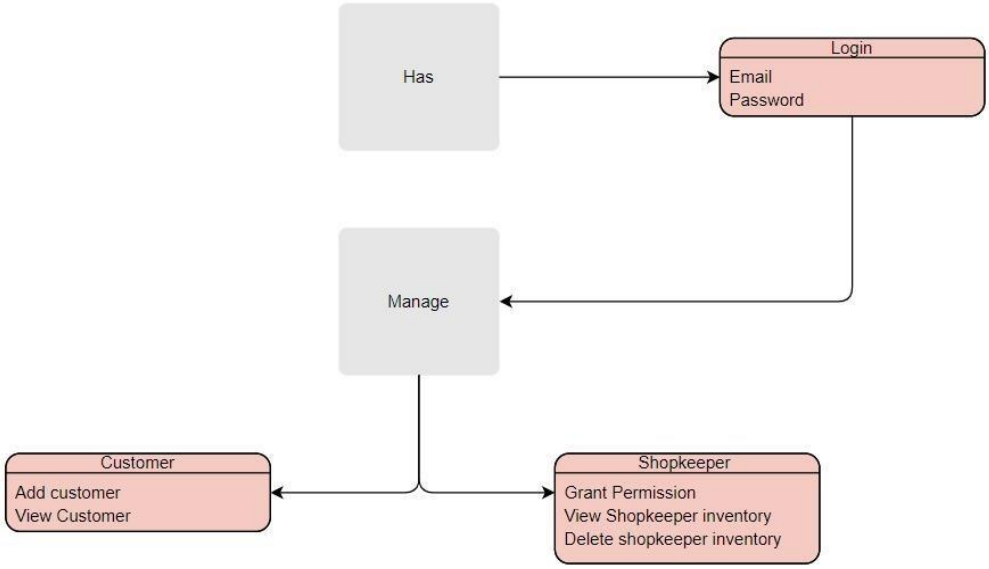
With respect to Shopkeeper:



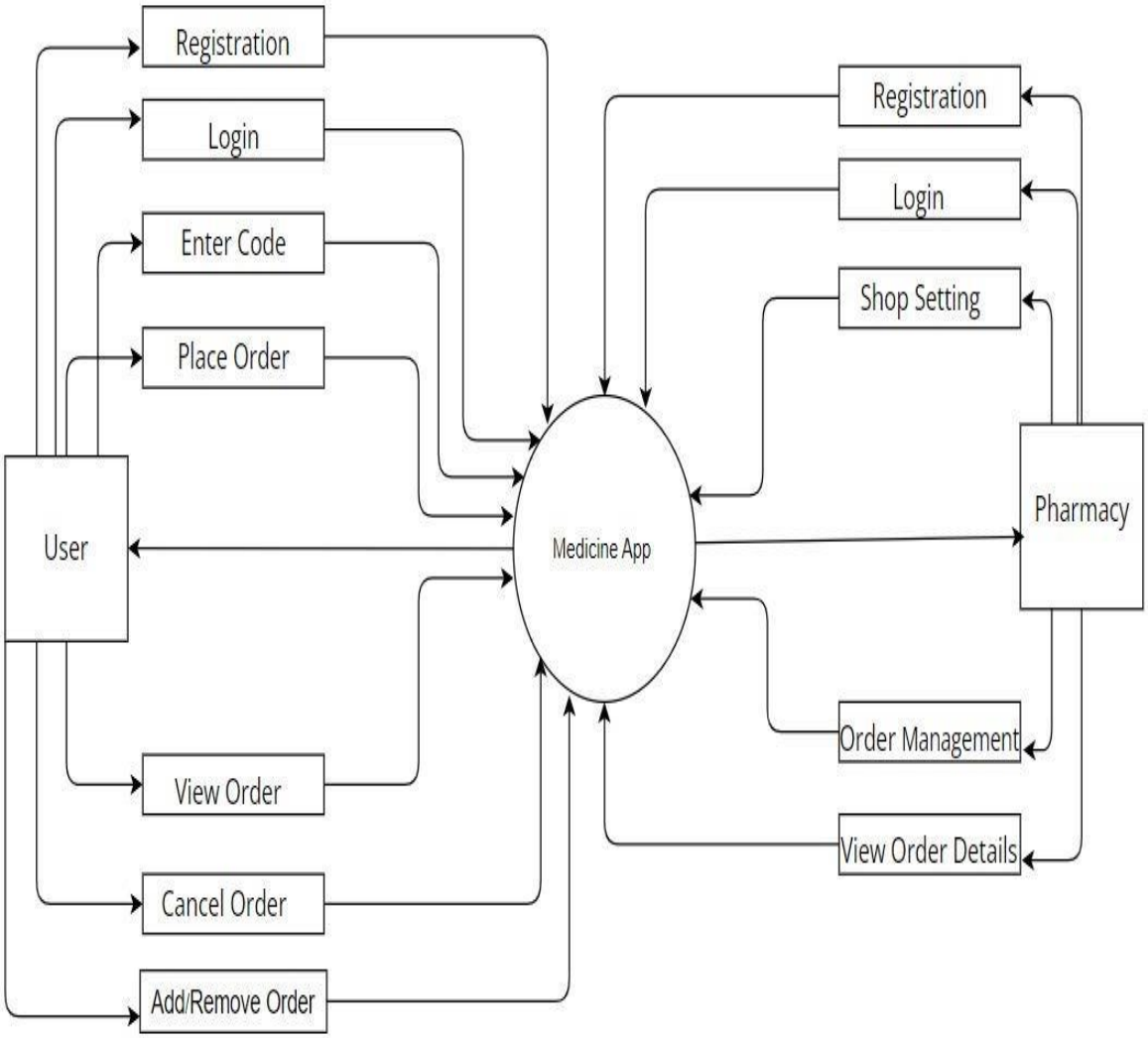
With respect to Customer:



With respect to Admin:

