

# **Pharmacy Management System**

## **Final Project Report**



Sri Lanka Institute of Information Technology  
IT2080 Information Technology Project

Group ITP25\_WD\_B5\_107

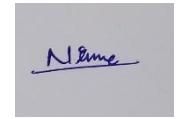
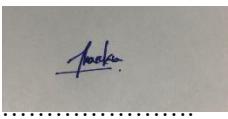
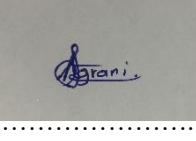
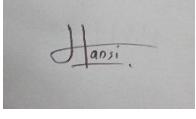
May 2025

## Appendix 2 – Declaration

### **Declaration**

This project report is our original work and the content is not plagiarized from any other resource. References for all the content taken from external resources are correctly cited. To the best of our knowledge, this report does not contain any material published or written by third parties, except as acknowledged in the text.

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## **Abstract**

The Pharmacy Management System (PMS) is a comprehensive solution designed to streamline operations for pharmacies. This web-based application offers a set of essential features, including customer management, order processing, inventory tracking, supplier coordination, financial management, and marketing support. Using a robust MERN stack (MongoDB, ExpressJS, ReactJS, NodeJS), the system provides a user-friendly and interactive platform for pharmacy staff and managers to handle their daily activities efficiently. By reducing the need for manual operations, the PMS enhances accuracy and speed in pharmacy operations, resulting in significant improvements in service delivery. Our team members carefully selected the functionalities to include in the PMS after conducting thorough discussions on creating a Java-based web application. We chose the MERN stack for its scalability and flexibility, ensuring easy collaboration and code management through GitHub for version control. In summary, the Pharmacy Management System offers pharmacy owners an advanced and efficient solution that embraces automation and digitalization, addressing the challenges faced in traditional pharmacy operations.

## **Acknowledgement**

Undertaking an ITP group project is an incredible opportunity for IT students to gain hands-on experience and put their learning into practice. As members of the ITP 2025 Y2\_S2\_B5\_107 group, we express our heartfelt appreciation to all who supported and guided us to achieve success in our project. We sincerely thank the owner of the pharmacy, Mr. Samantha Abesinghe, for his invaluable guidance and unwavering support throughout the project. His expertise and insights have been instrumental in shaping our understanding and application of key concepts. We are also grateful to our project evaluator, Mr. Samantha Abesinghe , for dedicating his time and effort to assess our work and provide constructive feedback. His inputs helped us identify areas for improvement and refine our approach. We would like to express our heartfelt appreciation to our parents, colleagues, and other individuals who have supported and encouraged us throughout the project. Their guidance and encouragement have been crucial in keeping us motivated and focused. Finally, we extend our deepest gratitude to our team members who have worked tirelessly throughout the semester to bring this project to fruition. Their unwavering support and commitment to our common goal have been instrumental in achieving the success we enjoy today. We are proud of the work we have accomplished together and the skills we have acquired through this project

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# Chapter 1 – Introduction

## Background

Assuring that patients have access to medical supplies and pharmaceuticals they require, pharmacies play an important role in the healthcare supply chain. [1] The majority of pharmacies offer over-the-counter medications, wellness and health supplies, and also provide pharmaceutical advice to their customers.

For our client Safeway Pharmacy, we are implementing a pharmacy management system. The client is a small independent pharmacy. The number of customers engaged in this pharmacy has increased due to its excellent administration and friendly staff. However, they still manually handle their inventory, sales data and prescriptions. This results in inefficiencies and potential errors such as stock mismanagement, delayed transactions and prescription errors. These errors can occasionally result in significant losses and cause customers to lose interest in the pharmacy.

Managing everything manually creates an enormous amount of work. The pharmacy currently has 5 permanent employees who work on shifts. The pharmacy still requires additional staff. We can easily overcome this problem by automating their tasks.

To overcome these challenges and to strengthen the business, we propose a Pharmacy Management System (PMS). We design this system specially to suit the functions of a retail pharmacy. This pharmacy management system will automate inventory tracking, prescription handling, and sales operations. The customers of this pharmacy can buy medications and health supplies by accessing our new web application. By examining the pharmacy's suppliers via the application, consumers can even select the brand of the products they want to buy. Prescriptions cannot be uploaded to the majority of online pharmacies. We are developing this feature in our system because it is very beneficial for our customers to be able to upload prescriptions to buy medications. To avoid errors, we employ AI to recognize prescriptions that consumers upload. This system will gather customer feedback and ratings to evaluate and enhance the business. The users can use feedback and ratings from previous customers to help them decide before making a purchase.

In addition, this web application facilitates the owner's vision for future expansion of the business. The owner can easily determine what has to be improved because the system offers thorough updates and detailed information on sales activities.

## **Problem and Motivation**

### **Problem**

Critical functions such as managing inventory, managing prescriptions, performing financial transactions, and processing customer data are still performed manually in many pharmacies. Several problems arise from this outdated approach, including:

1. Human errors: Entering all data manually can lead to errors in financial transactions, dispensing prescriptions, or recording prescriptions. This can cause big problems.
2. Inefficiency and time wastage: Employees end up spending a significant amount of time on administrative tasks, reducing the productivity of the entire process. As a result, customers must wait longer, leaving less time for more important activities.
3. Medication shortages: Pharmacies may quickly run out of stock or delay restocking if inventory is not properly tracked, which could affect consumers' access to necessary prescription drugs.
4. Customer inconvenience: It can be challenging for customers to view their prescription history. Also, they can encounter delays while attempting to confirm prescriptions or obtain refills, which could irritate them.
5. Disorganized data: Without a centralized way to manage records, it becomes difficult to retrieve customer information quickly and accurately. Organizing scattered digital information and paper documents takes more time and effort.
6. Inaccurate financial reporting: Inaccurate financial transactions due to manual calculations or paper invoices can cause confusion during audits, loss of revenue, and accounting issues.

### **Motivation**

1. Reduce human error: Automation ensures accurate financial calculations, accurate medication dispensing, and proper recording of prescriptions.
2. Simplify operations: IT solutions reduce administrative load and human labor while expediting order processing and customer service.
3. Improve customer experience: Increase customer satisfaction by simply accessing prescription history, checking inventory status, and submitting refill or renewal requests online.
4. Real-time inventory monitoring: Automated inventory tracking reduces the chance of out-of-stocks and allows for faster reordering by managing your inventory in real-time.
5. Improved supplier management: To ensure prompt replenishment, avoid delays, and provide uninterrupted service to consumers, pharmacies can automate the ordering process.
6. Efficient financial transactions: Digital payment systems, automated sales reporting, and invoicing ensure accurate and transparent transactions and reduce errors in financial procedures.

## Literature Review

The development of technology leads to improvement in many fields. The medical field is one of the major areas which can be considered to prove this point. Due to benefits provided by the digitalized pharmacy management systems, people tend to utilize these systems than the traditional pharmacies. In contrast, a digitalized pharmacy management system facilitates a few more benefits when compared to a traditional system. They have earned a rapid growth due to utilizing of technology such as artificial intelligence. For an example, AI technology can be used to identify the accurate medicine listed in the prescriptions. In contrast, the pharmacists in traditional pharmacies occasionally fail to identify the accurate medicine which is listed in the prescription. These technologies can be used to minimize the ill effects of the system as AI is much more reliable as it has the capability of avoiding the human errors. [3]

Due to the vast development in technology, the competitors are created and they constantly compete to keep their business in a constant level. When considering a pharmacy management system, we can identify a number of competitors. These competitive systems vary according to several factors. The following are the main factors which can be taken into consideration.

1. Billing and order processing
2. AI functionality
3. Security and data protection
4. User interface and experience
5. Legal status
6. Customer support
7. Customer feedback and ratings
8. Performance and scalability

All pharmacy systems can be categorized into two main categories a local and global systems in order to compare the above factors accordingly. The followings are some selected samples from the above two categories.

