Software Requirements Specification

for

MEDIKIT

An Online Medicine Supply System Where Clicks Connect to Compassion

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1. Introduction

MEDIKIT is an online medicine supply system revolutionizing healthcare accessibility. With a few clicks, users can order vital medications, escaping long queues and shortages. Pharmacies embrace the platform, enhancing operations and reaching a wider clientele. Administrators ensure system security and smooth operation, safeguarding user data. Deliverymen, the heroes, navigate cities to ensure secure medication delivery, embodying trust. Operating round the clock, MEDIKIT offers solace even in the darkest hours, connecting people with essential medicines. This transformative project showcases how technology can build resilient communities, bringing hope and relief to doorsteps.

1.1 Problem Statement

Many people struggle to access essential medications due to long queues, shortages, and inefficient pharmacy systems. Pharmacies also face challenges in serving a larger clientele and ensuring data security in online platforms. Timely and secure delivery of medicines further complicates the situation. A comprehensive solution is needed to streamline medication access, optimize pharmacy operations, protect user data, and improve delivery efficiency.

1.2 Purpose

MEDIKIT strives to revolutionize healthcare access by offering an online medicine supply system. It prioritizes convenience, enabling users to effortlessly order crucial medications from their homes. By fostering seamless interactions between patients and pharmacies, the platform enhances efficiency in medication procurement and delivery. Its user-friendly interface ensures accessibility for all, while also empowering pharmacies to expand their reach and improve service quality. MEDIKIT operates around the clock, providing a sanctuary for patients in need, ensuring they receive essential medications promptly and reliably. Through technology-driven solutions, MEDIKIT endeavors to create stronger and more resilient communities by addressing critical healthcare needs effectively.

1.3 Project Scope

The project scope for MEDIKIT encompasses the development and implementation of an online medicine supply system. This includes:

- Development of MEDIKIT online platform for ordering essential medications.
- User registration, login, and profile management features.
- User-friendly interface for medication search and ordering.
- Integration of inventory management for pharmacies.
- Secure payment processing with potential for discounts.
- Order authentication and real-time delivery tracking.
- Administrative tools for system monitoring and issue resolution.

1.4 Glossary

This section provides definitions for all document names, acronyms, and abbreviations. The application domain's terms and concepts are defined.

GUI - Graphical User Interface
API – Application Programming Interface
SRS – Software Requirement Specification
UI – User Interface
SDLC – Software Development Life Cycle
MB – Megabytes
XML – Extensible Markup Language
RESTful – Representational State Transfer
HTML – Hyper Text Markup Language

1.5 Overview

With just a few clicks, they escaped long queues and medication shortages, effortlessly ordering crucial medicines from the comfort of their homes. It's a sanctuary for patients, offering convenience and relief in the realm of healthcare. The platform boasts a user-friendly interface for everyone.
Pharmacies eagerly adopted the project, making their operations more efficient and reaching a wider clientele. The platform's smooth integration enhanced pharmacy operations, ensuring a broader impact and improved service.
Administrators monitored operations, resolved issues, and ensured the system's security, safeguarding user data in the process.
Deliverymen, the heroes of MEDIKIT, are the lifeline of the community. With precision in navigating the city, they ensure secure medication delivery, embodying trust and bringing hope to doorsteps through real-time tracking tools.
MEDIKIT operates around the clock, even as the sun sets. A user, unwell late at night, found comfort in the platform, ordering necessary medications and receiving assurance through a nighttime delivery under the digital moonlight.
At the same time, Pharmacies updated their product availability for nighttime orders using Inventory Management. Administrators in the control center ensured the system's smooth operation. Deliverymen set out on nighttime journeys, delivering medications under the moonlight.
The MEDIKIT project showcased its transformative power through a story unfolding day and night. It connected people with vital medications, highlighting how technology profoundly impacts building strong and resilient communities.

1.6 References

IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

2. Stakeholders and Characteristics

2.1 User

Individuals seeking essential medications who utilize the MEDIKIT platform to place orders conveniently and efficiently from their homes. They benefit from improved access to medications

and streamlined ordering processes.

2.2 Pharmacies

Providers of essential medications integrated into the MEDIKIT platform. Pharmacies benefit from increased efficiency in managing inventory, reaching a broader clientele, and enhancing customer service through the platform's features.

2.3 Administrators

Individuals responsible for overseeing the operation, security, and maintenance of the MEDIKIT system. They ensure smooth functioning of the platform, resolve issues, and safeguard user data, contributing to the overall reliability and trustworthiness of the system.

2.4 Delivery Man

Key players responsible for the secure and timely delivery of medications from pharmacies to users' doorsteps. They navigate logistics efficiently, ensuring that users receive their medications promptly, thereby playing a crucial role in maintaining the platform's reliability and user satisfaction.

3. Design and Implementation Constrains

To ensure the success of the MEDIKIT project, we've established design and implementation constraints. These constraints provide guidelines and tools for developers and testers to inspect and interact with the application's user interface (UI) elements.

3.1 Frontend Technologies

3.1.1 HTML, CSS, and JavaScript

HTML (Hyper Text Markup Language) provides the structure of web pages, while CSS (Cascading Style Sheets) dictates the appearance, and JavaScript adds interactivity to the MEDIKIT platform.

3.1.2 React.js

React.js is a JavaScript library for building user interfaces. It facilitates the creation of reusable UI components and ensures efficient rendering of UI updates, enhancing the user experience of the MEDIKIT platform.

3.2 Backend Technologies

3.2.1 Node.js and Express.js

Node.js is a runtime environment for executing JavaScript code outside of a web browser, while Express.js is a web application framework for Node.js. Together, they provide a robust set of features for building the backend of the MEDIKIT platform, including routing, middleware, and

database interactions.

3.2.2 MongoDB

MongoDB is a NoSQL database that stores data in flexible, JSON-like documents. It is well-suited for storing unstructured or semi-structured data, providing scalability and high availability for the MEDIKIT platform's database needs.

3.3 Cloud Services

3.3.1 Amazon Web Services (AWS)

AWS offers a comprehensive suite of cloud computing services, including storage, compute power, and databases. Leveraging AWS services such as Amazon S3 for storing media files and Amazon EC2 for hosting the MEDIKIT platform ensures scalability, reliability, and high performance.

3.4 Security Measures

3.4.1 HTTPS

Implementing HTTPS (Hypertext Transfer Protocol Secure) encrypts data transmitted between the client and server, ensuring confidentiality and integrity. By enabling HTTPS, the MEDIKIT platform protects sensitive user information and maintains trust.

3.4.2 Authentication and Authorization

Authentication verifies the identity of users, while authorization determines their access rights. Implementing robust authentication and authorization mechanisms ensures that only authorized users can access and modify sensitive data within the MEDIKIT platform.
These constraints serve as guiding principles for the design and implementation of the MEDIKIT project, ensuring that it meets functional requirements while prioritizing security, performance, and scalability.

4. Requirement Specification

This section encompasses all requirements derived from the elicitation process.

4.1 Functional Requirement

Functional requirements specify what a system or software application should do, defining its features, behaviors, and interactions with users and other systems. They serve as the foundation for system design and development, ensuring that the final product meets user needs and expectations.

4.1.1 User login and register

F_R-1	User Registration and Login to registered account.		
Description	Users should have the capability to create accounts on the platform, providing necessary information such as username, email address, and password.		
Stakeholders	Users, Administrators	**Priority**	High

4.1.2 Medication Search

F_R-2	Facilitate medication search.		
Description	Users should possess the ability to search for medications using various criteria such as medication name, category, or dosage, facilitating easy access to desired products.		
Stakeholders	Users	**Priority**	High

4.1.3 Order Placement

F_R-3	Allow medication ordering.		
Description	Users must be able to place orders for medications seamlessly through the platform, specifying the quantity and desired delivery options.		
Stakeholders	Users	**Priority**	High

4.1.4 Payment Processing

F_R-4	Ensure secure payment processing.
Description	The platform should offer secure payment processing mechanisms, enabling users to complete transactions using preferred payment methods securely.

Stakeholders	Users, Administrators, Delivery Man	**Priority**	High

4.1.5 Inventory Management

F_R-5	Enable medication availability updates.		
Description	Pharmacies should be empowered to update medication availability on the platform, ensuring accurate representation of available products to users.		
Stakeholders	Users, Administrators, Pharmacies	**Priority**	High

4.1.6 User Profile Management

F_R-6	Allow users to update account details.		
Description	Enable users to edit and update their account information, including personal details, contact information, and preferences.		
Stakeholders	Users, Administrators, Pharmacies	**Priority**	Medium

4.1.7 Advanced Medication Search

F_R-7	Implement filters for precise search results.		
Description	Implement advanced search filters such as price range, manufacturer, and dosage form to refine medication search results.		
Stakeholders	Users, Pharmacies	**Priority**	Medium

4.1.8 Password Strength Validation

F_R-8	Ensure strong user passwords.
Description	Implement password strength validation to ensure that user passwords meet minimum security requirements, such as minimum length and inclusion of alphanumeric characters.

Stakeholders	Users, Administrators	**Priority**	Low

4.1.9 Order Tracking

F_R-9	Provide real-time order tracking.		
Description	Users should have access to real-time order tracking functionalities, allowing them to monitor the status of their orders from placement to delivery.		
Stakeholders	Users, Administrators, Delivery Man, Pharmacies	**Priority**	High

4.1.10 Admin Dashboard

F_R-10	Offer comprehensive admin monitoring		
Description	Administrators must have access to a comprehensive dashboard, providing insights into system operations, user activities, and performance metrics. It should also facilitate issue resolution and system maintenance tasks effectively.		
Stakeholders	Administrators	**Priority**	High

4.2 Data Requirement

To optimize storage needs for our medicine delivery application, which involves storing various data files, including user information and medication records, we will implement compression techniques. Through lossless compression algorithms, we aim to reduce file sizes by up to 80%

4.2.1 User Profiles

D_R-1	Store user info for authentication and delivery		
Description	Collect and store user information such as name, contact details, delivery address, and authentication credentials securely.		
Stakeholders	Users, Administrators	**Priority**	High

4.2.2 Medication Inventory

D_R-2	Track medication with details and supplier information		
Description	Maintain a database of available medications, including details like name, dosage, price, expiration date, and supplier information.		
Stakeholders	Users, Pharmacies	**Priority**	High

4.2.3 Order Records

D_R-3	Manage orders with medication, quantities, and delivery status		
Description	Capture and manage data related to user orders, including the medications ordered, quantity, total price, order status, and delivery details.		
Stakeholders	Users, Administrators	**Priority**	High

4.2.4 Pharmacy Information

D_R-4	Store pharmacy details and available medication		
Description	Store information about registered pharmacies, including name, location, contact details, and inventory of medications available at each pharmacy.		
Stakeholders	Users, Pharmacies	**Priority**	Medium

4.2.5 Delivery Tracking

D_R-5	Monitor deliveries and personnel for accuracy		
Description	Record and track delivery details, including delivery personnel information, delivery schedules, status updates, and real-time tracking data to ensure timely and accurate medication deliveries.		
Stakeholders	Users, Deliveryman	**Priority**	High

1.1 Maintainability and Supportability

4.3.1 Maintenance Requirements

MR-1	Software Updates		
Description	Regularly update software dependencies, libraries, and frameworks to the latest versions to incorporate bug fixes, security patches, and performance improvements.		
Stakeholders	Developers, Administrators	**Priority**	Medium

MR-2	Database Maintenance		
Description	Perform routine database maintenance tasks, including data cleanup, index optimization, and database backups, to ensure data integrity, performance, and availability.		
Stakeholders	Administrators	**Priority**	High

4.3.2 Supportability Requirements

This system ensures Testability, Maintainability, Compatibility, Configurability, Serviceability, and Install ability, all of which are pertinent to supportability requirements.

5. Requirement Engineering Process

Requirements Engineering (RE) determines software requirements according to customer requirements or needs. Requirements engineering process includes requirements elicitation, needs modeling, requirements analysis, requirements assurance & validation, and requirements management.

5.1 Requirement Elicitation Techniques

Requirements elicitation involves the process of researching and gathering system requirements from various stakeholders, including users, customers, and administrators. Different techniques are employed to effectively gather these requirements for the MEDIKIT project.

5.1.1 Hold Interviews

We hold discussions that can be held individually or with a small group of participants. They are an effective way to access services without spending a lot of time with participants because we meet with people to discuss only certain important requirements of this program. Negotiations are useful for obtaining individual requirements for members in organizing workshops where those members of the program come together to resolve any issues or conflicts. We mainly perform our interview based on some specific criteria.