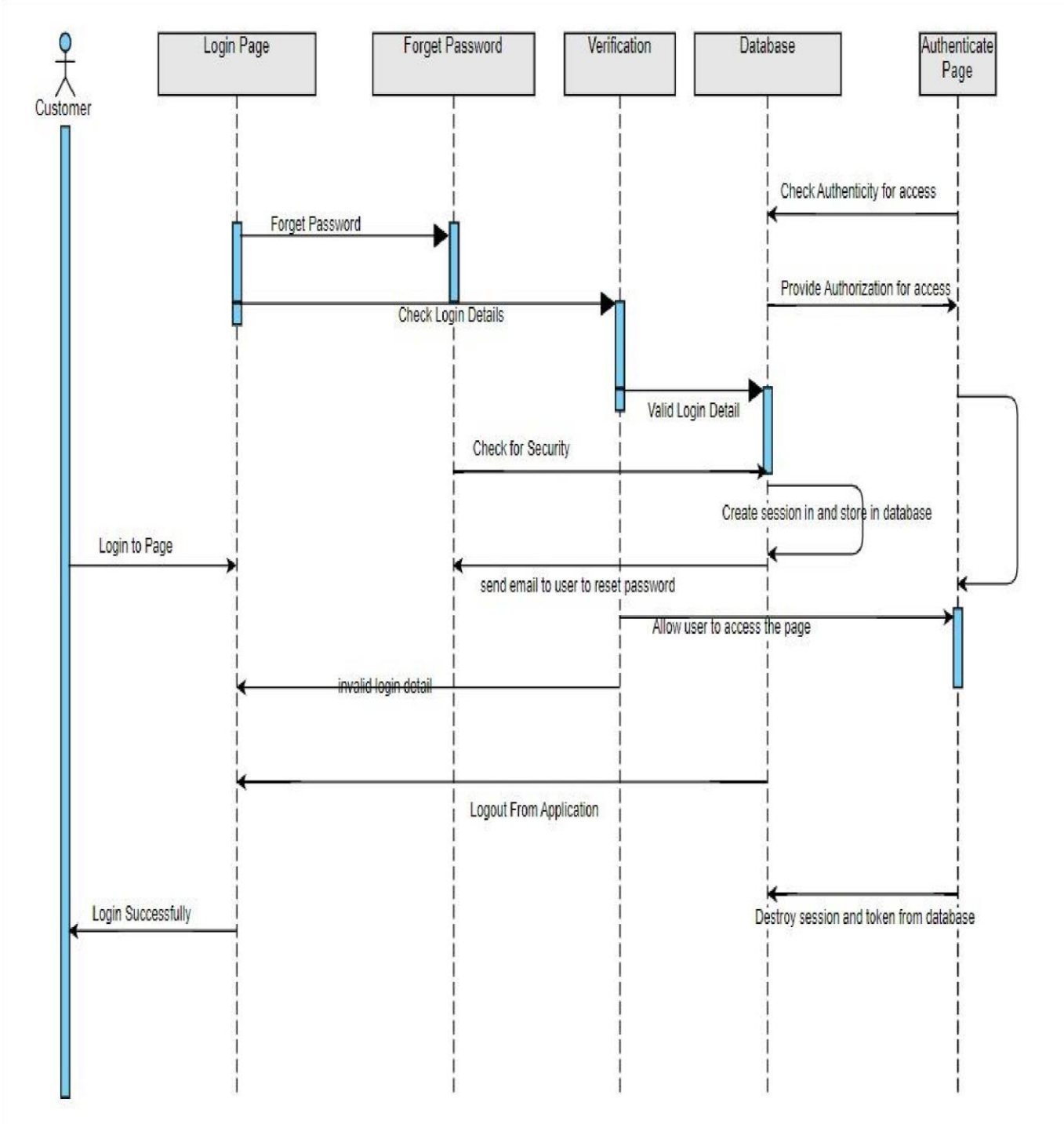


4.4. Class Diagram

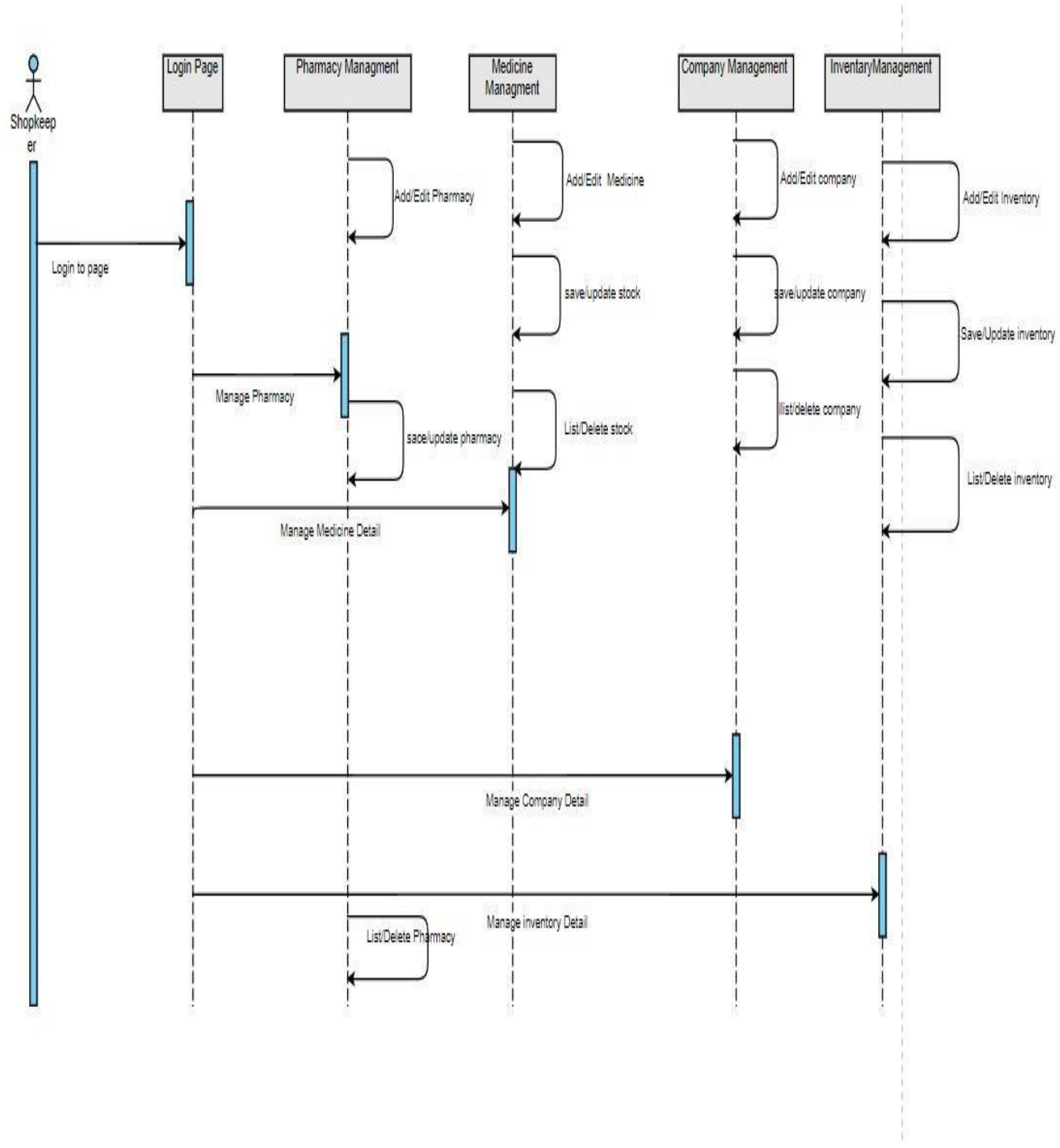