Local Systems	International Systems
 <b>CareLink</b> Your pharmacy, made easy.	 Walgreens (United states of America)
 <b>Union Chemists</b> (Pvt) Limited Total healthcare support SINCE 1981	 <a href="http://euro-pharmas.com">euro-pharmas.com</a> pharmacie française
 <b>Unique Pharmacy</b> Online Shop	 <b>Pharmacy First</b>

## **Pharmacy Platforms – Local vs International**

A comparative analysis of local and international pharmacy platforms highlights several key differences in user experience, technology integration, and operational efficiency.

### **Local Systems (CareLink, Union Chemists, Unique Pharmacy)**

Local pharmacy platforms offer functional services such as online ordering, prescription management, user accounts, and secure transactions via HTTPS. However, they generally lack AI integration and advanced security features like multi-factor authentication. While user interfaces range from modern (CareLink) to outdated (Union Chemists), all support basic payment options (online and cash-on-delivery), and some provide customer reviews and support via hotlines or messaging apps. Legal compliance is maintained, but transparency regarding licenses varies. Personalization and scalability remain limited.

### **International Systems (Walgreens, Euro-Pharmas, PharmacyFirst)**

International platforms stand out with modern, responsive designs, high performance, and advanced AI features such as personalized recommendations, automated order processing, and chatbots. They offer comprehensive security protocols, including multi-factor authentication, and integrate detailed customer feedback. Legal reliability is ensured through strict adherence to regional regulations (e.g., FDA, UK laws). These platforms cater to large-scale transactions with a wide range of products and efficient support systems.

### **Key Comparison Insights**

- **AI Integration:** Limited in local systems; widely used in international platforms.
- **Security:** Basic HTTPS encryption in local sites; advanced security in global systems.
- **User Experience:** More modern and responsive in international platforms.
- **Scalability:** Local systems are suitable for regional demand; international systems support high-volume operations.
- **Personalization:** Stronger in local services; international systems focus on automation over human interaction.

To enhance local pharmacy platforms, incorporating AI, improving UI/UX design, expanding product range, and adopting stronger security measures are recommended to match global standards and improve customer satisfaction.

## **Aim and Objectives**

### **Aim:**

A pharmacy management system (PMS) makes it easier and more automated for pharmacies to handle financial transactions, inventory, prescriptions and client information. By installing a system that increases the precision, effectiveness, and transparency of pharmacy operations, this solution seeks to eradicate inefficiencies, lower human error, and enhance the general client experience.

### **Objectives:**

#### **1. Automate prescription management:**

Establish a centralized digital system that makes it easy for customers and pharmacy employees to record, store, and retrieve prescriptions. This allows customers to refill prescriptions quickly and efficiently and allows them to view their prescriptions history.

#### **2. Improved inventory management and control:**

Implement an automated inventory management system to ensure rapid replenishment, prevent shortages, and monitor drug supplies in real time. The system regularly reports on inventory status and sends alerts when inventory levels are low.

#### **3. Improve customer experience:**

Let clients track their orders, get timely prescription alerts, and easily access their drug history and prescription information online. Reducing wait times and improving medication accuracy increases customer satisfaction and convenience.

#### **4. Optimize financial transactions:**

Incorporate automated billing systems and digital payment solutions that ensure accurate financial transactions, fast payment processing, and simple sales report generation. This ensures accurate billing and payment monitoring and reduces errors in manual financial calculations.

#### **5. Facilitate supplier management:**

Automating the ordering process for consumables and pharmaceuticals can improve supplier relationships. Improving communication and order tracking ensures prompt replenishment, reduces the chance of out-of-stocks, and strengthens supplier relationships.

#### **6. Eliminate human error:**

Switching to an automated system reduces the chance of human error in financial transactions, record keeping, and medication distribution. As a result, pharmacy operations become more accurate and reliable.

#### **7. Assure regulatory compliance:**

To make sure the pharmacy conforms with health and wellness standards, create system to maintain accurate records, guarantee data integrity, and expedite reporting processes for audits and regulatory inspections.

#### **8. Improve operational efficiency:**

Employees can spend more time helping clients if they spend less time on manual administrative activities. System-wide operational efficiency is increased by streamlining repetitive processes including financial reporting, prescription management, and inventory tracking.

## **Solution Overview**

Esypharma is an pharmacy management web application solution that is providing an effective platform for pharmacy management which eliminates human errors by automating and streamlining pharmacy operations related to inventory management, supplier management, financial management, order management and customer management.

A pharmacy management system can help the pharmacy owners to reduce costs and increase the efficiency of its operations. This can provide valuable timely data and insights that can be used to improve pharmacy performance and take better decisions to achieve greater profitability.

- Develop a web based application for pharmacy management system
- Database implementation with separate tables to store valuable data for the pharmacy operations
- Validation to ensure accurate entries of data
- Search option for more convenience
- Generating specific required reports based on the performances
- Interactive user interfaces that gives a good user experience

The following benefits can be gained for the pharmacy management system through the approach above.

- A web-based application that will increase the efficiency of the operations
- User friendly convenient application
- Easy access to the system from anywhere at anytime
- Easiness in managing daily pharmacy operations and manipulating information as per need

The pharmacy management system is divided into 5 management systems, namely financial management, inventory management, supplier management, customer management and order management.

## **Methodology**

### **Development Methodology**

Agile methodology, which is structured yet flexible, incremental, collaborative, fast-paced and progressive, will be used for the pharmacy management system. As a people centric methodology which has some fine features like, welcoming the changing requirements with the constant feedbacks, leading increased stakeholder satisfaction and empowering self-organizing teams empowering team engagement, this will be the most suitable for our project.

### **Requirement Engineering**

One of the key steps in the software development process is Requirements Engineering which aims to comprehend the client's needs in order to design the system. Requirements Engineering includes key phases such as feasibility study, analyzing, specifying, validating, and managing stakeholder's needs and expectations.

When developing this pharmacy management system, we collected these requirements using a variety of methods, including:

- Interviews – Conduct interviews with the owner (client), employees, and few customers
- Questionnaires and surveys
- Document analysis – Review current documents maintained by the pharmacy (inventory, prescriptions, etc.).
- User stories
- Use case diagrams
- Reviews and workshops – Conduct workshops to review the requirements identified. So that they can be validated before designing the system.

### **System Design**

- User Stories – To capture the needs and expectations of the users
- Use-case Diagrams – To graphically capture the functional requirements of the system, so that one can see the interactions between the user and the system.

Our system will be adopting the following approaches.

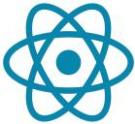
- High-Level Designing: The Model-View-Controller(MVC) architecture

The separation of data, user interface and control logic in the system, enhances code organization, scalability, easier maintenance and better control over the data and business logic handling.

- Low-Level Designing: Entity-relationship Diagram

To organize, simplify the database design for a well-structured and efficient system, we will apply this in designing the database.

## Technology Stack

<b>Frontend</b>			
	Figure 2. React	Figure 3. TailwindCss	Figure 4. MaterialUI
<b>Server-side</b>			
	Figure 5. nodeJS		Figure 6. ExpressJS
<b>Database</b>			
		Figure 7. mongoDB	
<b>Development Environment</b>			
		Figure 8. VSCode	
<b>Version Control</b>			
		Figure 9. GitHub	
<b>API Testing</b>			
		Figure 10. Postman	

## Design Tools and Technologies

### 1. Development Tools

Supporting JavaScript, Node.js and React Visual Studio Code is a lightweight yet powerful code editor with a large selection of extensions to improve development efficiency.

JavaScript libraries for Node.js and React apps can be installed and managed more easily with the help of node package manager.

MongoDB Compass is a graphical tool for visualizing and managing MongoDB databases. [4]

Through request transmission and response verification Postman enables developers to test APIs.

Teams can store, maintain, review and collaborate on code using the GitHub platform.

## **2. Development Techniques**

In software development best practices for code such as modular coding, the MVC pattern and RESTful API design improve communication and organization. [5]

While improving efficiency with slow loading, database indexing, and caching, testing and performance optimization guarantee system stability through unit, integration, and end-to-end testing

To make deployment and system maintenance more efficient CI/CD and deployment use automated testing, containerization and monitoring

## **Testing**

Testing goes hand in hand with our development process to ensure that the system is running as expected. We are going to run the following tests: [6]

- **Unit Testing** - Testing individual components of the system using Jest.
- **Integration Testing** - Postman is a tool that tests API answers and interactions to make sure various modules function properly together.
- **Security Testing** - OWASP ZAP will be used for identifying and fixing security vulnerabilities.
- **Performance Testing** - A tool for performance testing that guarantees system stability under high demand is Apache JMeter.