Sample of Requirements Collection:

Requirement Elicitation Techniques	Interviews,Surveys,Focus Groups
Collected From	Students of IIT
Findings	• **User registration process** This process involves allowing users to create accounts on the platform. Users typically provide necessary information such as name, email address, password, and sometimes additional details like contact information or delivery address. The registration process may include steps for validating user input, ensuring data security, and confirming account creation through email verification or other means. Once registered, users gain access to the platform's features and services. • **Medication search functionality** The medication search functionality enables users to find specific medications or browse through available options on the platform. Users may enter keywords, medication names, or browse through categories to search for relevant medications. The search functionality interacts with a database of medications, allowing users to access details such as medication names, descriptions, dosages, prices, and availability. It enhances user experience by providing efficient access to the desired medications. • **Ordering process** The ordering process enables users to select and purchase medications through the platform. Users typically add desired medications to a shopping cart, review their selections, proceed to checkout, and provide necessary details such as delivery address and payment information. The ordering process may include steps for validating user input, ensuring medication availability, processing payments securely, and generating order confirmations. Once

	an order is placed successfully, it is processed for delivery to the user's specified address. • **Delivery logistic** Delivery logistics involve the management and coordination of medication deliveries to users. This process includes tasks such as assigning delivery personnel, scheduling delivery routes, tracking delivery status, and ensuring timely and accurate deliveries. Delivery logistics may also involve optimizing delivery routes for efficiency, managing inventory levels at distribution centers, and handling any issues or delays that may arise during the delivery process. It plays a crucial role in ensuring that users receive their medications promptly and reliably.

Requirement Elicitation Techniques	Interviews
Collected From	Saiful Islam, Owner & Salesman , Unique Pharma
Findings	During the interview, several key topics were covered to gather requirements for integrating the pharmacy's operations with the MEDIKIT platform. These topics included understanding the current inventory management practices, order processing workflow, m and pricing strategies, delivery logistics and timelines, user feedback and with the MEDIKIT platform, and any training and support needs for adopting new technologies. Through these discussions, valuable insights were gained regarding the pharmacy's operational processes, challenges, and expectations, which will inform the development of the MEDIKIT platform to effectively meet the needs of both pharmacies and users.

5.1.2 Perform Document Analysis

Document analysis is crucial for understanding existing systems, processes, and requirements. Here's how we can perform document analysis effectively for the MEDIKIT project:

- **Gather Existing Documentation**

  This step involves collecting any existing documentation related to the project or system under review. It may include technical specifications, user manuals, system architecture diagrams, requirements documents, and any other relevant materials. Gathering existing documentation provides insights into the project's background, functionality, and features, serving as a foundation for the review process.

- **Review Textual Content**

  In this step, the textual content of the documentation is carefully examined and analyzed. This includes reviewing descriptions, instructions, specifications, and other textual elements to understand the project's functionality, processes, and requirements. Reviewing textual content helps identify key information, clarify ambiguities, and ensure consistency and accuracy in documentation.

- **Identify Functionalities and processes**

  Here, the focus is on identifying the various functionalities and processes described in the documentation. This involves breaking down the system's capabilities and operations into distinct components, such as user registration, data management, authentication, ordering process, delivery logistics, etc. Each functionality and process is analyzed to understand its purpose, interactions, and dependencies within the system.

- **Document Findings**

  Finally, the findings from the review process are documented systematically. This includes summarizing key points, highlighting significant observations or discrepancies, and recording any recommendations or actions needed to address identified issues. Documenting findings ensures that insights gained from the review process are captured effectively and can be used to guide future development, updates, or improvements to the project or system.

5.2 Requirement Validation

Requirement validation ensures the accuracy and quality of requirements for the MEDIKIT platform. To validate requirements effectively:

5.2.1 Review the Requirements

Conduct rigorous peer reviews to identify ambiguities and gaps in the requirements. Utilize a diverse team of reviewers to examine written needs, analysis models, and relevant information thoroughly.

5.2.2 Test the Requirements

Create test cases to validate requirements and ensure they meet expected performance standards. Perform writing tests to verify the expected behavior of the MEDIKIT platform under specified conditions, including user needs and system functionality.

5.2.3 Simulate the Requirements

Utilize simulation tools to simulate the proposed system and add detail to written requirements. Prototyping and simulation techniques elevate requirement validation by providing a tangible representation of the MEDIKIT platform's functionality.

6. Use Case Diagram

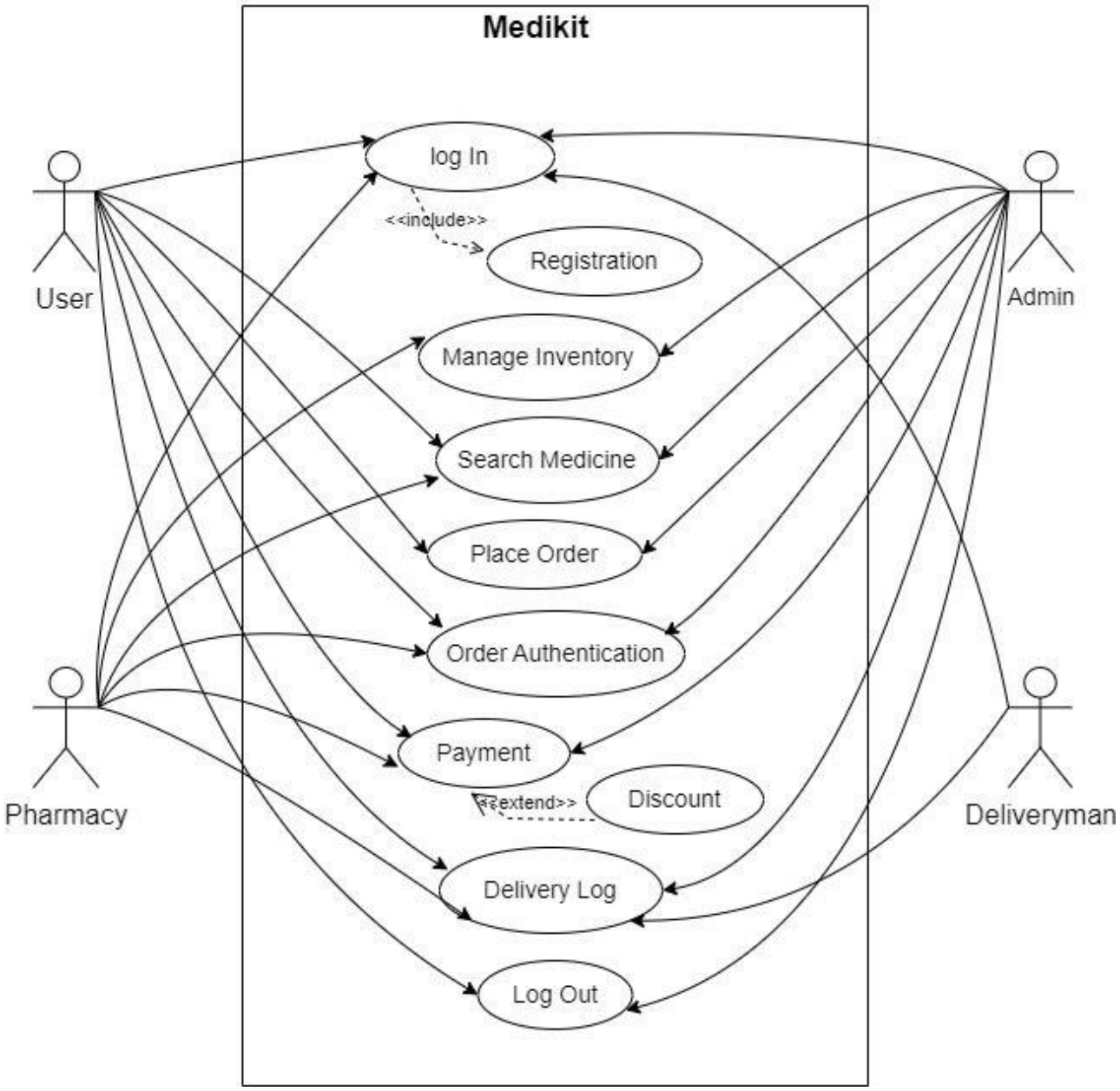

Figure 1: Use-case Diagram

7. Use Case Description

Table 1: Registration

Use Case	Registration
Definition	User wants to create an account in the "Medikit" application if not registered yet.
Preconditions	N/A
Success End Condition	A user account is created.
Failed End Condition	User account is not created.
Primary Actors: **Secondary Actors:**	User Admin
Trigger	"Sign in" button needs to be clicked.
Main Success Flows	User opens the "Medikit" application.
	User clicks the "Sign in" button.
	User provides username, email, Mobile number, Create password, Confirm password.
	Server checks information and providesconfirmation.
	Account is created.
Alternative Flows	User does not have an account
	User needs to create one.
	User does not login with an existing account.
	User needs to create another account
	Server shows that information invalid or usedbefore.
	User needs to change provided information.
Quality Requirements	Username, email and Mobile number must be unique.

Table 2: Log in

Use Case	Login
Definition	User login to “Medikit” application.
Preconditions	User should have a registered account.
Success End Condition	Successfully login to “Medikit” application.
Failed End Condition	Unable to login.
Primary Actors: **Secondary Actors:**	User Admin
Trigger	“Login” Button needs to be clicked.
Main Success Flows	User opens the “Medikit” application.
	User clicks the “Log in” button.
	User provides username, email, password.
	Server checks information and provides confirmation.
	User login is successful.
Alternative Flows	User does not have an account.
	User clicks the “Create Account” buttonto create an account.
Quality Requirements	Users must have an account.

Table 3: Manage Inventory

Use Case	Manage Inventory
Definition	Admin wants to add or manage new pharmacy and medicine to the "Medikit" application.
Preconditions	N/A
Success End Condition	Admin successfully added new pharmacy or medicine in the system database.
Failed End Condition	The verification of the new medicine or the pharmacy failed and not included in the system.
Primary Actors: **Secondary Actors:**	Admin Pharmacy
Trigger	The "Update" button needs to be clicked.
Main Success Flows	Administrator accesses the inventory management system.
	System displays the current inventory status.
	Administrator updates inventory quantities for specific medicines.
	Changes are saved successfully.
Alternative Flows	Admin encounters update error, system prompts retry.
	System maintains previous state until update success.
Quality Requirements	Real-time sync for accurate stock levels.
	Inventory changes logged for audit trail.

Table 4: Search Medicine

Use Case	Search Medicine
Definition	User wants to search a medicine.
Preconditions	N/A
Success End Condition	User gets the searched medicine result.
Failed End Condition	User unable to get any result from the search.
Primary Actors: **Secondary Actors:**	User Admin, Pharmacy
Trigger	"Search" box needs to be clicked.
Main Success Flows	User accesses the search functionality within the "Medikit" application.
	User enters keywords or selects categories to search for specific medicines.
	System retrieves relevant medicine information based on the search query.
	Search results are displayed to the user.
Alternative Flows	System displays "no matching medicines found."
	System prompts user to retry search.
Quality Requirements	Accurate search results based on user query.
	Support for filtering and sorting options.

Table 5: Place Order

Use Case	Place Order
Definition	User wants to place order for the selected medicine.
Preconditions	Search or select medicine.
Success End Condition	Successfully order placed.
Failed End Condition	Order placement unsuccessful.
Primary Actors: **Secondary Actors:**	User Admin
Trigger	"Order" button needs to clicked to perform the operation.
Main Success Flows	User selects desired medicines and adds them to the shopping cart.
	User proceeds to checkout and provides delivery and payment details.
	System validates the order information.
	User confirms the order.
	System processes the order and generates an order confirmation.
Alternative Flows	System prompts user to correct errors.
	System notifies user and suggests alternatives.
Quality Requirements	Secure payment processing.
	Efficient order processing with timely confirmations.

Table 6: Order Authentication

Use Case	Order Authentication
Definition	Admin checks the authentication of the placed order.
Preconditions	Order should be placed.
Success End Condition	Order authentication successful.
Failed End Condition	Admin fails to authenticate the order.
Primary Actors: **Secondary Actors:**	Admin User, Pharmacy
Trigger	Admin provides keywords in the authentication box.
Main Success Flows	User confirms the order.
	System validates the order details.
	System checks medication availability.
	Order is authenticated.
Alternative Flows	System prompts user to review and correct.
	System notifies user, suggests alternatives.
Quality Requirements	Fraud prevention with order verification.
	Efficient authentication for minimal delays.

Table 7: Payment

Use Case	Payment
Definition	User selects a payment method and pay for the medicine.
Preconditions	Login, Order placement, Order Authentication
Success End Condition	Payment is done successfully.
Failed End Condition	Insufficient balance.
Primary Actors: **Secondary Actors:**	User Admin, Pharmacy
Trigger	User clicks on “Make Payment”.
Main Success Flows	User proceeds to payment after confirming the order.
	User selects a payment method and provides payment details.
	System processes the payment securely.
	If applicable, the system applies any eligible discounts to the order.
	Payment is successfully completed.
Alternative Flows	System notifies user, suggests retry or alternative method.
	System prompts user for valid code.
Quality Requirements	Secure payment transactions for user financial protection.
	Accurate validation of discount codes to prevent misuse.