4.5. Sequence / Collaboration Diagram

wrt Customer:



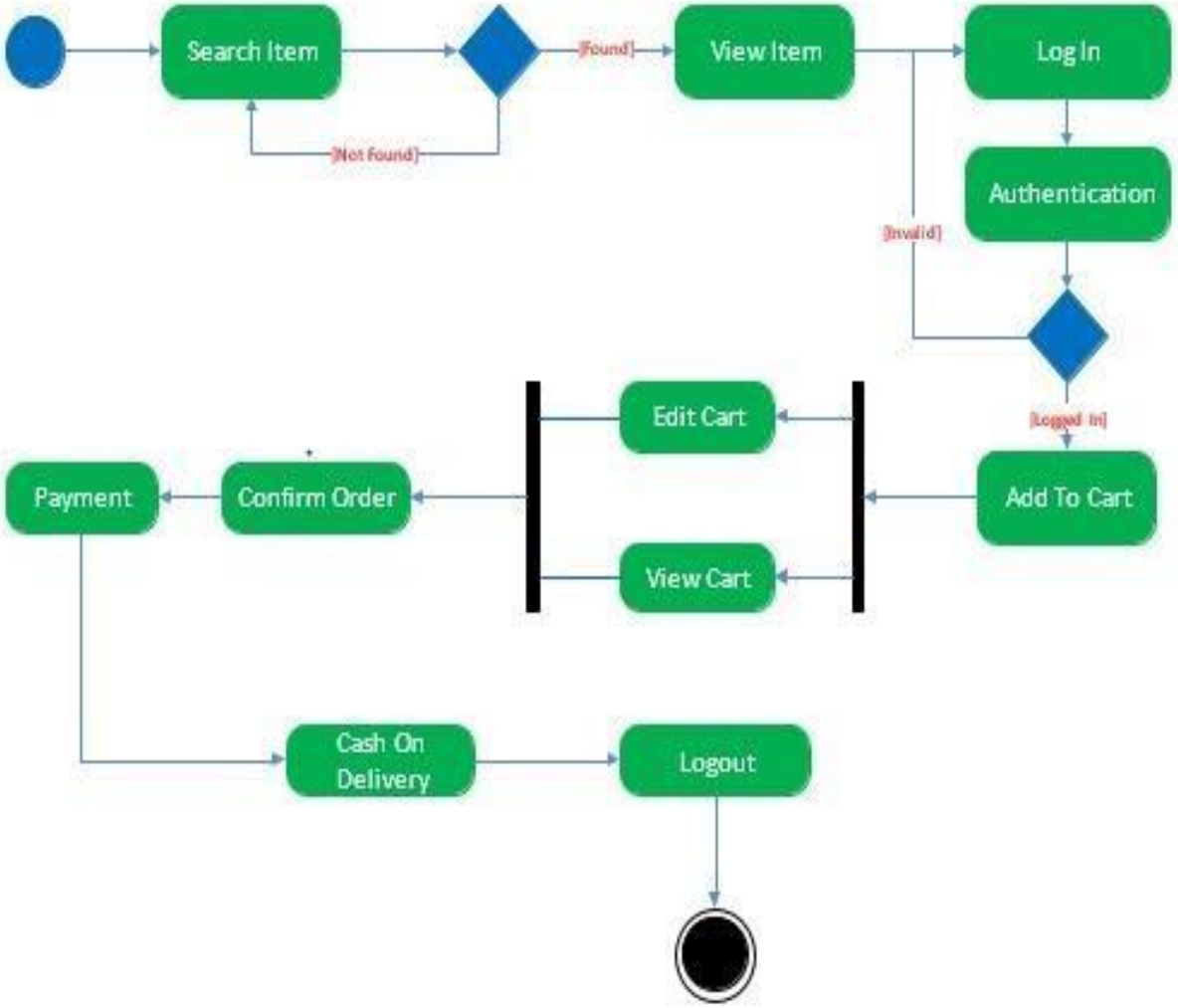
With respect to Shopkeeper:



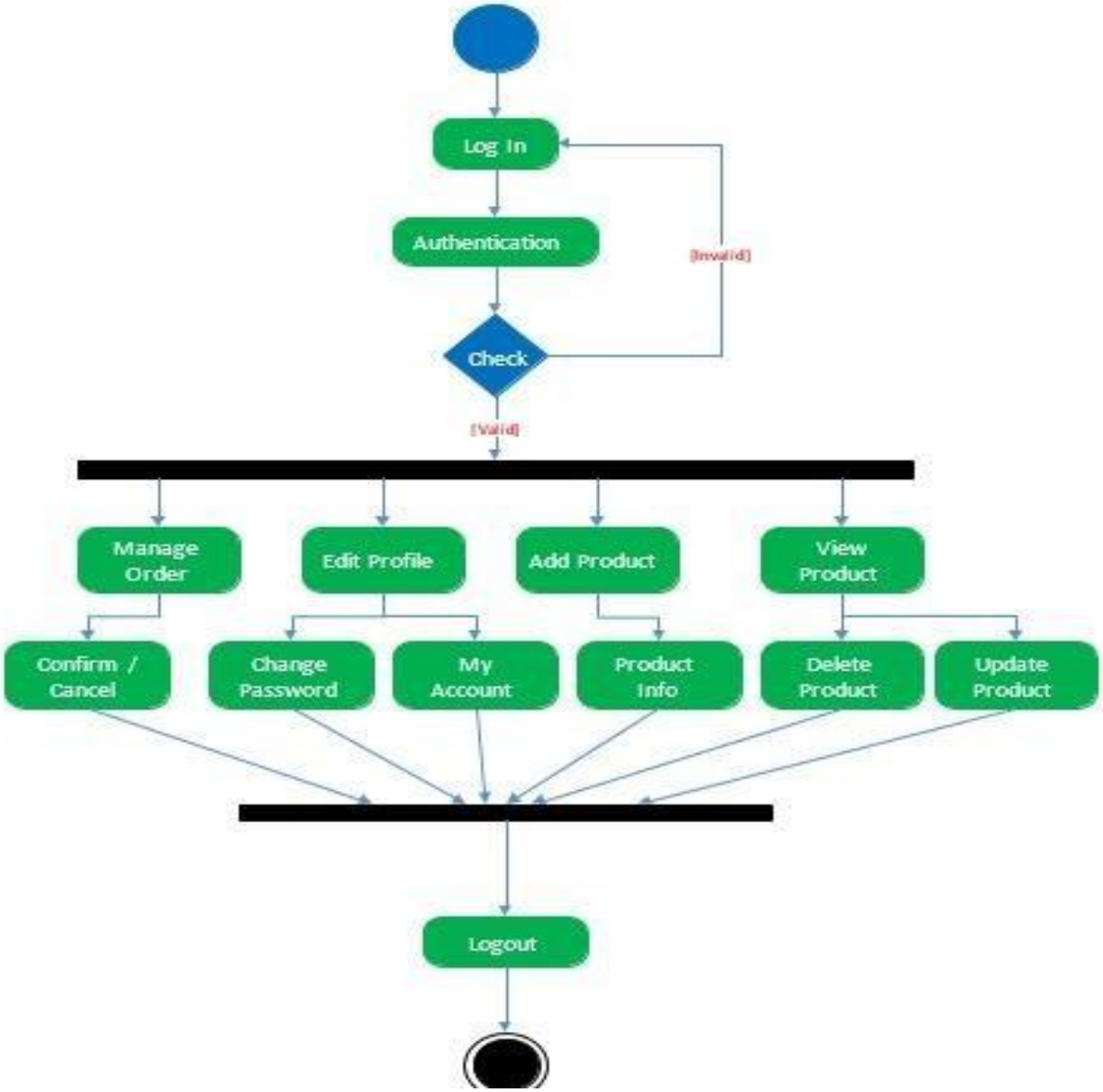
4.6. Operation contracts

4.7. Activity Diagram

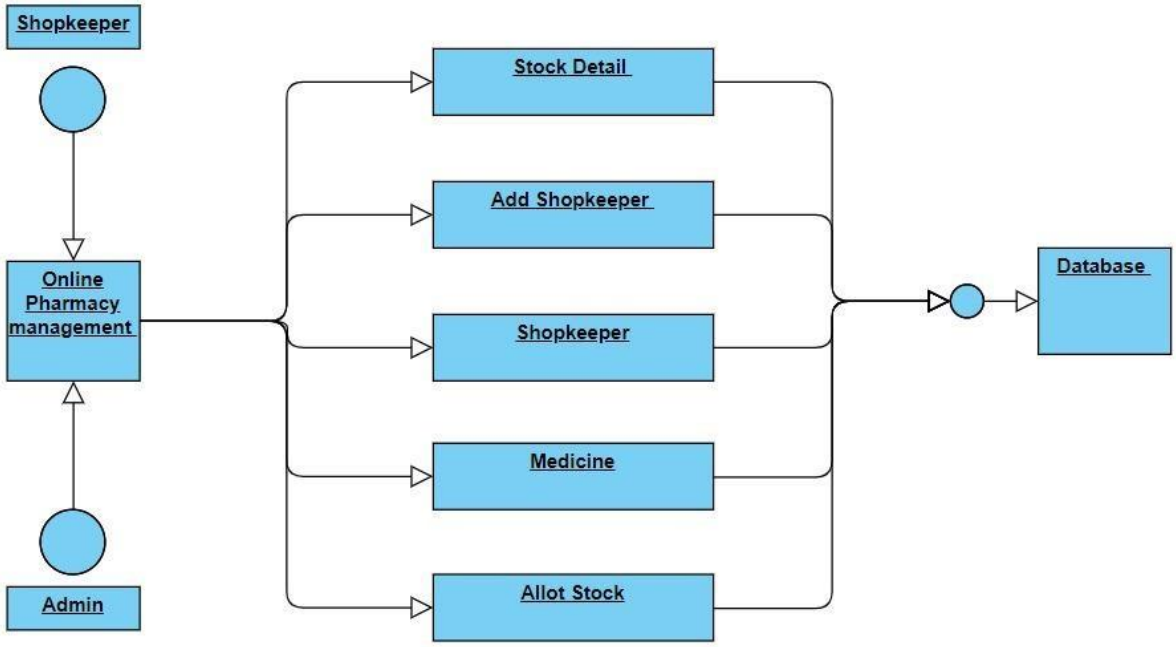
With respect to Customer:



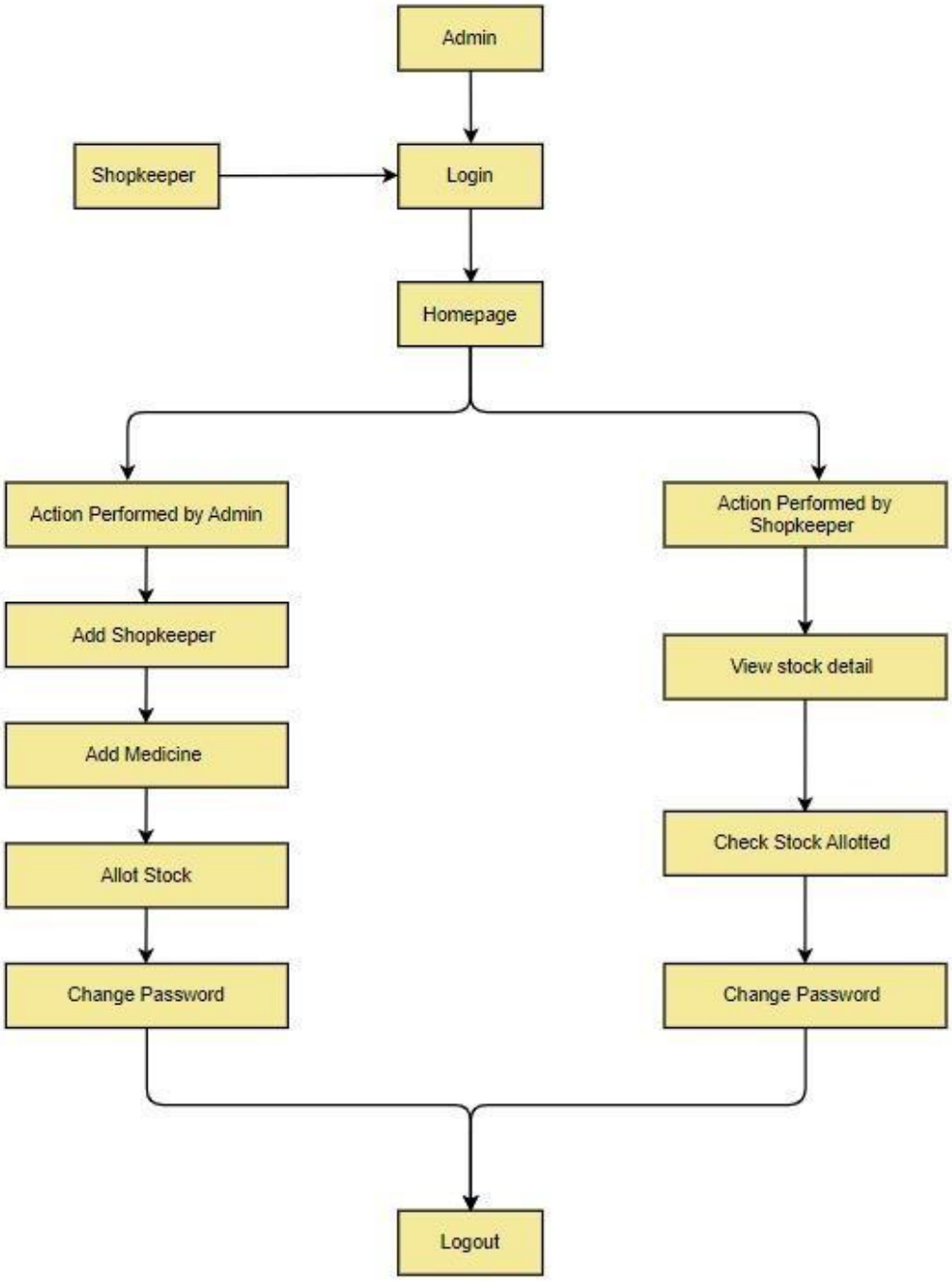
With respect to Shopkeeper:



4.8. Component Diagram



4.9. Data Flow diagram



Chapter 5
Implementation

Chapter 5: Implementation

5.1. Important Flow Control/Pseudo codes

Here is the flow control of the project

User Side	Shop Side

User Registration:
 	
OnSignUpButtonClick():
DisplayRegistrationForm()
OnFormSubmit():
if ValidateRegistrationForm():
CreateNewUserAccount()
else:
DisplayErrorMessage()
 	
Shop Login:
 	
OnSignUpButtonClick():
DisplayRegistrationForm()
OnFormSubmit():
	Shop Registration:
	
	OnSignUpButtonClick():
	DisplayRegistrationForm()
	OnFormSubmit():
	if ValidateRegistrationForm():
	CreateNewUserAccount()
	else:
	DisplayErrorMessage()
	
	Shop Login:
	
	OnSignUpButtonClick():
	DisplayRegistrationForm()
	OnFormSubmit():

Prescription Upload: OnPrescriptionUpload() DisplayPrescriptionUploadOptions() OnFileSelect() if FileIsImage(): ProcessImageToText() DisplayExtractedText() OnTextConfirmation() if TextConfirmed(): SavePrescriptionDetails() else DisplayManualCorrectionOption() else: DisplayErrorMessage()	**Add Product:** OnBrowseButtonClick() FetchProductListFromDatabase() DisplayProductList() OnProductSelect(product): FetchProductDetails(product) DisplayProductDetails(product)

Place Order:	**View Order Requests:**
OnPlaceOrderClick(): CreateOrder(orderDetails) ProcessPayment(orderDetails.paymentMethod) SendOrderRequest(orderDetails) DisplayOrderConfirmation()	OnOrderRequestsView(): FetchOrderRequests() DisplayOrderRequests() OnOrderRequestSelect(order): DisplayOrderDetails(order) OnAcceptOrderClick(): AcceptOrder(order) OnRejectOrderClick(); RejectOrder(order)

5.2. Components and Libraries

- **Language**: Java and Xml
- **UI**: XML and third part libraries
- **Database**: Firebase
- **Libraries**: Android Navigation Jetpack and third-party libraries from GitHub for android, google maps firebase and volley libraries

5.3. Deployment Environment

- **Backend**: Java Language Firebase Services
- **Database**: Firebase for all data SQL lite for some values
- **IDE:** Android Studio and for Testing Real-time Mobile devices

5.4. Tools and Techniques

Tools:

- Android Studio for development
- MS Word for documentation

Techniques:

- Artificial Intelligence.
- Machine Learning.
- Image Processing.

5.5. Best Practices / Coding Standards 5.6. Version Control

- Android Studio-2021.3.1.17 -2023
- MS office 2019
- Android 9 pie

Chapter 6

Testing and Evaluation

6.1. Use Case Testing

Use Case 1: User Registration/Shop Register

Description: Test the registration process for new users.

Steps:

- Open the e-medicine application.
- Click on the "Sign Up" button.
- Enter valid personal information and credentials in the registration form.
- Click on the "Register" button.
- Expected Result: User account is created successfully, and the user is redirected to the login page

Use Case 2: Placing an Order with Prescription

Description: Test the process of placing an order for medicines.