## **Integration Technique**

Integration means to combine all the system's components so that the overall system functions as one. We shall use the following for this:

- **Continuous Integration** - prevents human errors by automating code integration and testing.
- **API Integration** - ensures smooth communication between third-party services, the frontend, and the backend.
- **Database Integration** - guarantees data consistency and seamless database schema changes.

## **Data Security and Ethical Considerations**

The pharmacy management system ensures data security and integrity through multiple measures. Role-based access control, multi-factor authentication, and strong passwords prevent unauthorized access. Data encryption secures communication and storage of sensitive information. Input validation protects against threats like SQL injection, while regular backups—cloud or local—support disaster

recovery. Integrity checks using hash functions and detection of incomplete or duplicate data ensure accuracy. Updated antivirus software defends against cyber threats. Together, these measures provide secure, reliable service for customers and a safe working environment for users.

## **The structure of the report**

### **SECTION 1:**

The first section of the report describes the difficulties of the manual system and as a solution how the system should support, and the deliverables expected by the users of the system.

### **SECTION 2:**

Section two of the report includes Requirement Analysis, Design, Implementation and, Testing. Use case diagrams and Activity diagrams to depict the Requirements Analysis. ER diagram, Class diagram, and Interfaces depict the overall design of the system. The implementation describes module structures and test cases used in the system.

### **SECTION 3:**

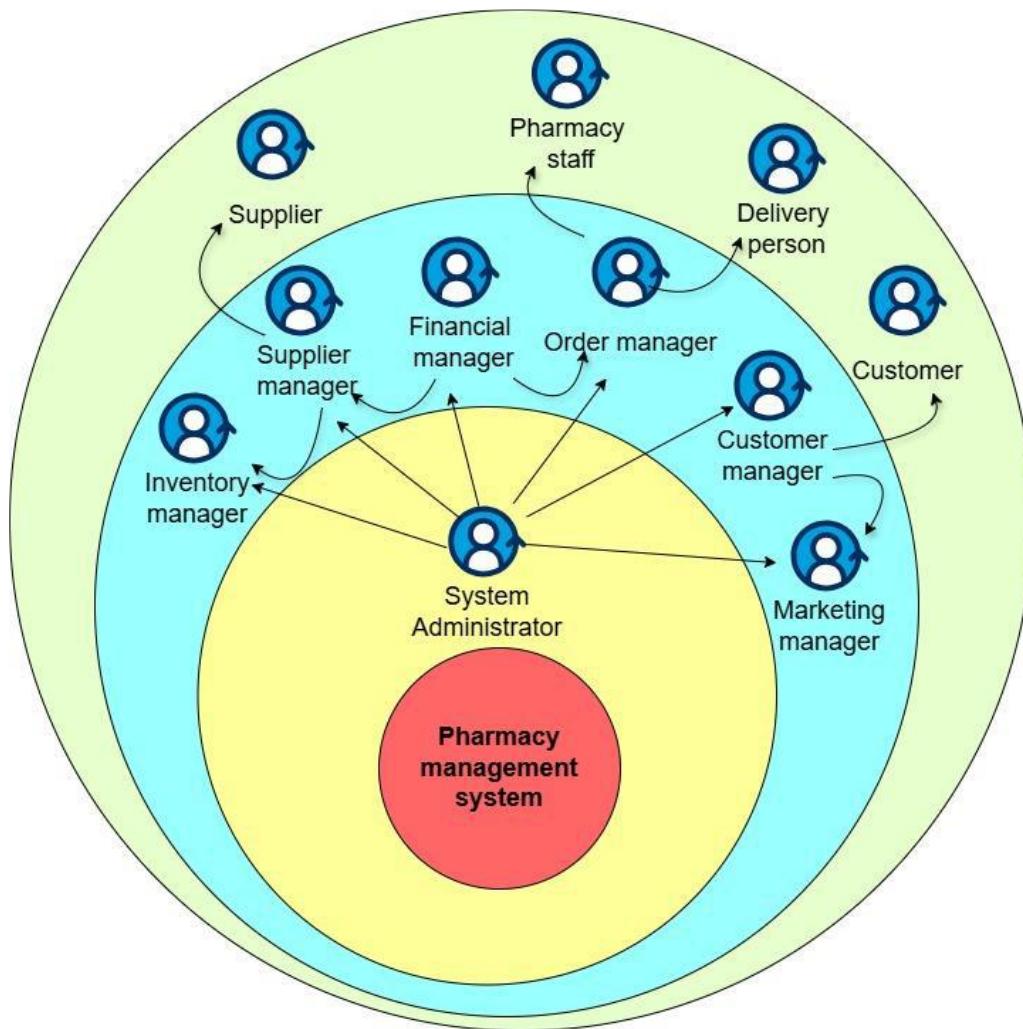
Section three includes references used as support to complete the project report successfully.

## **A clickable link to the Git repo**

<https://github.com/M-Rathnayake/pharmacy-management-system>

# Chapter 2 – Requirements

## Stakeholder Analysis



### 1. Order Manager

**Role:** Manages the order lifecycle from placement to delivery.

#### Key Responsibilities:

- Places orders after payment verification and generates order IDs.
- Maintains order records and tracks order status.
- Coordinates with the Financial Manager for payments and refunds.
- Assigns delivery personnel and communicates with Pharmacy Staff for order packing.
- Handles customer complaints (damaged/missing products) and ensures resolution.

#### Interests/Needs:

- Real-time order tracking.
- Efficient communication with financial and delivery teams.
- Reliable system for managing returns and refunds.

### 2. Pharmacy Staff

**Role:** Prepares and packages orders accurately for delivery.

**Key Responsibilities:**

- Prints order labels and packs products as per customer requests.
- Updates order status (e.g., "processing," "ready for delivery").
- Hands over orders to Delivery Personnel.
- Securely logs in to the system to access order details.

**Interests/Needs:**

- Clear order instructions and product details.
- Easy access to pending/new orders.
- Secure authentication and role-based access.

### 3. System Administrator

**Role:** Ensures system security, performance, and user management.

**Key Responsibilities:**

- Manages user accounts (activation/deletion, access control).
- Monitors system performance and troubleshoots issues.
- Maintains system updates and implements security measures.
- Ensures data backups and system recovery in case of failures.

**Interests/Needs:**

- Robust security protocols.
- Efficient user activity monitoring.
- Reliable system maintenance tools.

### 4. Delivery Personnel

**Role:** Ensures timely and accurate delivery of orders.

**Key Responsibilities:**

- Updates order status (e.g., "out for delivery," "delivered").
- Communicates with customers for delivery concerns.
- Accepts Cash on Delivery (COD) payments.
- Coordinates with Pharmacy Staff and Order Manager for order details.

**Interests/Needs:**

- Real-time order tracking and delivery updates.
- Clear customer communication tools.
- Availability status management.

### 5. Financial Manager

**Role:** Manage balance sheet , bank book, profit and loss, petty cash and ledger recording, salary calculation.

**Key Responsibilities:**

- Verifies payments and generates receipts.
- Processes refunds for returned orders.
- Maintains financial records and transaction logs.

**Interests/Needs:**

- Secure payment processing system.
- Integration with order and refund management.
- Automated receipt generation.