Table 8: Delivery Log

Use Case	Delivery Log
Definition	User wants to locate their order and the deliveryman.
Preconditions	Payment should be done.
Success End Condition	User receives the order from the deliveryman and saves the record of the delivery log.
Failed End Condition	N/A
Primary Actors: **Secondary Actors:**	User, Deliveryman Pharmacies, Admin
Trigger	User click the "Delivery log" button.
Main Success Flows	Delivery personnel access the delivery log system.
	System retrieves assigned orders for delivery.
	Delivery personnel update delivery status for each order.
	System logs delivery status updates.
Alternative Flows	System notifies personnel to check back later.
	System prompts retry for status updates.
Quality Requirements	Real-time updates for transparent order tracking.
	Systematic logging of delivery status for audit trail.

Table 09: Log Out

Use Case	Log out
Definition	Logout from “Medikit” application.
Preconditions	User login
Success End Condition	Successful logout operation from the system.
Failed End Condition	Remain logged in in the system.
Primary Actors: **Secondary Actors:**	User Admin
Trigger	“Logout” button needs to be clicked.
Main Success Flows	User initiates the log out process.
	System terminates the user session.
	User is successfully logged out and redirected to the homepage.
Alternative Flows	System prompts user to retry if technical issues occur.
	System redirects user to login page.
Quality Requirements	Complete session invalidation for account security.
	Smooth redirection to designated landing page after logout.

8. Activity Diagram

Activity Diagram (Registration)

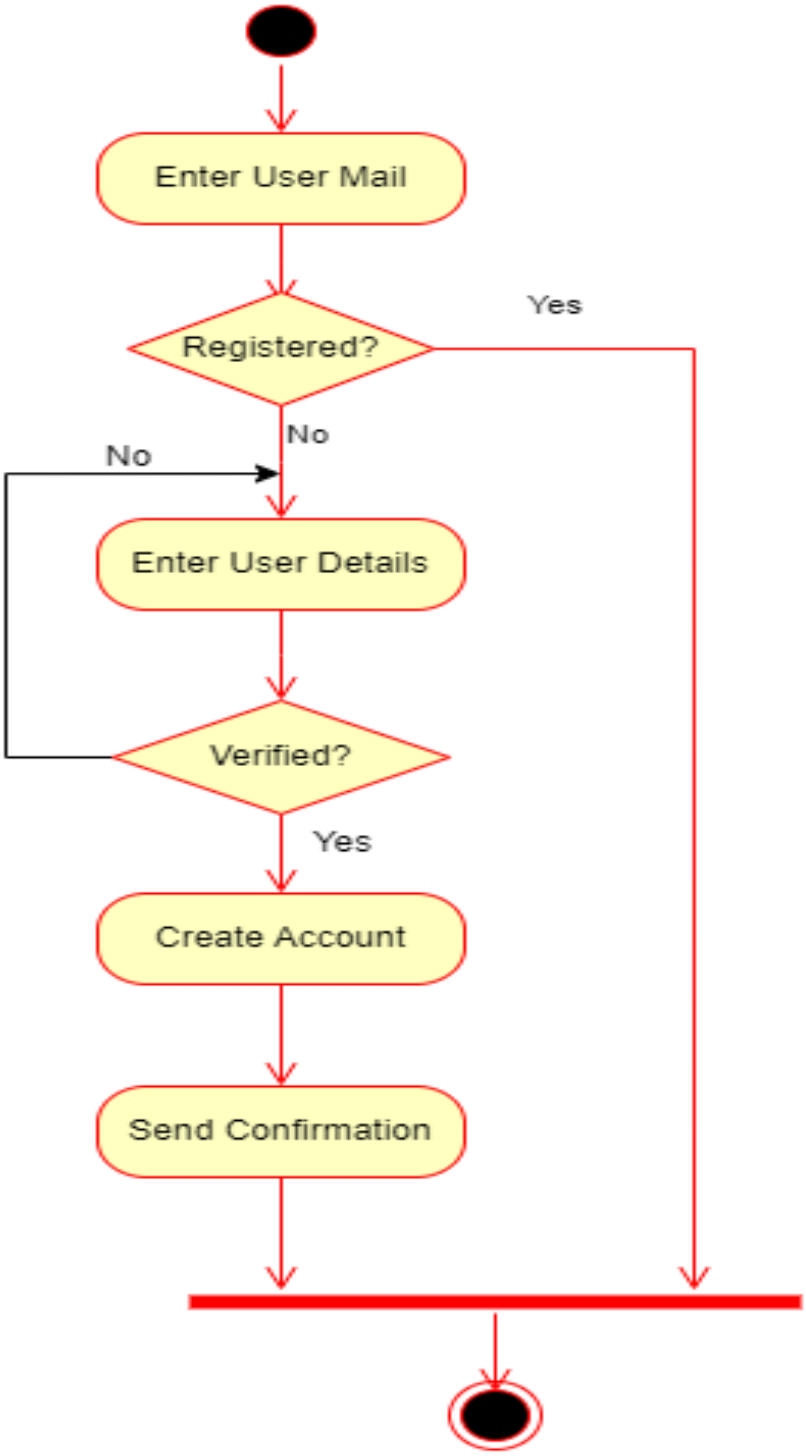

Figure 2: Registration

Activity Diagram (Log in)

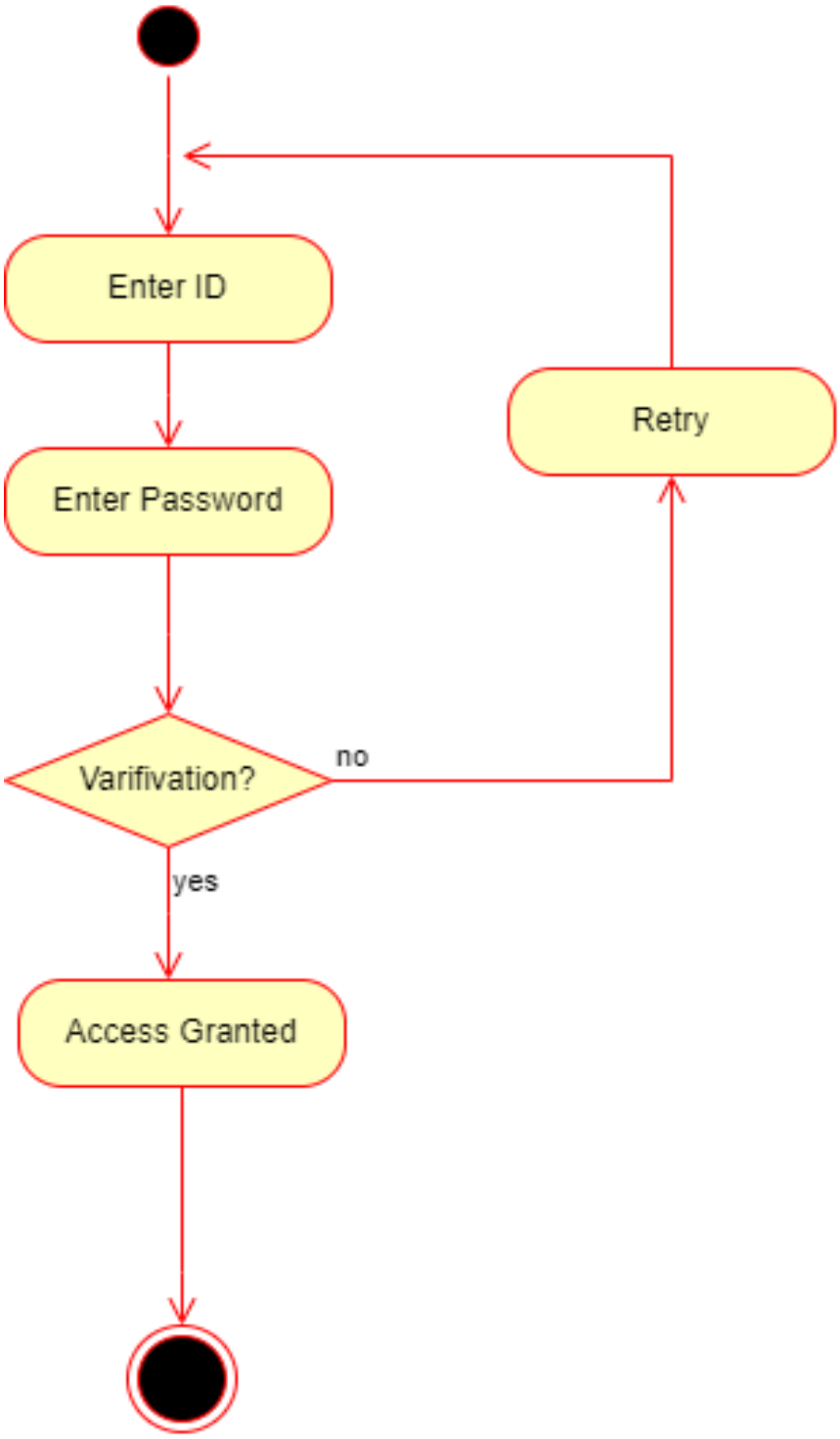

Figure 3: Log in

Activity Diagram (Manage Inventory)

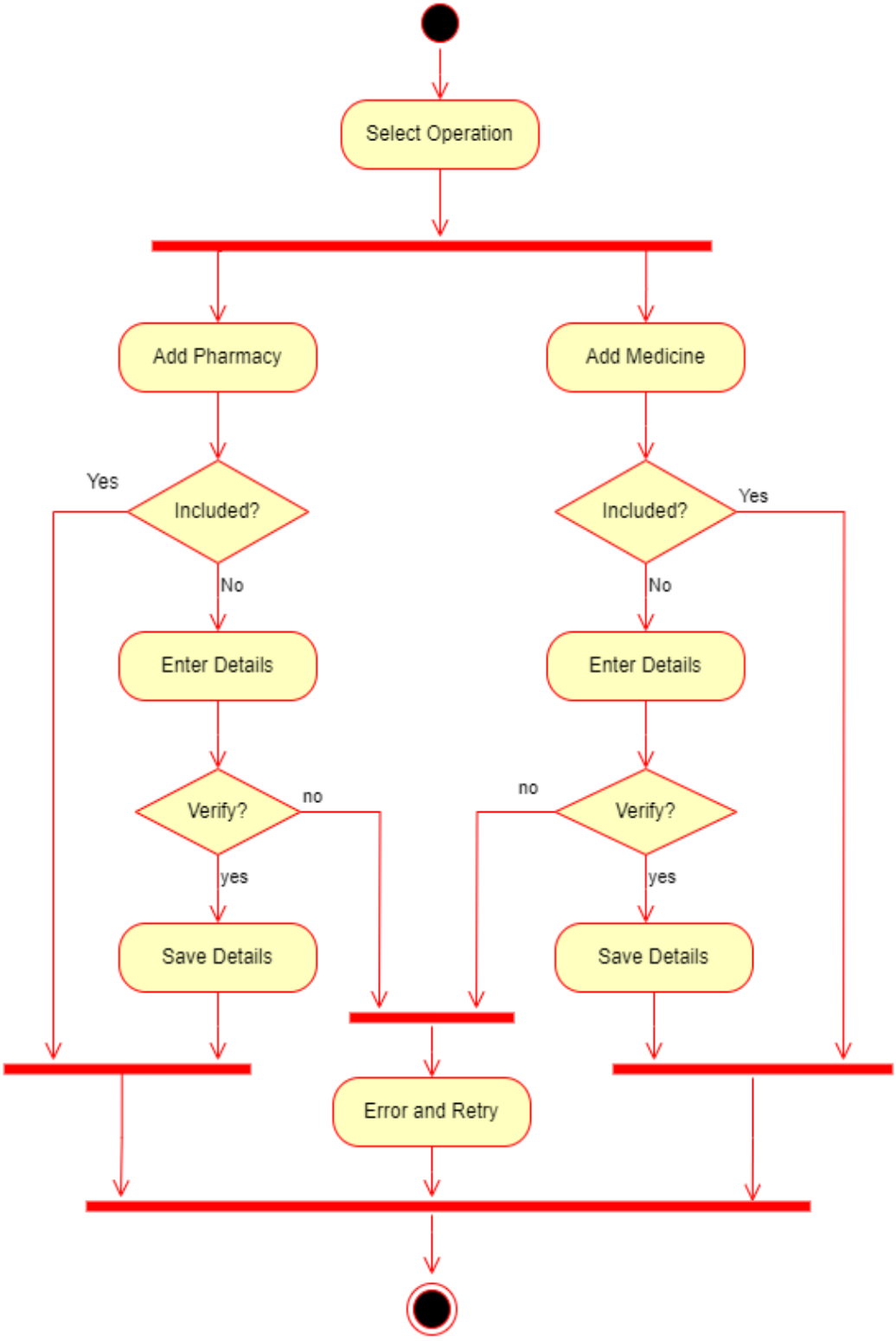

Figure 4: Manage Inventory

Activity Diagram (Search Medicine)