Steps:

- Log in to the e-medicine application using valid credentials.
- Upload Prescription and Image should convert to text.
- And place order by proceed button

Use Case 3: Placing an Order on Products with desired Products

Description: Test the process of placing an order for medicines.

Steps:

- Log in to the e-medicine application using valid credentials.
- Select your desired pharmacy.
- Place an order to desired pharmacy with your selected products

Use Case 4: Chat with AI

Description: Test the process off chat with AI chat bot.

Steps:

- Log in to the e-medicine application using valid credentials.
- Enter your question Edit text

- Expected Result: It should be desired reply on the basis of model

Use Case 5: Chat between user and shopkeeper

Description: Test the process of chat between user and shopkeeper.

Steps:

- Log in to the e-medicine application using valid credentials.
- Go to pharmacies screen and selected your chat pharmacy/customer you want to chat
- It should be message should be sent to desired shopkeeper/customer

Use Case 6: Profile and Business Update and Passwords updates

Description: Test the updating of Real-time profiles of user and shopkeeper both.

Steps:

- Log in to the e-medicine application using valid credentials.
- Go to profile user/shopkeeper and update information both
- Expected Result: Profile Updated Successfully

Use Case 7: Product Add Testing

Description: Test the Shopkeeper product adding process.

Steps:

- Log in to the e-medicine application as shopkeeper using valid credentials.
- Go to add products and add product information (name, image, price etc.).
- Expected Result: Product should add successfully and viewed later

6.2. Equivalence partitioning

User Registration:

- Valid partitions: Valid email address, valid password
- Invalid partitions: Invalid email address, weak password, missing required fields

Prescription Upload:

- Valid: Image should be upload through camera or gallery should be valid JPEG, PNG not gift or other
- Invalid: Unsupported Image support Should be Invalid

User Authentication:

- Valid: Correct username and password combination for registered users, granting access to the application.
- Invalid: Incorrect username or password, unregistered user account.

Chat Bot Support:

- Valid: Properly formatted user queries or concerns, receiving appropriate responses from the chatbot or support staff.
- Invalid: Invalid or incomplete user queries, unexpected or incorrect responses.

Data flow testing

User Registration Data Flow:

Input: User provides personal information and registration details.

Process: The application validates and processes the user registration data.

Output: User registration data is stored in the database and a new user account is created.

Prescription Upload Data Flow:

Input: User uploads a prescription image.

Process: The application processes the image, extracts text using Firebase ML OCR(Optical Character Recognition) technology.

Output: Extracted prescription text is stored and associated with the user's order.

Order Placement Data Flow:

Input: User selects medicines, quantities, and provides delivery details.

Process: The application verifies the availability of medicines, calculates the total order amount, and processes the payment.

Output: Order details are stored in the database, and a confirmation is sent to the user.

Chat Data Flow:

Input: User sends a message or query.

Process: The application routes the message to the appropriate chatbot or support staff.

Output: Response or resolution is generated and sent back to the user.

Profile and Business Update Data Flow:

Input: User/shopkeeper updates personal or business information.

Process: The application validates and updates the user/shopkeeper profile data.

Output: Updated profile information is stored in the database and reflected in the user/shopkeeper's profile.

Product Add Data Flow:

Input: Shopkeeper provides product details (name, image, price, etc.

Process: The application validates and adds the product information to the database.

6.3. Unit testing

User Registration Unit Test:
Test Case: Verify that a new user account is created successfully.
Input: Valid user registration details.
Expected Output: User account is created and stored in the database.
Prescription Processing Unit Test:
Test Case: Validate the conversion of an image prescription to text.
Input: Prescription image file.
Expected Output: Extracted text matches the expected prescription details.
Chatbot Unit Test:

Test Case: Verify the accuracy of chatbot responses.
Input: Various user queries or messages.
Expected Output: Chatbot generates appropriate and relevant responses.
Profile Update Unit Test:
Test Case: Validate the updating of user/shopkeeper profile information.
Input: New profile details.
Expected Output: User/shopkeeper profile is updated with the new information.
Product Addition Unit Test:
Test Case: Ensure the successful addition of a new product by a shopkeeper.
Input: Product details (name, image, price, etc.).
Expected Output: New product is added and stored in the product database.

6.4. Integration testing

User Registration and Login Integration Test:

- Verify that the registration module and login module work together seamlessly.
- Test the flow from user registration to successful login.

Prescription Upload and Processing Integration Test:

- Test the integration between the prescription upload module and the image processing module

Chatbot Integration Test:

- Test the integration between the Chatbot module and the user interface.
- Verify that the chatbot responds appropriately to user queries.

User and Shopkeeper Profile Integration Test:

- Test the integration between the user profile module and the shopkeeper profile module.
- Verify that profile information is updated correctly for both users and shopkeepers.

Product Management Integration Test:

- Test the integration between the product management module and the user interface.
- Verify that products can be added, viewed, and managed by the shopkeepers.

Chapter 7

Summary, Conclusion and Future Enhancements

Chapter 7: Summary, Conclusion & Future Enhancements

7.1. Project Summary

The main purpose of Medi-World mobile app is to innovate the field of Pharmacy, so that no one will not have to go to the pharmacy. Person can order, reorder, exchange and return medicines with ease. This mobile app will have all the previous features and new add-on well.

This app will come with main features of:

- AI/Image processing
- Order
- Reorder
- History
- Chat with Shopkeeper
- Manage inventor
- Separate accounts of Shopkeeper and user
- Online payment
- AI Doctor
- SMS/Email Alert
- Password authentication

7.2. Achievements and Improvements

As we talk about improvements the login process is now much smoother for both customer and shopkeeper. Shopkeeper don't have to wait for days to get verified. It will be done in a day with a call. Adding chat feature in the order process so that shopkeeper and user can add chat freely and take information from both ends.