## **Requirements Analysis**

### **Customer Manager**

- Receive and track customer complaints
- Provide solutions or escalate unresolved issues to relevant teams
- Maintain a complaint resolution log to track issue status
- Gather customer feedback after purchase
- Analyze feedback to determine popular products and customer preferences
- Generate reports on frequently purchased and recommended products
- Share insights with inventory managers to promote in-demand products
- Make sure new customers are registered and logged into the system
- Help clients with account or login problems
- Report account issues to the system admin for resolution
- Determine and recommend items for marketing based on customer buying patterns
- Assist the inventory staff in highlighting products that are in high demand
- Notify customers about discounts and offers based on their purchase history

### **Order Manager**

- Once the customer confirms the order and the payment is verified, order manager shall place the order.
- Order manager shall generate order id for each order.
- Order manager shall maintain record of orders and the relevant details for each order.
- Order manager shall forward the order details to the financial manager in order to generate receipt and for payment verification.
- Order manager shall inform the financial manager in case of return of an order by a customer.
- Order manager shall be able to check the status of packed orders by pharmacy staff.
- Order manager shall notify the staff about the assigned delivery personal for a particular order.
- Order manager shall forward necessary order details to the staff for packing of order.
- Order manager shall contact the relevant customer if a customer returns any order due to damage products, false orders and missing products.
- Order manager shall maintain records of order complaints and update the status of resolving of order issues.
- Order manager shall notify customers about the return and refund policy whenever customer purchase a product.
- Order manager shall be able to check the availability status of the delivery personal.
- Once an order is confirmed and packed, order manager shall assign a delivery personal to a particular order and send order details.

### **Inventory Manager**

- The system should monitor stock levels, update quantities, track availability of medicines and notify low-stock situations.
- System should let only the authorized users to modify the inventory. The authorities should be granted based on their user roles and responsibilities.
- The system allows searching medicines, filtering based on name, category, brand, stock levels and expiry dates.
- The system should notify 30-120 days before the expiration depending on the medicine.
- The system should maintain a threshold of the medicines and alert the stock is low.

- For much easier access to the product details, the user can scan the barcode and get the details.

## **Supplier Manager**

- Assigning a unique Supplier ID.
- Update, delete or add new supplier details to the supplier account.
- Validate supplier legal documents licenses in order to verify the supplier is legally registered person.
- When the inventory manager alerts low stock details, the supplier manager should be able to create purchase order.
- Assign orders to the suppliers based on their availability and reliability.
- The supplier manager should be able to approve the supplier payments.
- Keep record on pending payments and completed payments.
- The supplier manager should be able to review the supplier invoices.
- The supplier manager should be able to track supplier performance based on delivery time, quality of the products and compliance.
- Generate reports on the effectiveness of suppliers.
- Should be able to flag suppliers who frequently cause problems.

## **Financial Manager**

- Receive purchase invoices from suppliers
- Allocate the required budget for supplier payments
- Forward invoices to supplier management for processing
- Communicate with inventory managers to analyze product demand
- Identify top selling items to make better stocking and pricing decisions
- Set product prices based on demand, costs, and market trends
- Apply discounts and promotional offers where appropriate
- List available payment methods on your checkout page
- Process customer payments securely
- Create receipt templates for customer orders
- Auto-generate receipts when a customer places an order
- Provide return receipts when a customer returns an item
- Track daily transactions of the pharmacy
- Generate Profit and loss reports regularly

## **Requirements Modeling**

**1. Customer Management:** The system shall enable the customer manager to handle customer support and issue resolution, including receiving and tracking complaints, resolving them, and escalating unresolved issues to appropriate teams. It shall also maintain a complaint resolution log. The system will support customer feedback collection after purchases and provide tools to analyze buying patterns, helping identify popular products. Based on this, the system shall enable personalized product recommendations and promotional alerts to customers. Furthermore, it shall assist in customer account management by allowing new registrations, helping resolve login issues, and reporting technical problems to system administrators.

**2. Order Management:** The system shall allow order managers to place and manage customer orders. Once payment is verified, it will generate unique order IDs and maintain detailed records of all orders. It will facilitate communication with financial managers for payment verification and with pharmacy staff for order preparation. Additionally, it shall support assigning delivery personnel, tracking deliveries, and managing order issues such as damaged or incorrect products. The system will provide customers with clear information on return and refund policies and allow them to track order status using reference numbers.

**3. Inventory Management:** The system shall enable the inventory manager to track stock levels, update quantities, and monitor the availability of medicines. It will include features for secure access based on user roles and allow filtering/searching products by various parameters like name, brand, category, or expiry date. It shall generate low stock and expiry alerts and allow for barcode scanning to ease product access. Inventory audits can also be recorded within the system.

**4. Supplier Management:** The system shall support supplier account creation and maintenance, assigning unique IDs, and verifying legal documents and licenses. When inventory levels are low, supplier managers can create and send purchase orders to selected suppliers. The system shall generate and manage purchase orders and invoices and track supplier performance based on delivery times, product quality, and compliance. Problematic suppliers can be flagged based on this performance data.

**5. Marketing Management:** The system shall allow marketing managers to create promotional content for discounts, loyalty programs, and product launches. It will monitor brand reputation using customer feedback and social media insights. The marketing module shall support integration with external platforms like email and social media, and send personalized promotional messages to customers. Additionally, the system shall enable collaboration between marketing, inventory, and customer management teams for better strategy planning.

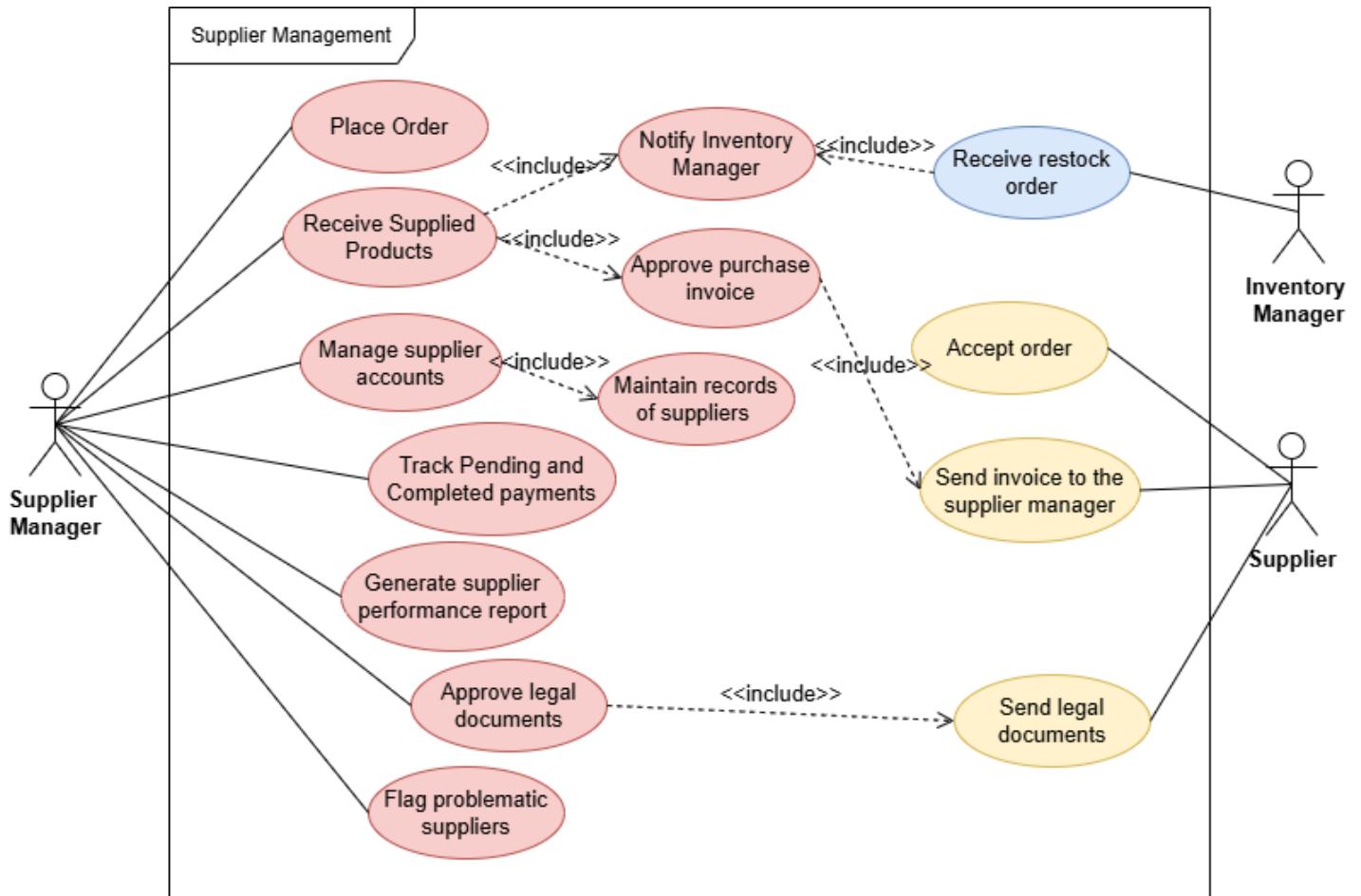
**6. Financial Management:** The system shall enable financial managers to manage invoices from suppliers, allocate budgets, and process transactions securely. It shall support various payment methods, set product pricing based on demand and trends, and generate customer receipts for each transaction. It will also generate reports on daily transactions, profit/loss summaries, and maintain up-to-date financial records.