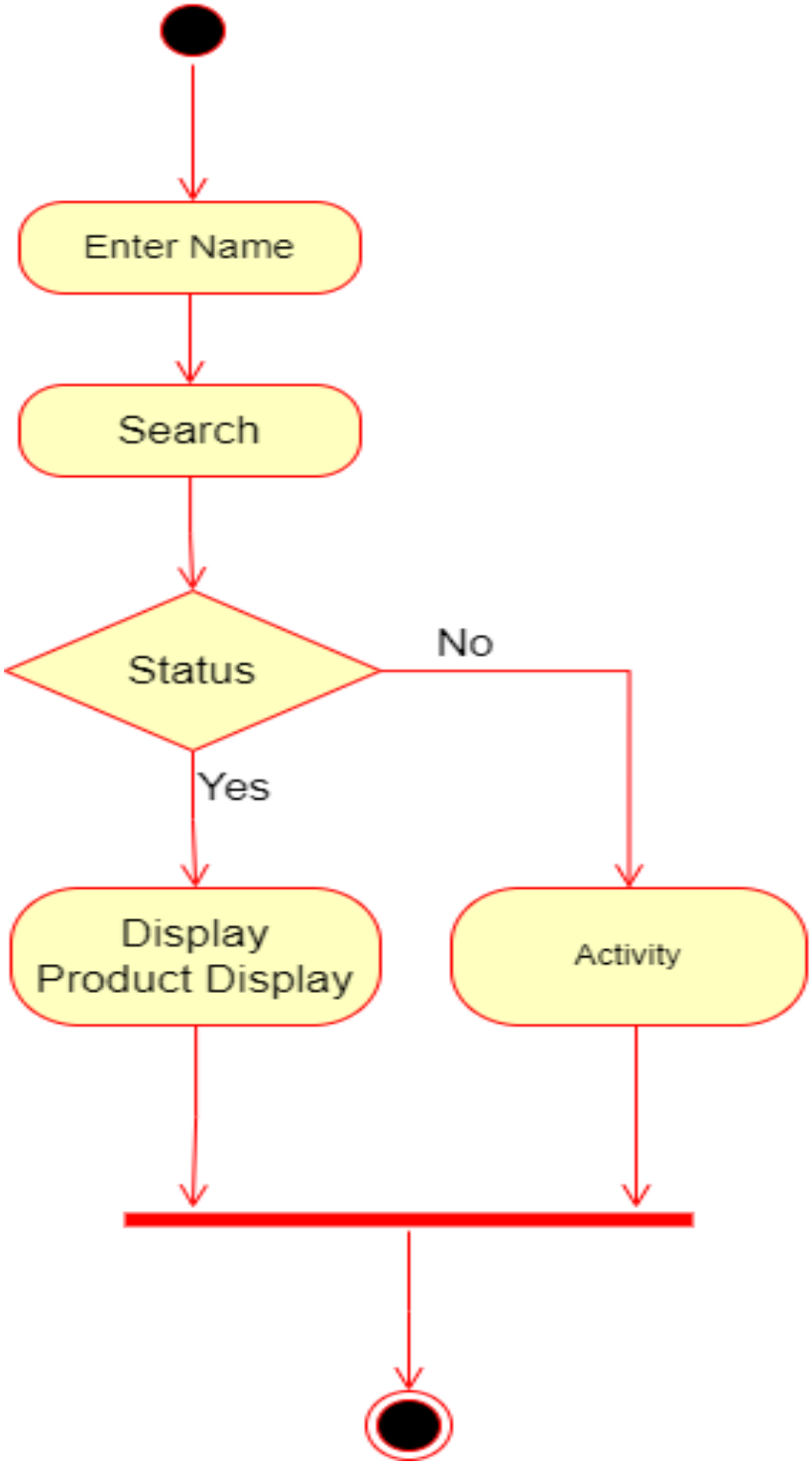

Figure 5:Search Medicine

Activity Diagram (Place Order)

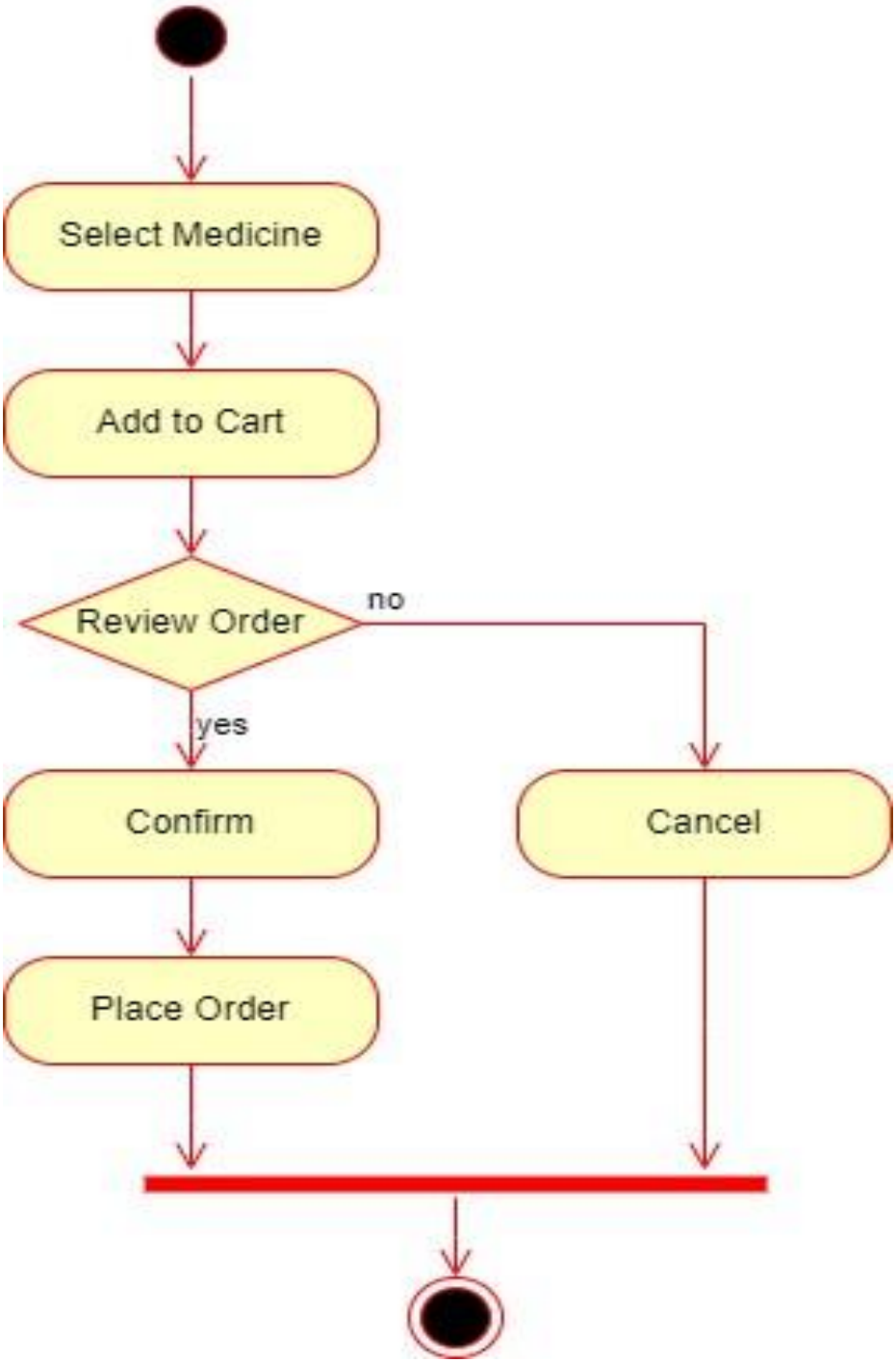

Figure5: Place Order

Activity Diagram (Order Authentication)

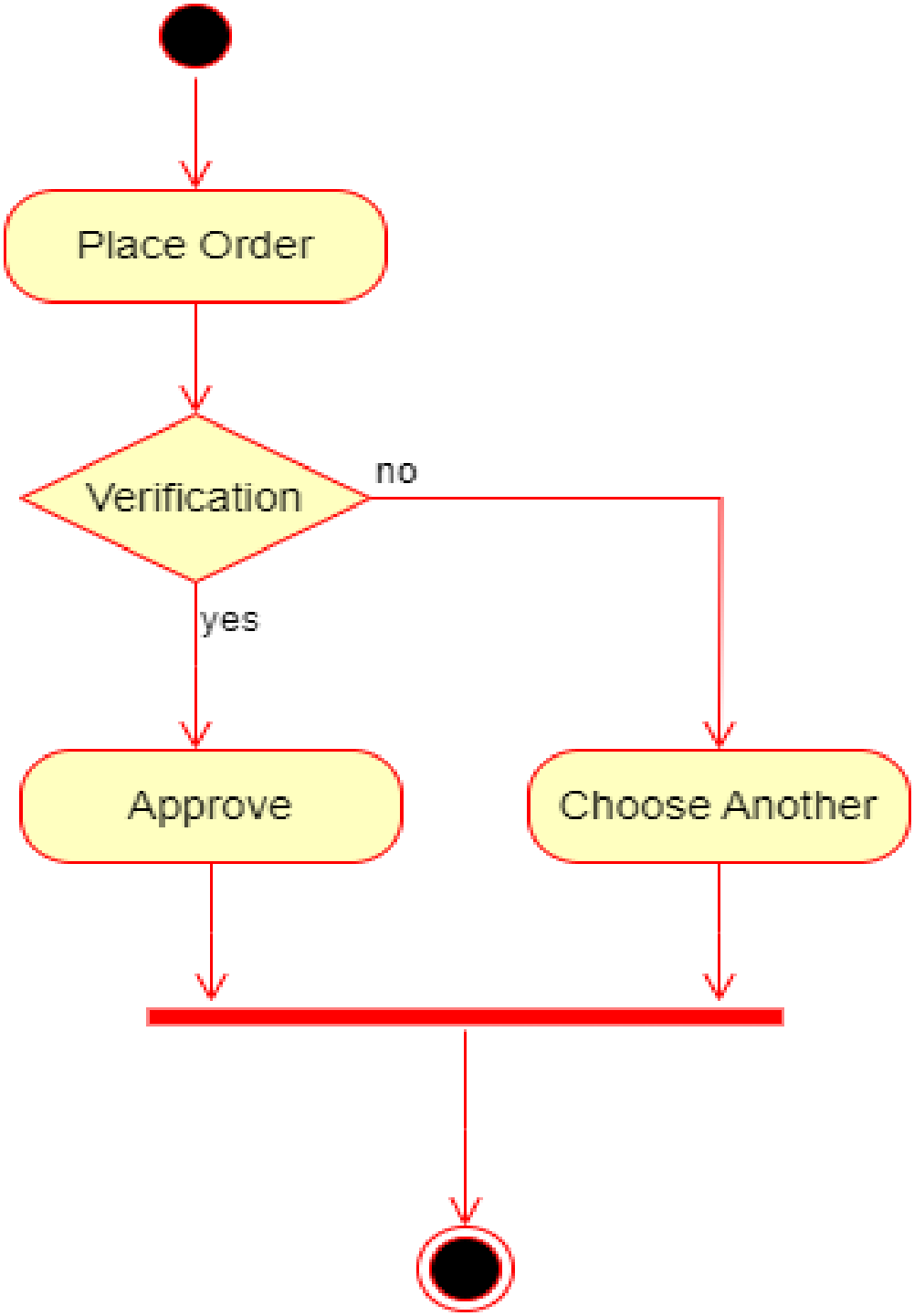

Figure 7:Order Authentication

Activity Diagram (Payment)

Figure 9: Payment

Activity Diagram (Delivery Log)