7.3. Critical Review

As the world entered the 21st century, business took off on the Internet with increasingly dynamic and highly competitive features. The proposed E-Marketing model here is an E-Commerce portal for online medicine trading app providing customers the list of nearby medical shops where the particular medicine is available and also online purchasing facility for that medicine. This model is basically proposing a new idea in E-marketing to supply medicines online. The purpose behind making such E-Commerce app providing customers a 24*7 availability of medicines. The shopkeepers will register over the portal and will let their medicine to be sold online. This will play a very important role in providing rare medicines at remote places where there is unavailability of medicine. As of 2022 there is only one Medicine App that can allow you to purchase medicine through a mobile application. But they have limited restrictions. As you have to wait for the response call to conform your order. And you cannot pay online. You also have to pay delivery fee which is the main reason people doesn't like to order things

7.4. Lessons Learnt

- Be consistent
- Teamwork is the key to success
- Time management is very Important
- Building a full fledge app take a lot of work determination and time
- You at least have 5 to 7 members to make such apps
- Update code time to time
- All members working on project have same kind of system with same updates

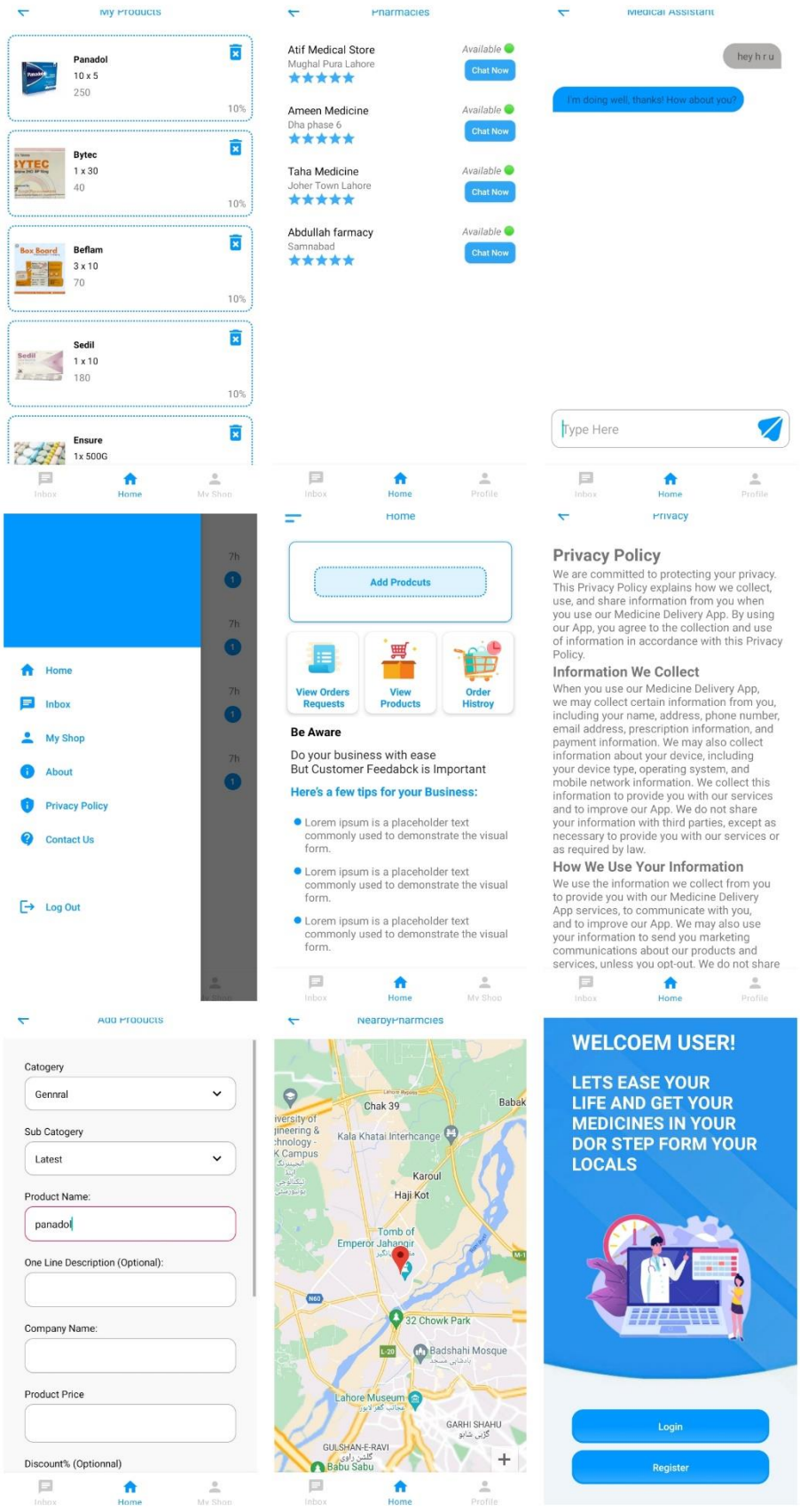
7.5. Future Enhancements/Recommendations