**7. Technical and Integration Features:** The system shall include a secure and scalable web-based architecture with role-based access controls and two-factor authentication. Data encryption shall be applied for both transmission and storage. The system will include daily backups and support real-time order tracking. It shall also allow barcode scanning for billing and inventory management and support integration with SMS/email services for customer notifications. A responsive and user-friendly interface shall ensure accessibility across various devices and platforms.

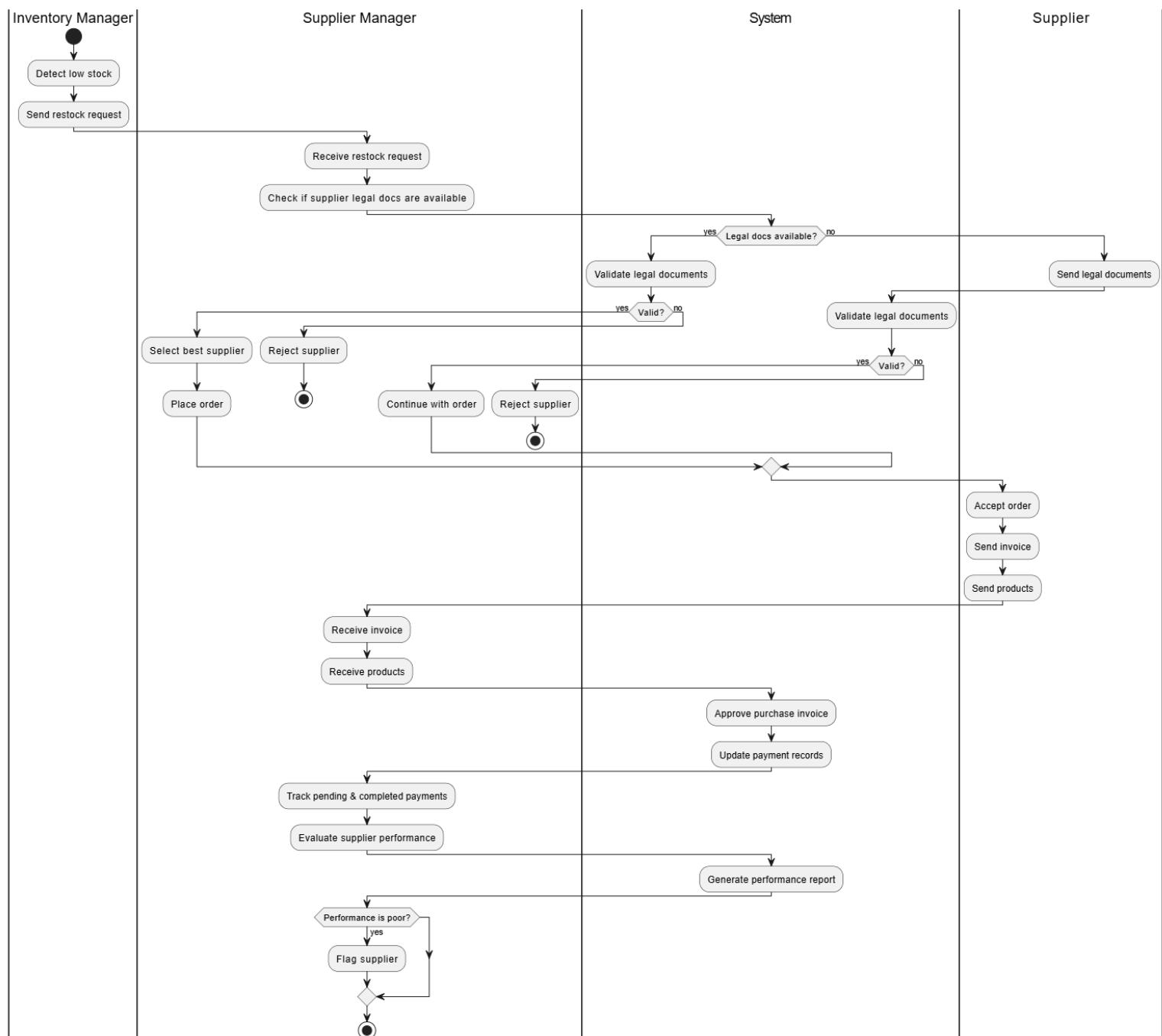
# Chapter 3 – Design and Development

## Supplier Management - IT23358102 - Silva N.N.S

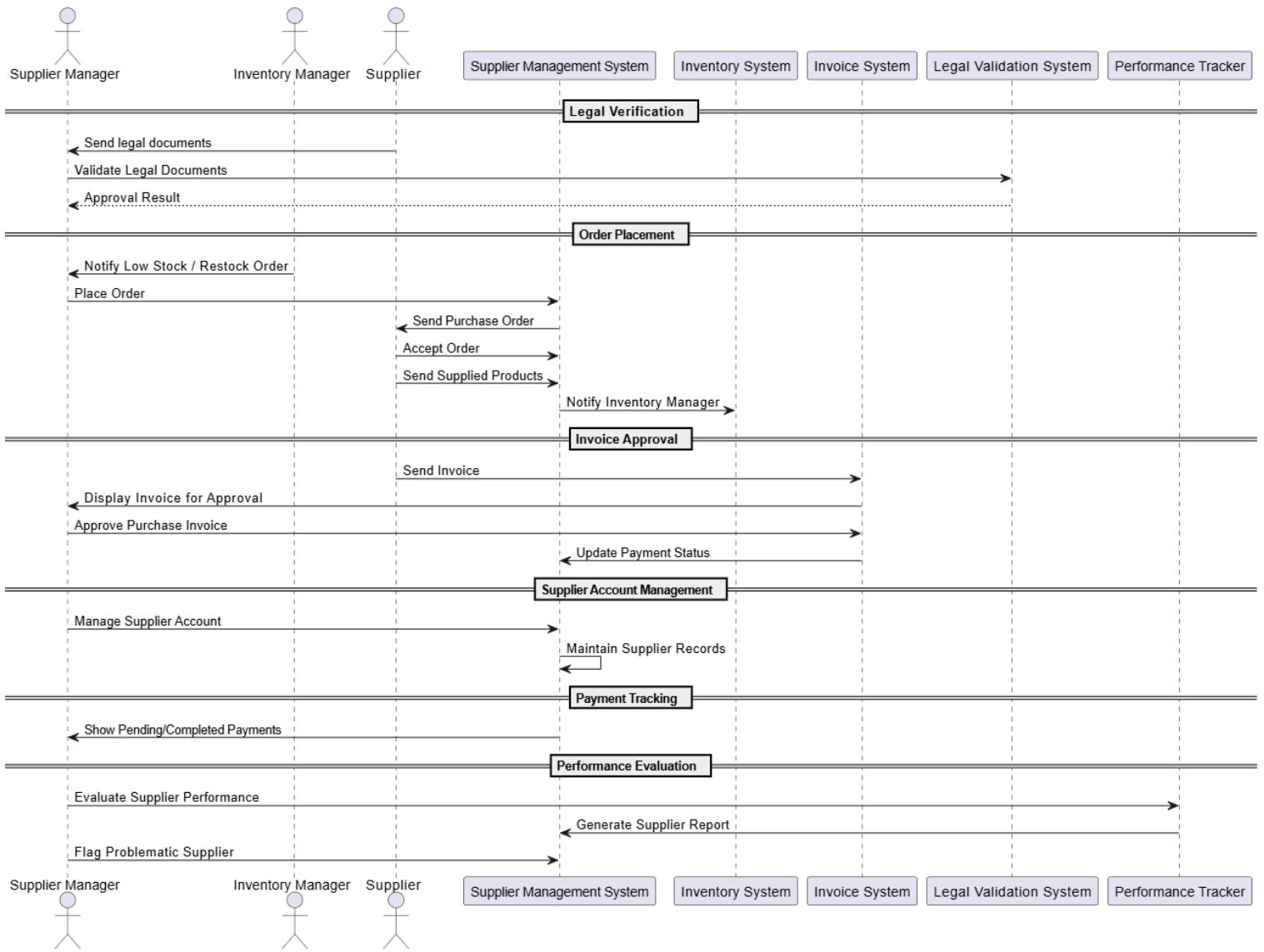
### 1) Use case diagram



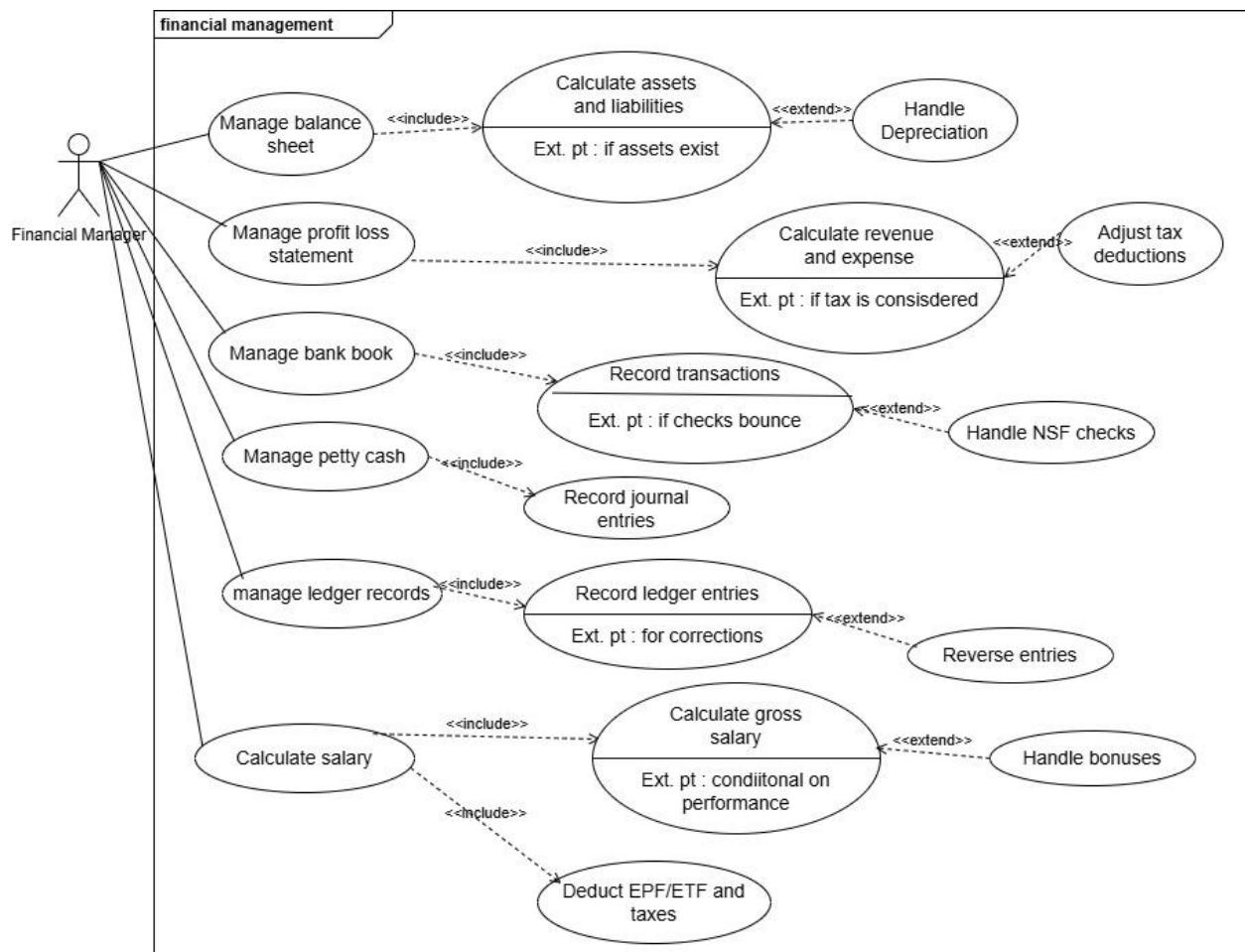