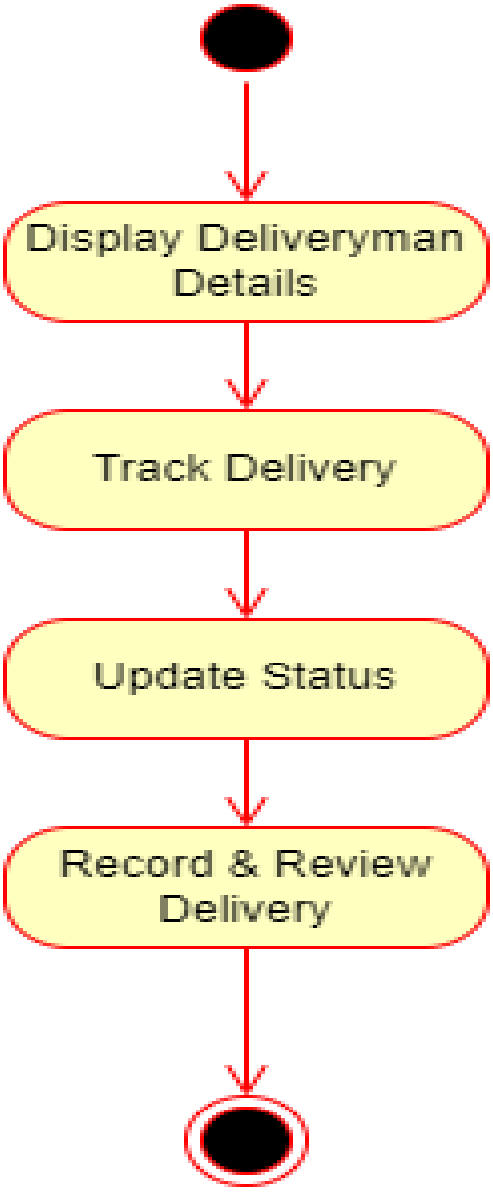

Figure 10: Delivery Log

9. Sequence Diagram

Sequence Diagram (Registration)

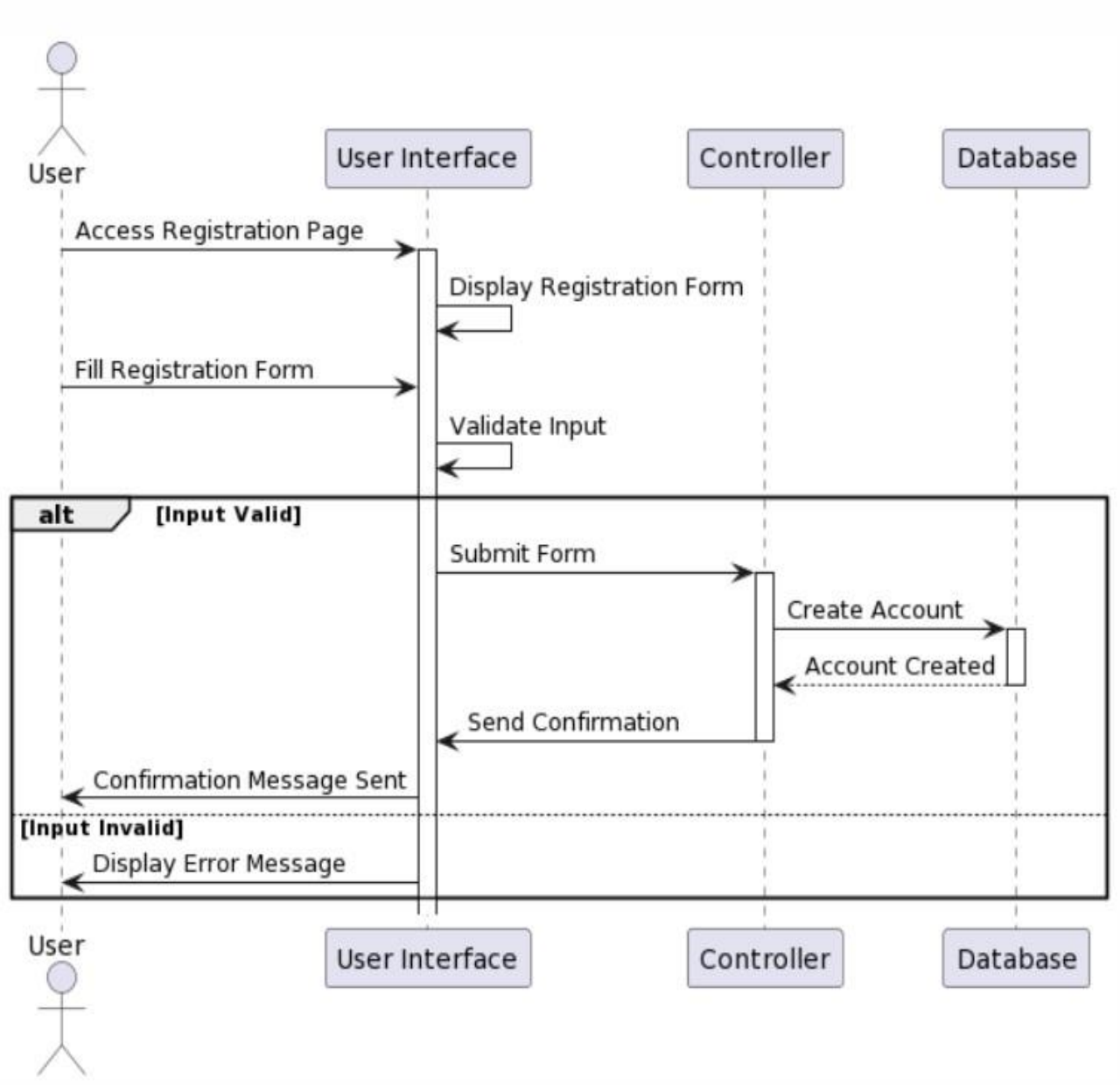

Figure 10: Registration

Sequence Diagram (Login)

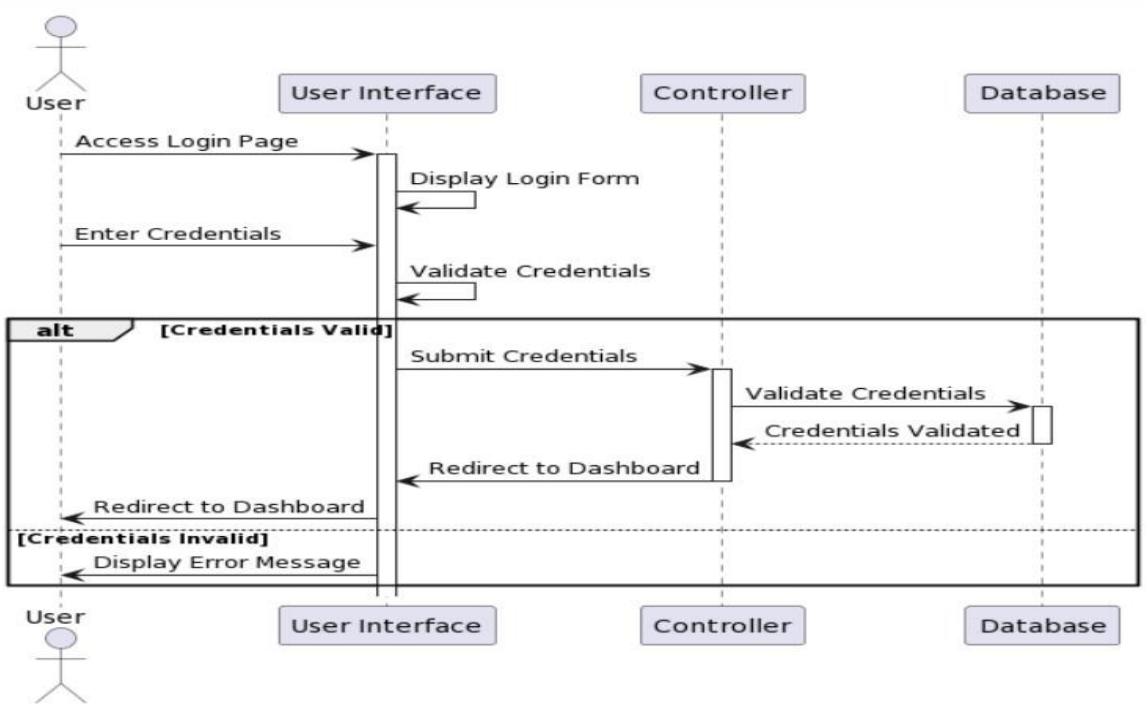

Figure 11: Login

Sequence Diagram (Manage Inventory)

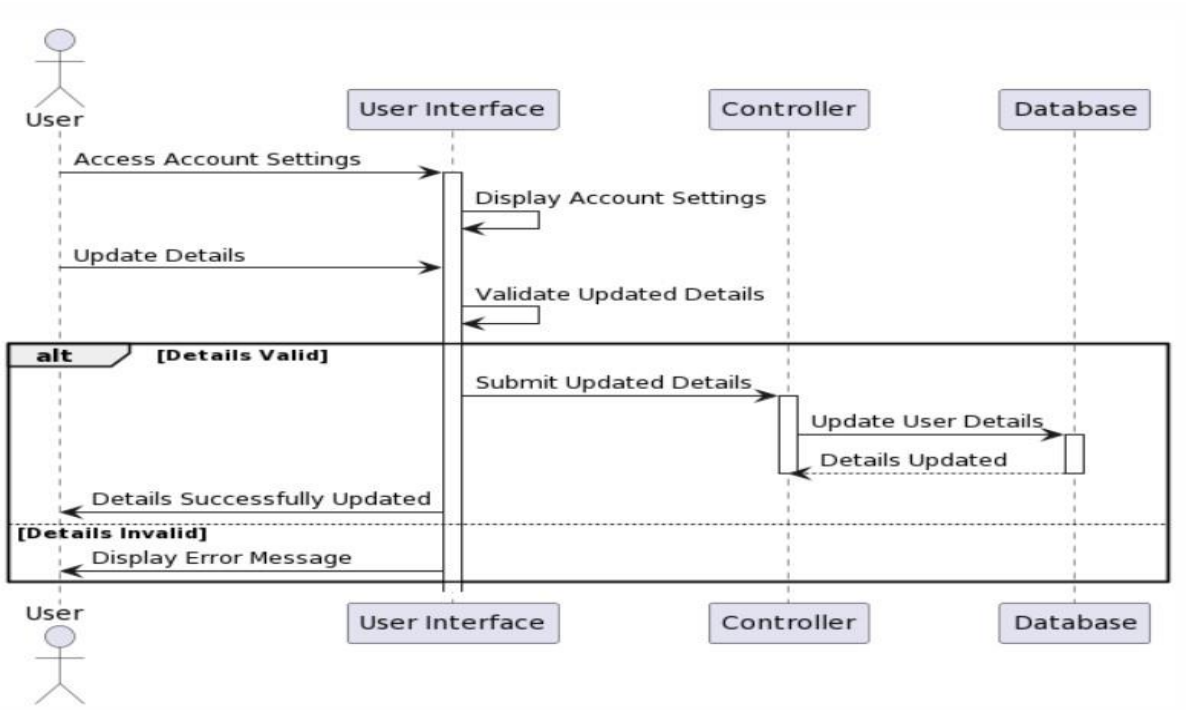

Figure 12: Manage Inventory

Sequence Diagram (Search Medicine)

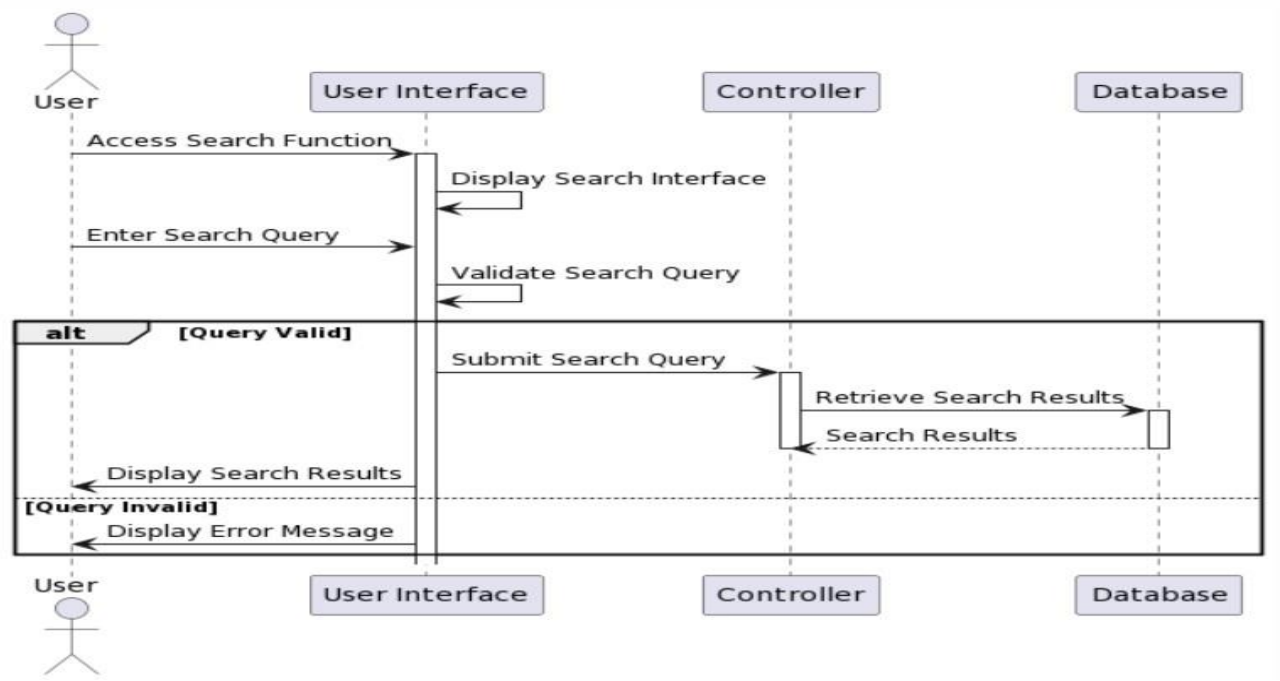

Figure 13: Search Medicine

Sequence Diagram (Place Order)