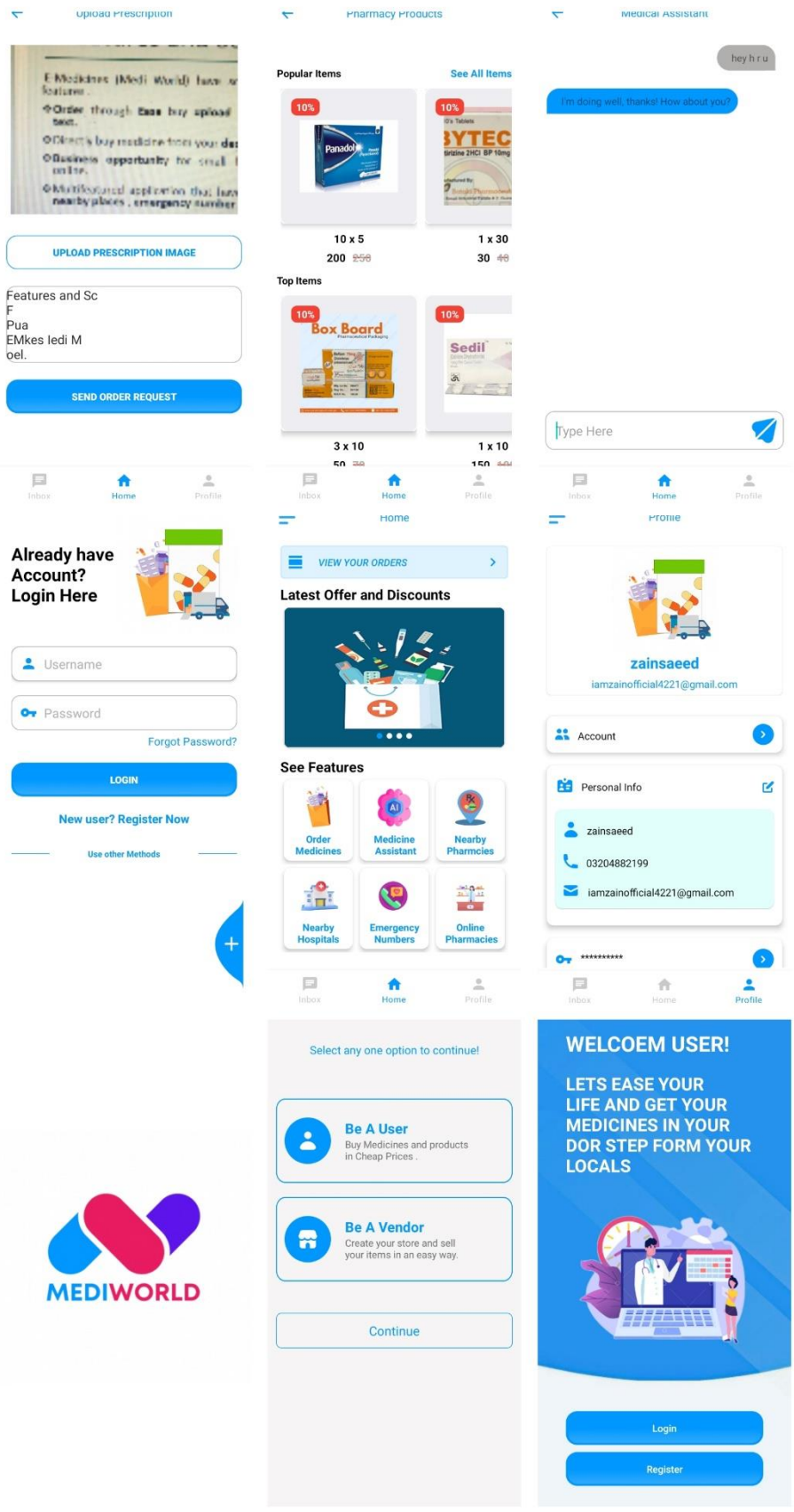
- Multi-level Marketing
- Proper support of AI Doctor
- Introducing online doctors in case of emergency you can contact them
- Proper Chat support
- Help/complain ceenter
- Wallet
- Online payment
- Guest mode
- History

Appendices

Appendix C: Information / Promotional Material

Flyer


My Products
Panadol
10 x 5
250
10%
Bytec
1 x 30
40
10%
Beflam
3 x 10
70
10%
Sedil
1 x 10
180
10%
Ensure
1x 500G
Inbox
Home
My Shop
Pharmacies
Atif Medical Store
Mughal Pura Lahore
Available
Chat Now
Ameen Medicine
Dha phase 6
Available
Chat Now
Taha Medicine
Joher Town Lahore
Available
Chat Now
Abdullah farmacy
Samnabad
Available
Chat Now
Profile
Medical Assistant
hey h r u
I'm doing well, thanks! How about you?
Type Here
Home
Inbox
My Shop
About
Privacy Policy
Contact Us
Log Out
Add Prodcuts
View Orders Requests
View Products
Order Histroy
Be Aware
Do your business with ease
But Customer Feedabck is Important
Here's a few tips for your Business:
Lorem ipsum is a placeholder text commonly used to demonstrate the visual form.
Lorem ipsum is a placeholder text commonly used to demonstrate the visual form.
Lorem ipsum is a placeholder text commonly used to demonstrate the visual form.
Privacy
Privacy Policy
We are committed to protecting your privacy. This Privacy Policy explains how we collect, use, and share information from you when you use our Medicine Delivery App. By using our App, you agree to the collection and use of information in accordance with this Privacy Policy.
Information We Collect
When you use our Medicine Delivery App, we may collect certain information from you, including your name, address, phone number, email address, prescription information, and payment information. We may also collect information about your device, including your device type, operating system, and mobile network information. We collect this information to provide you with our services and to improve our App. We do not share your information with third parties, except as necessary to provide you with our services or as required by law.
How We Use Your Information
We use the information we collect from you to provide you with our Medicine Delivery App services, to communicate with you, and to improve our App. We may also use your information to send you marketing communications about our products and services, unless you opt-out. We do not share
Add Products
Catogery
Gennral
Sub Catogery
Latest
Product Name:
panadol
One Line Description (Optional):
Company Name:
Product Price
Discount% (Optionnal)
Nearby Pharmcies
Chak 39
Babak
Kala Khatai Interchange
Karoul
Haji Kot
Tomb of Emperor Jahangir
32 Chowk Park
Badshahi Mosque
Lahore Museum
GARHI SHAHU
GULSHAN-E-RAVI
Babu Sabu
WELCOEM USER!
LETS EASE YOUR LIFE AND GET YOUR MEDICINES IN YOUR DOR STEP FORM YOUR LOCALS
Login
Register


Upload Prescription
UPLOAD PRESCRIPTION IMAGE
SEND ORDER REQUEST
Already have Account? Login Here
Username
Password
Forgot Password?
LOGIN
New user? Register Now
Use other Methods
MEDIWORLD
Pharmacy Products
Popular Items
See All Items
10 x 5
200
1 x 30
30
Top Items
Box Board
Sedil
3 x 10
1 x 10
Home
VIEW YOUR ORDERS
Latest Offer and Discounts
See Features
Order Medicines
Medicine Assistant
Nearby Pharmcies
Nearby Hospitals
Emergency Numbers
Online Pharmacies
Medical Assistant
hey h r u
I'm doing well, thanks! How about you?
Type Here
Profile
zainsaeed
iamzainofficial4221@gmail.com
Account
Personal Info
zainsaeed
03204882199
iamzainofficial4221@gmail.com
Select any one option to continue!
Be A User
Buy Medicines and products in Cheap Prices .
Be A Vendor
Create your store and sell your items in an easy way.
Continue
WELCOEM USER!
LETS EASE YOUR LIFE AND GET YOUR MEDICINES IN YOUR DOR STEP FORM YOUR LOCALS
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Register

Reference and Bibliography

Reference and Bibliography

[1] Stackflow.com
[2] Open. Ai
[3] Greek of Greeks
[4] GitHub (Libraries and Helping)
[5] Android Developers Community