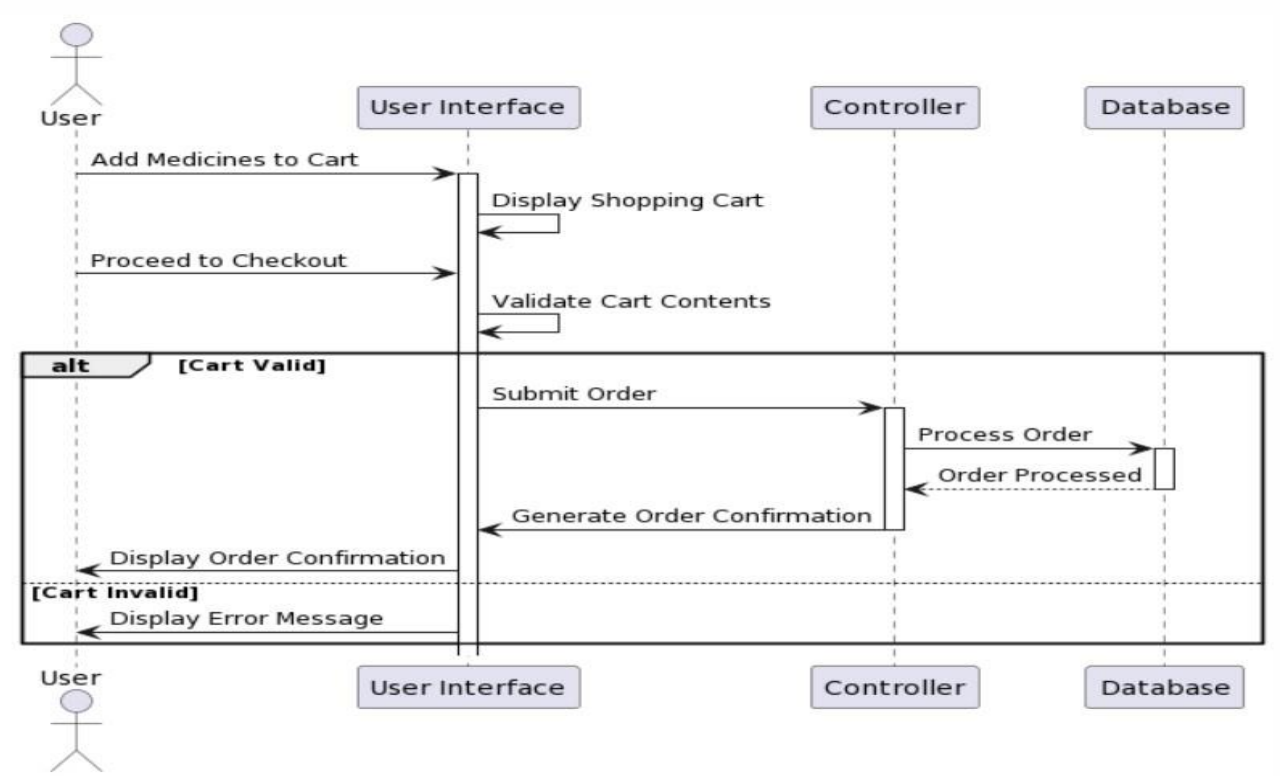

Figure 14: Place Order

Sequence Diagram (Order Authentication)

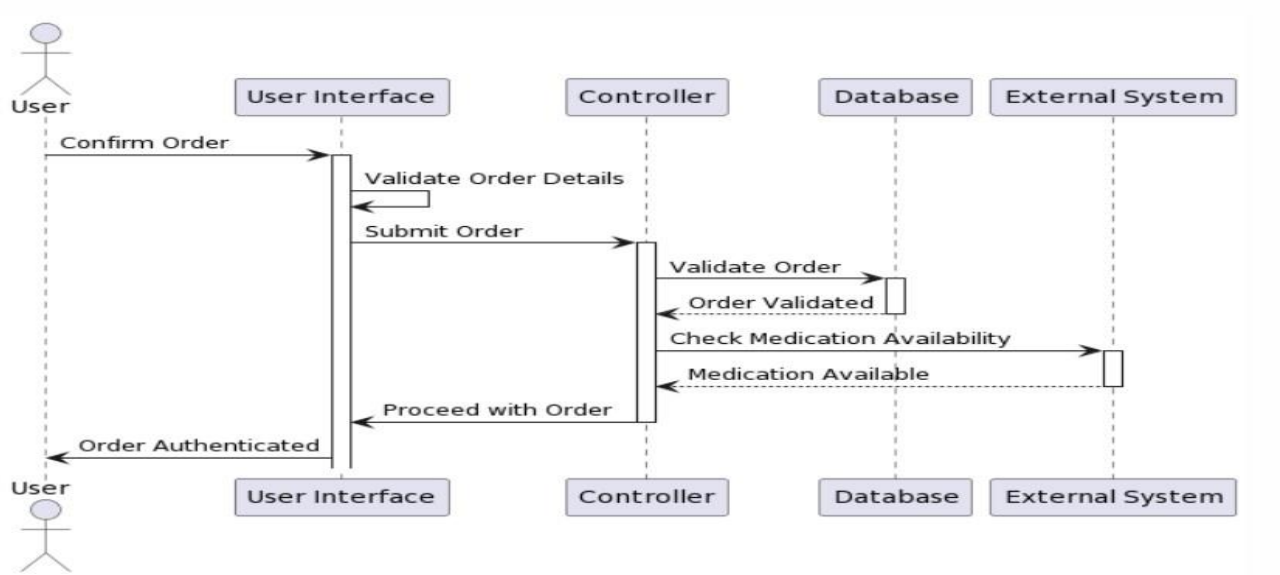

Figure 15: Order Authentication

Sequence Diagram (Payment)

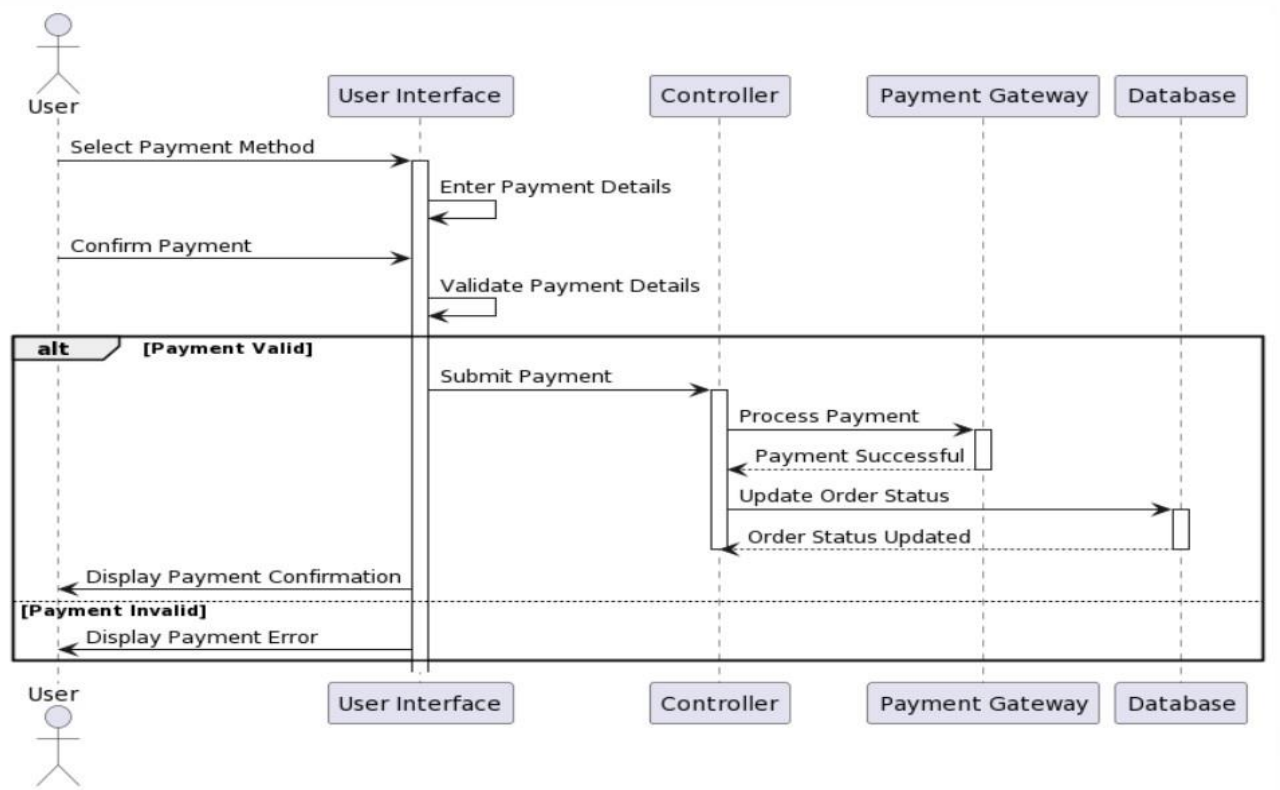

Figure 16: Payment

Sequence Diagram (Delivery log)

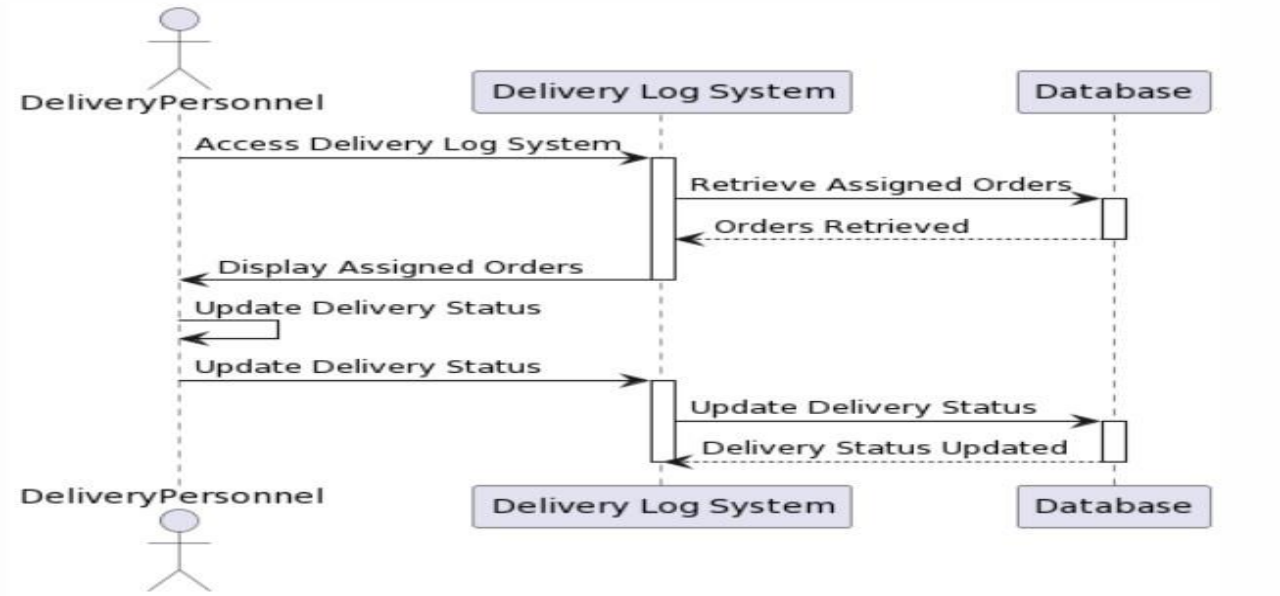

Figure 17: Delivery log

Sequence Diagram (Logout)

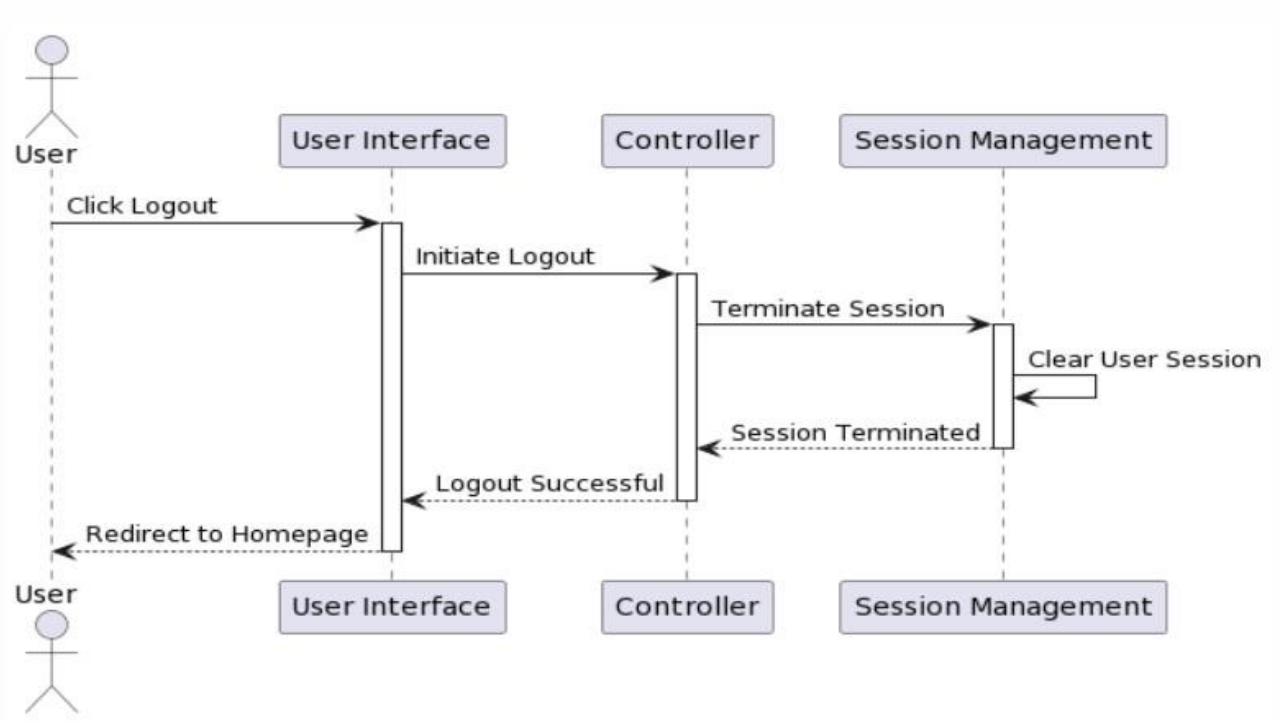

Figure 18: Logout

10. Swim-Lane Diagram

Swim-lane Diagram (Registration)

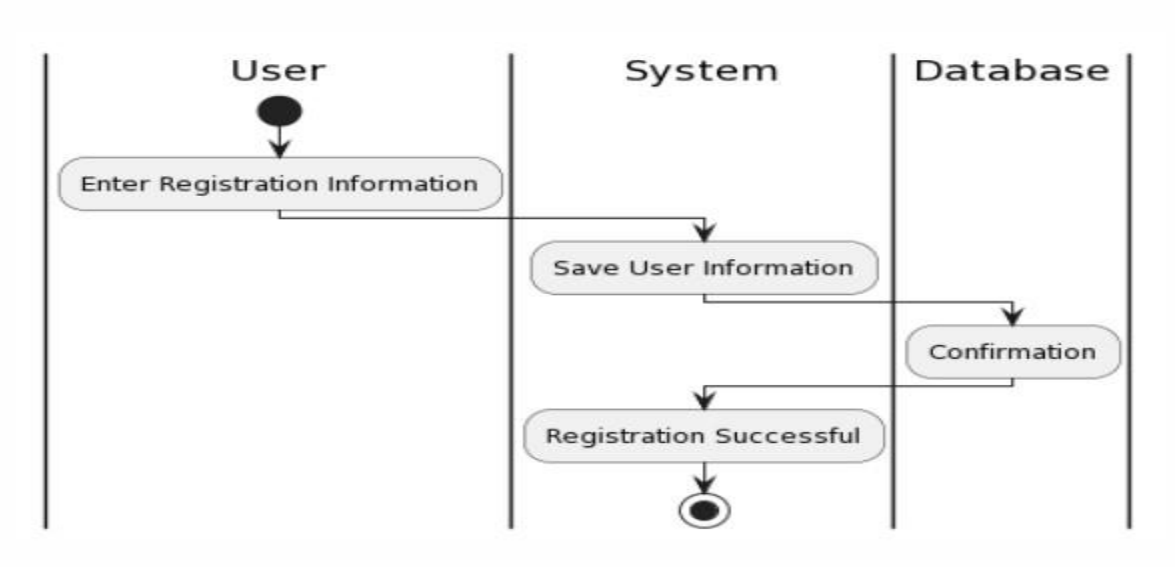

Figure 19: Registration

Swim-lane Diagram (Login)

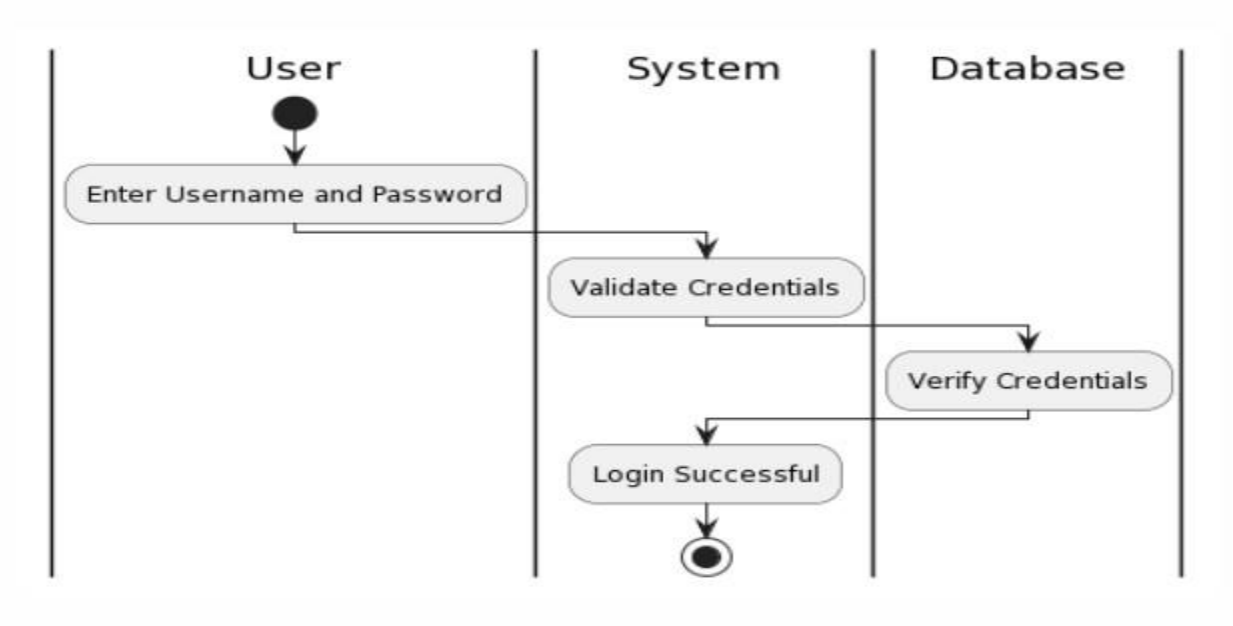

Figure 20: Login

Swim-lane Diagram (Manage Details)

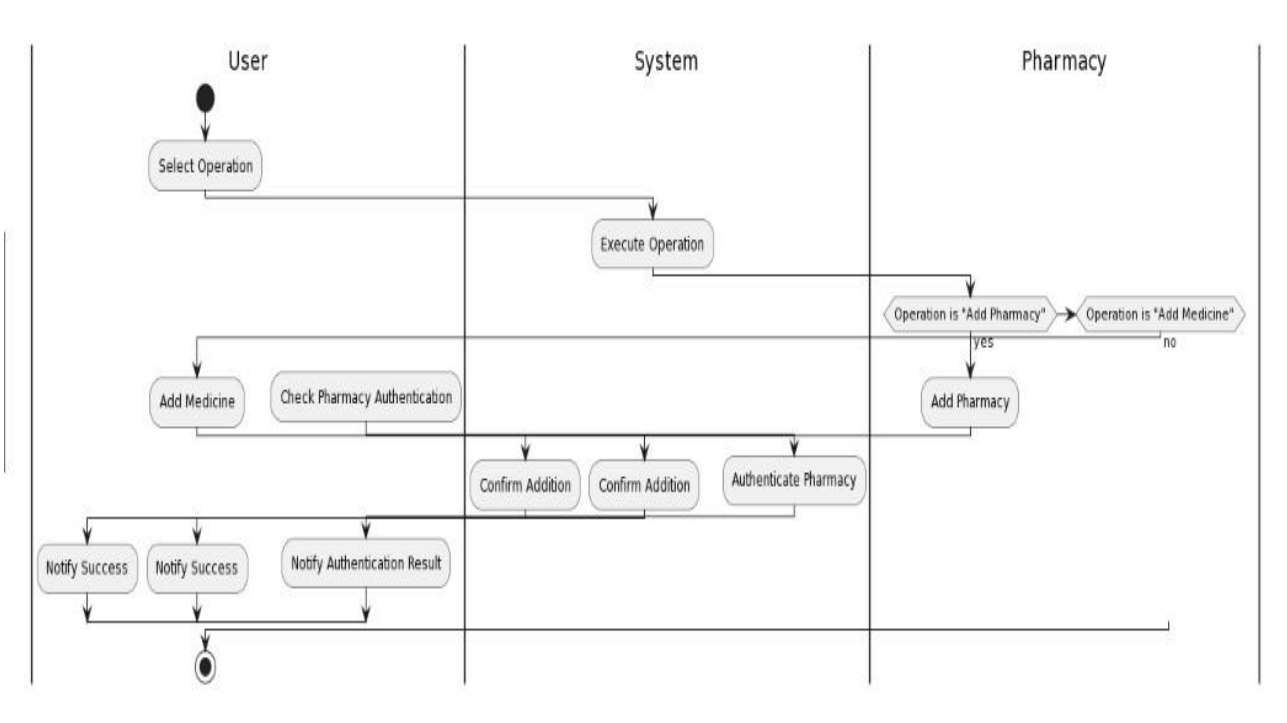

Figure 21: Manage Details

Swim-lane Diagram (Search Medicine)

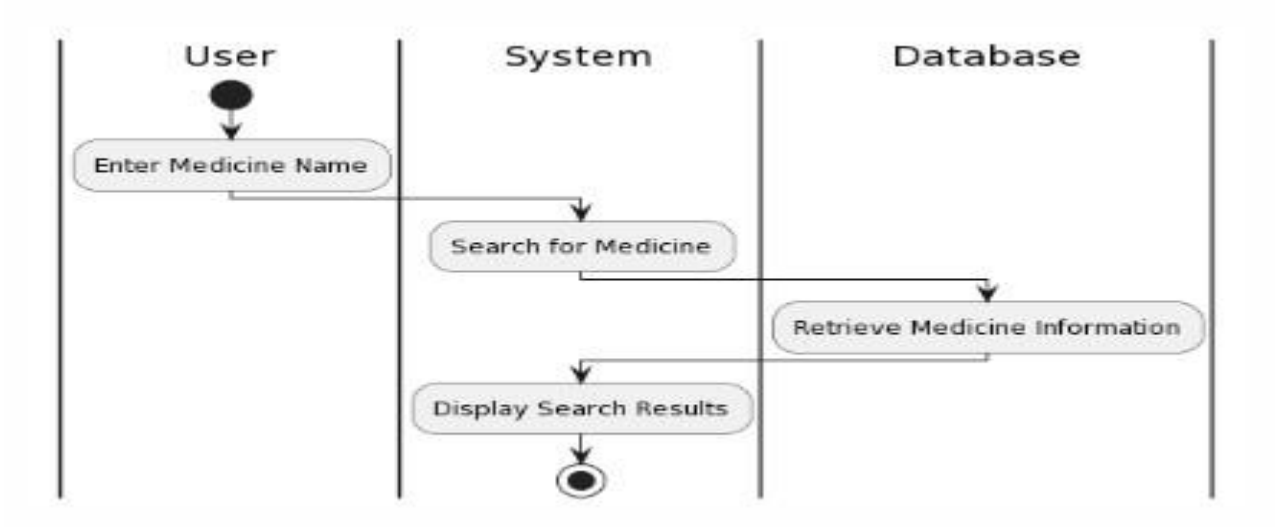

Figure 22: Search Medicine

Swim-lane Diagram (Place Order)

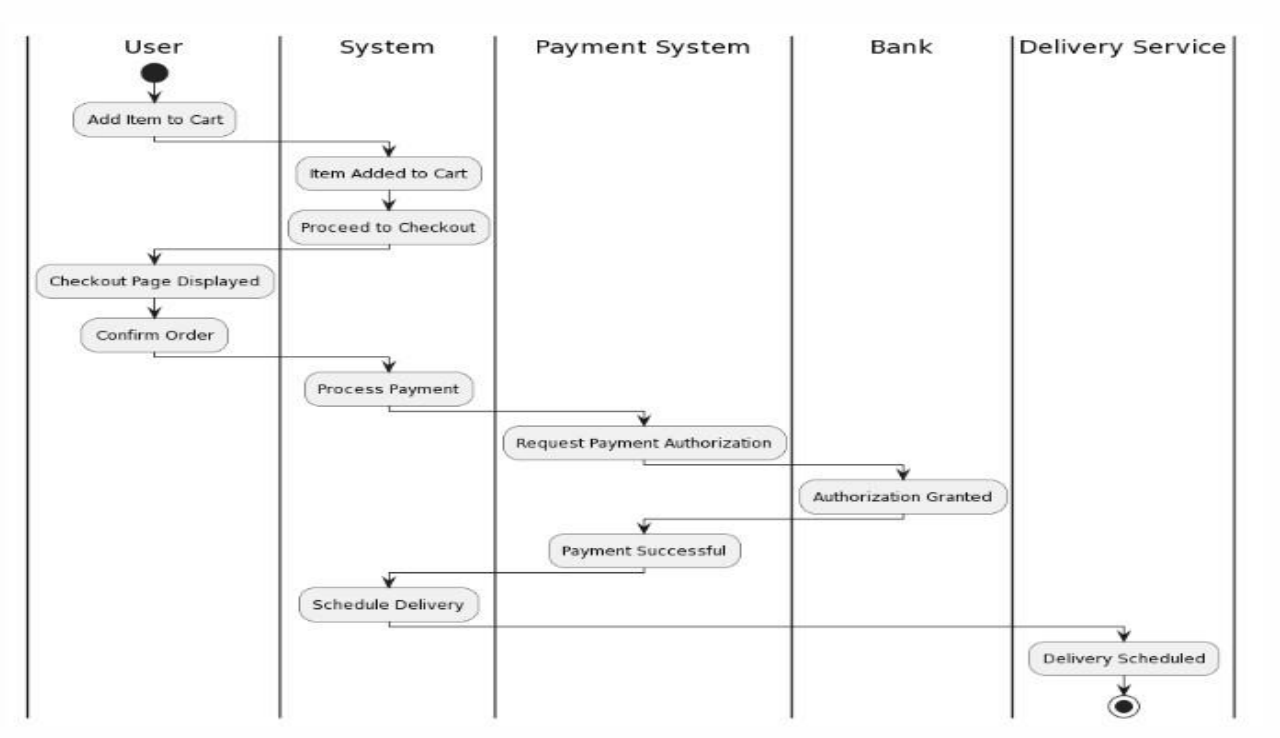

Figure 23: Place Order

Swim-lane Diagram (Order Authentication)

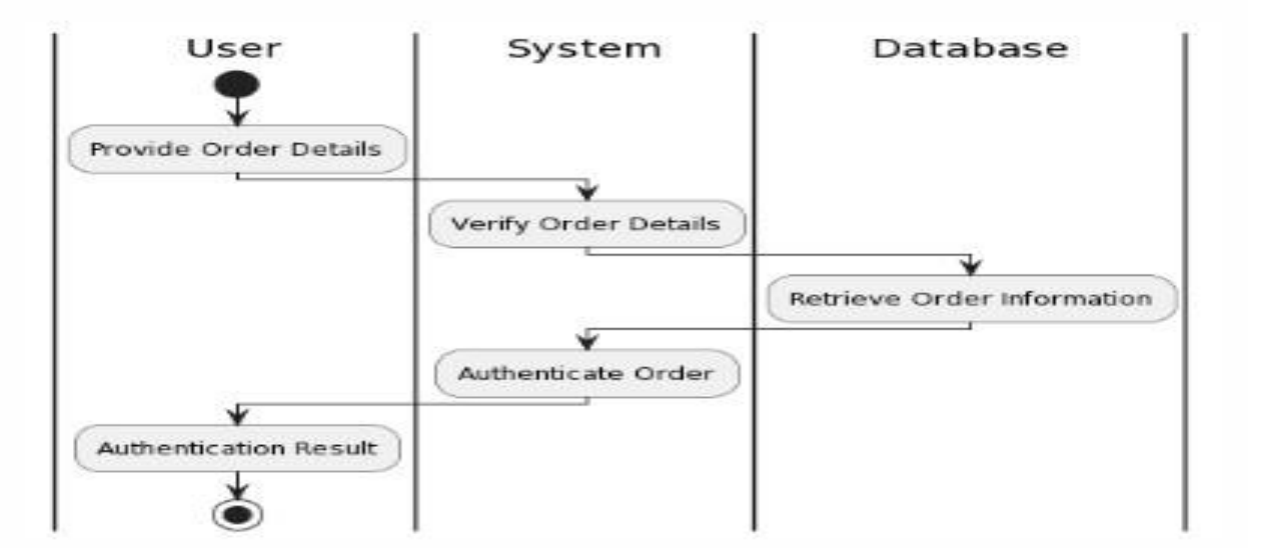

Figure 24: Order Authentication

Swim-lane Diagram (Payment)

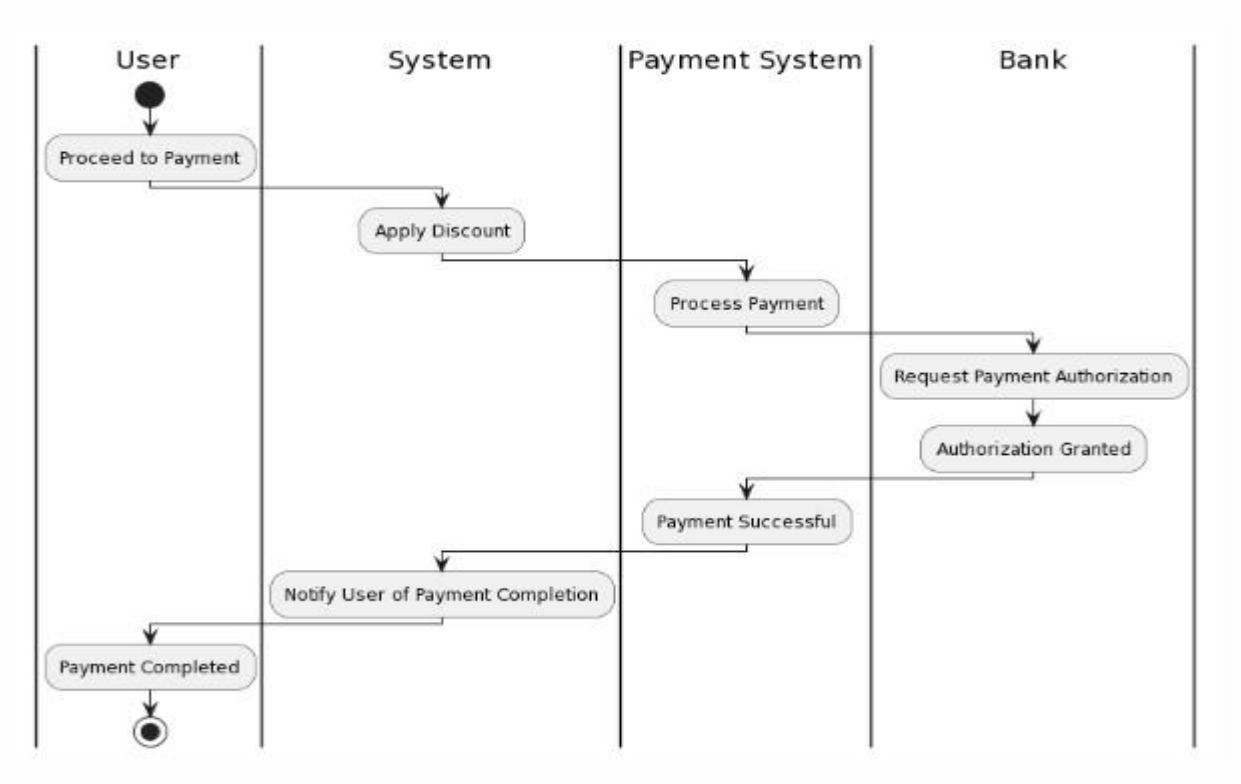

Figure 25: Payment

Swim-lane Diagram (Delivery Log)

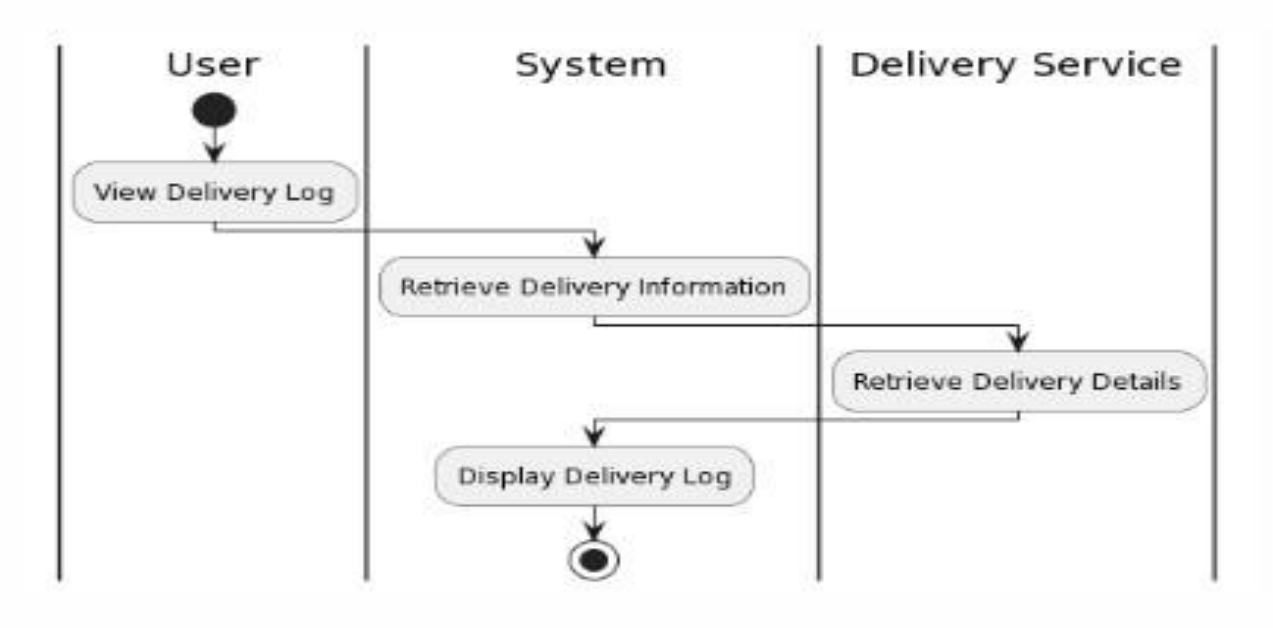

Figure 26: Delivery Log

11. Appendix

11.1 Prioritization of requirements

We've prioritized the functional requirements by following Three-level Scale technique.

11.1.1 Three-level Scale

Three-level scale techniques are a type of measurement scale that uses three levels to measure a variable. The three levels are typically labeled as "low," "medium," and "high." This type of scale is often used when the variable being measured is subjective or difficult to quantify.

11.1.2 Prioritization of the requirements of Medikit

F_R1 – High priority: Users should have the capability to create accounts on the platform, providing necessary information such as username, email address, and password.

F_R2 – High priority: Users should possess the ability to search for medications using various criteria such as medication name, category, or dosage, facilitating easy access to desired products.

F_R3 – High priority: Users must be able to place orders for medications seamlessly through the platform, specifying the quantity and desired delivery options.

F_R4 – High priority: The platform should offer secure payment processing mechanisms, enabling users to complete transactions using preferred payment methods securely.

F_R5 – High priority: Pharmacies should be empowered to update medication availability on the platform, ensuring accurate representation of available products to users.

F_R6 – Medium priority: Enable users to edit and update their account information, including personal details, contact information, and preferences.

F_R7 – Medium priority: Implement advanced search filters such as price range, manufacturer, and dosage form to refine medication search results.

F_R8 – Low priority: Implement password strength validation to ensure that user passwords meet minimum security requirements, such as minimum length and inclusion of alphanumeric characters.

F_R9 – High priority: Users should have access to real-time order tracking functionalities, allowing them to monitor the status of their orders from placement to delivery

F_R10 – High priority: Administrators must have access to a comprehensive dashboard, providing insights into system operations, user activities, and performance metrics.