## 2) Activity Diagram



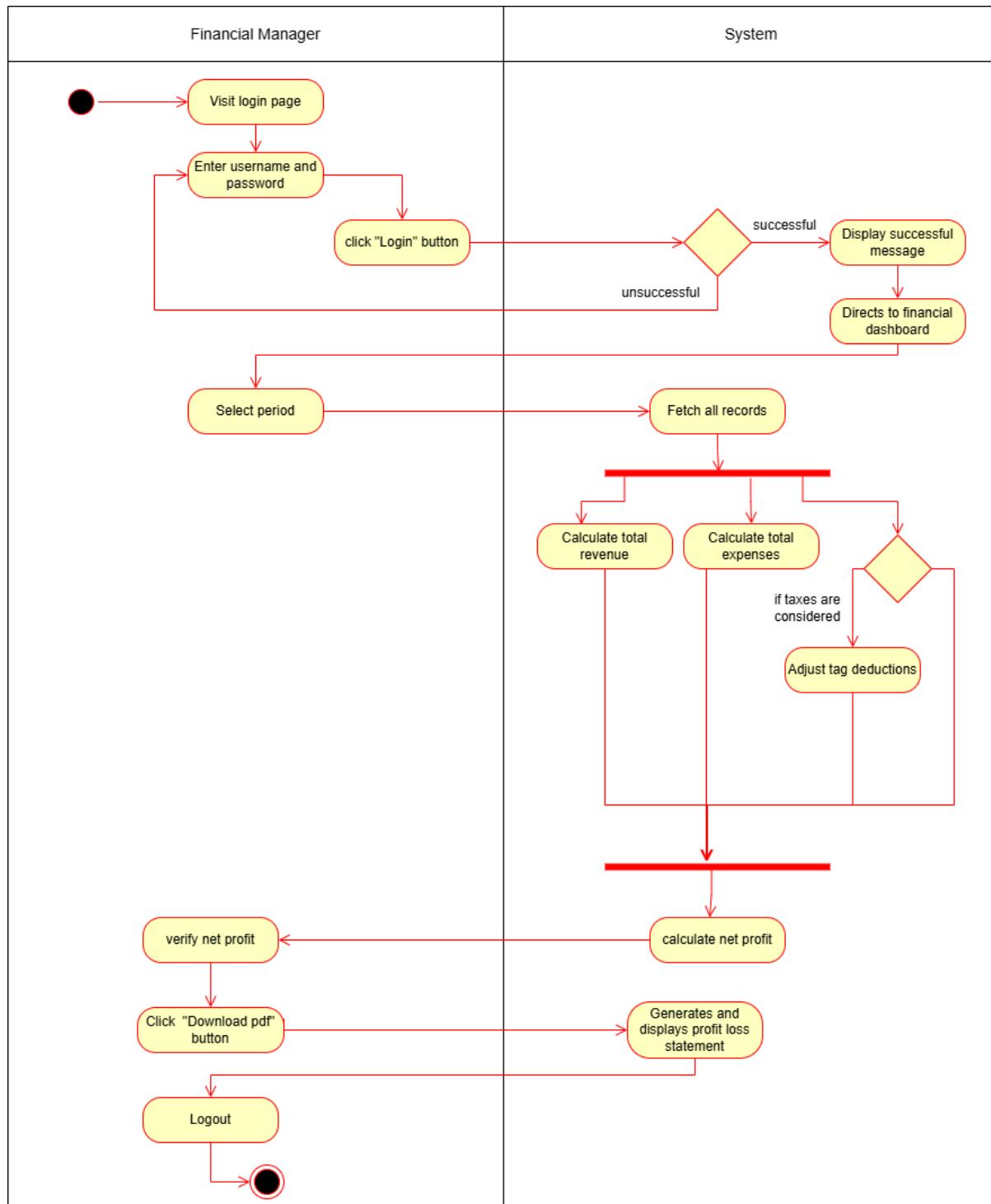
### 3) Sequence Diagram

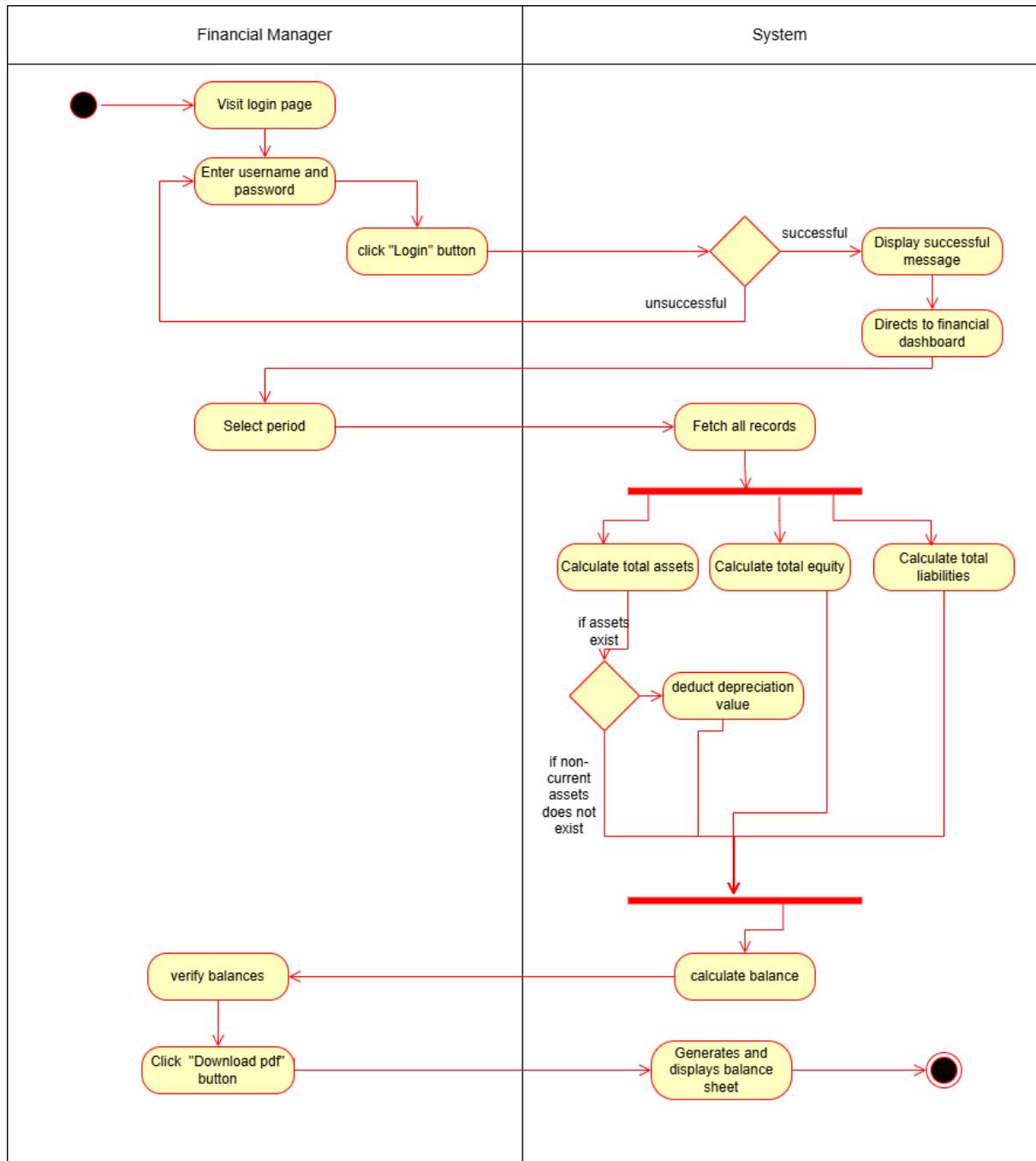


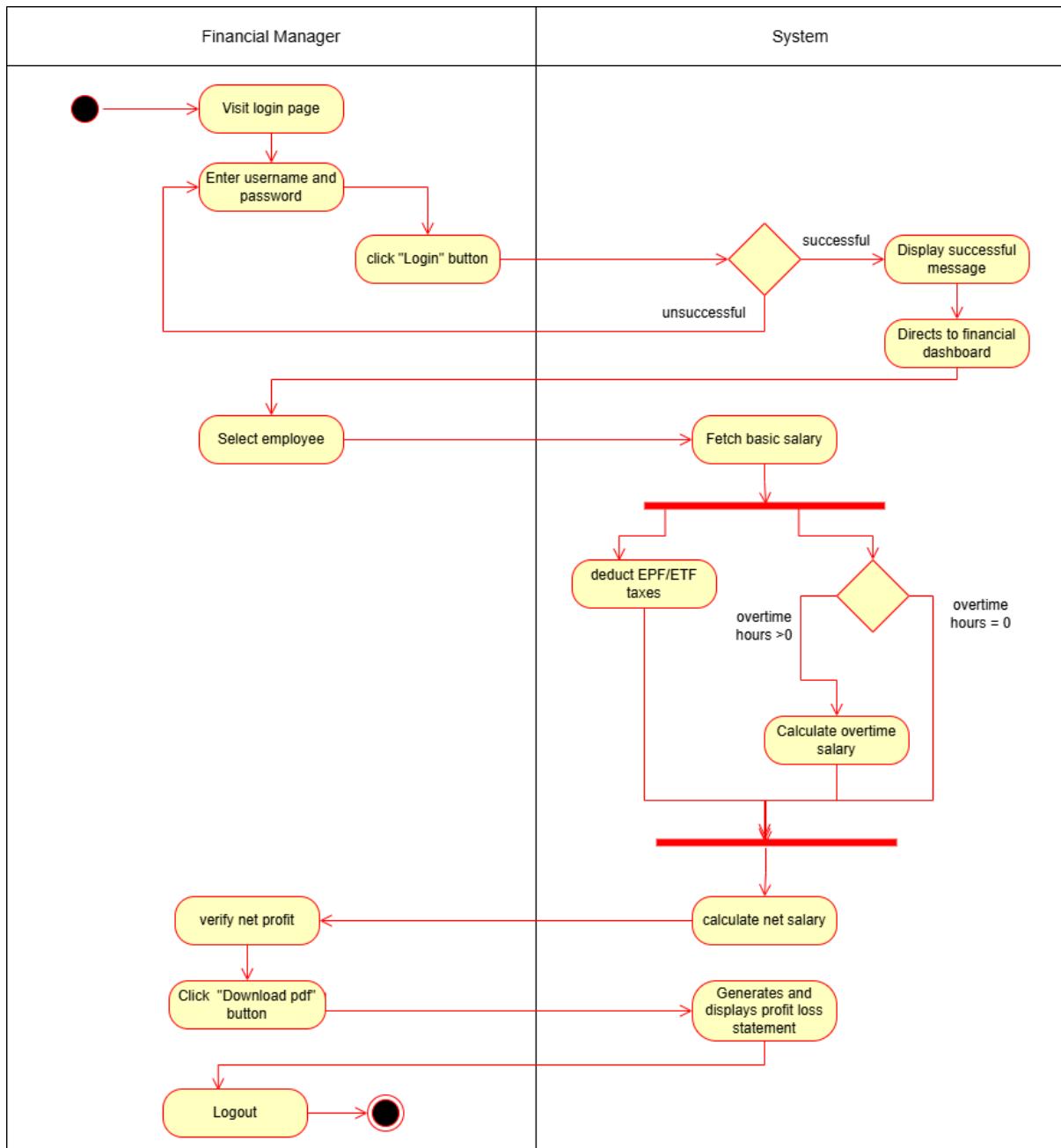
**1) Use case diagram**



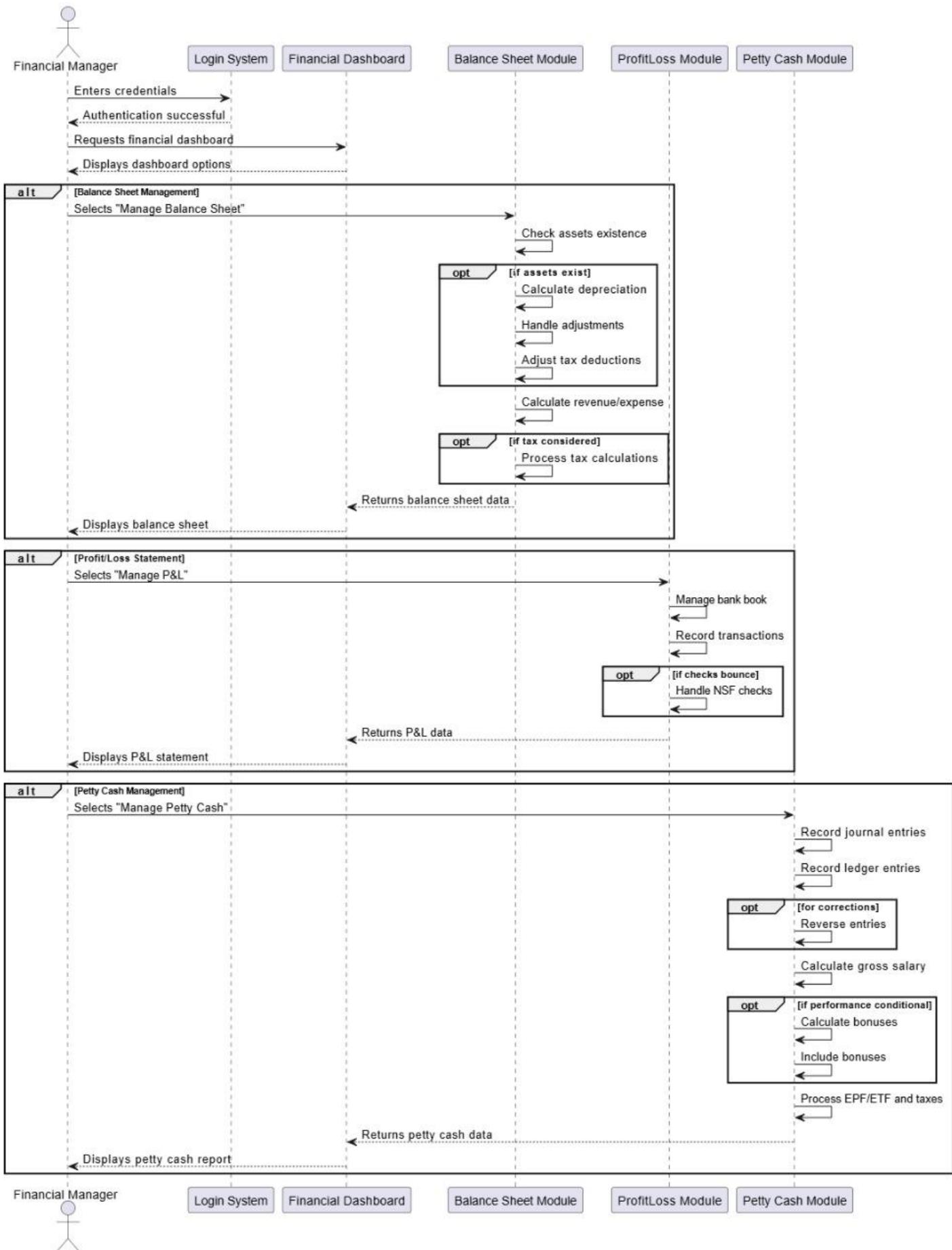
## 2) Activity Diagram



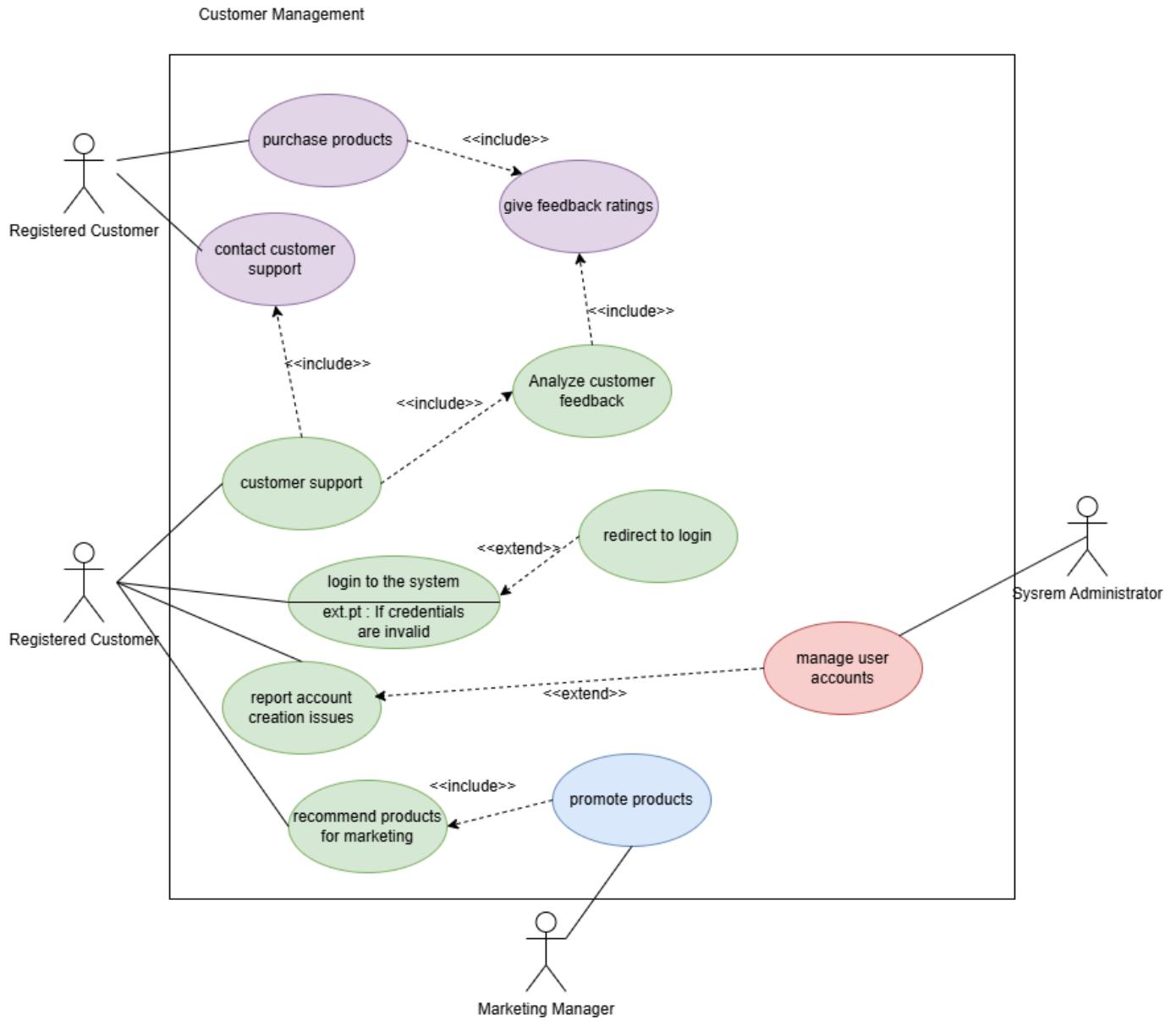




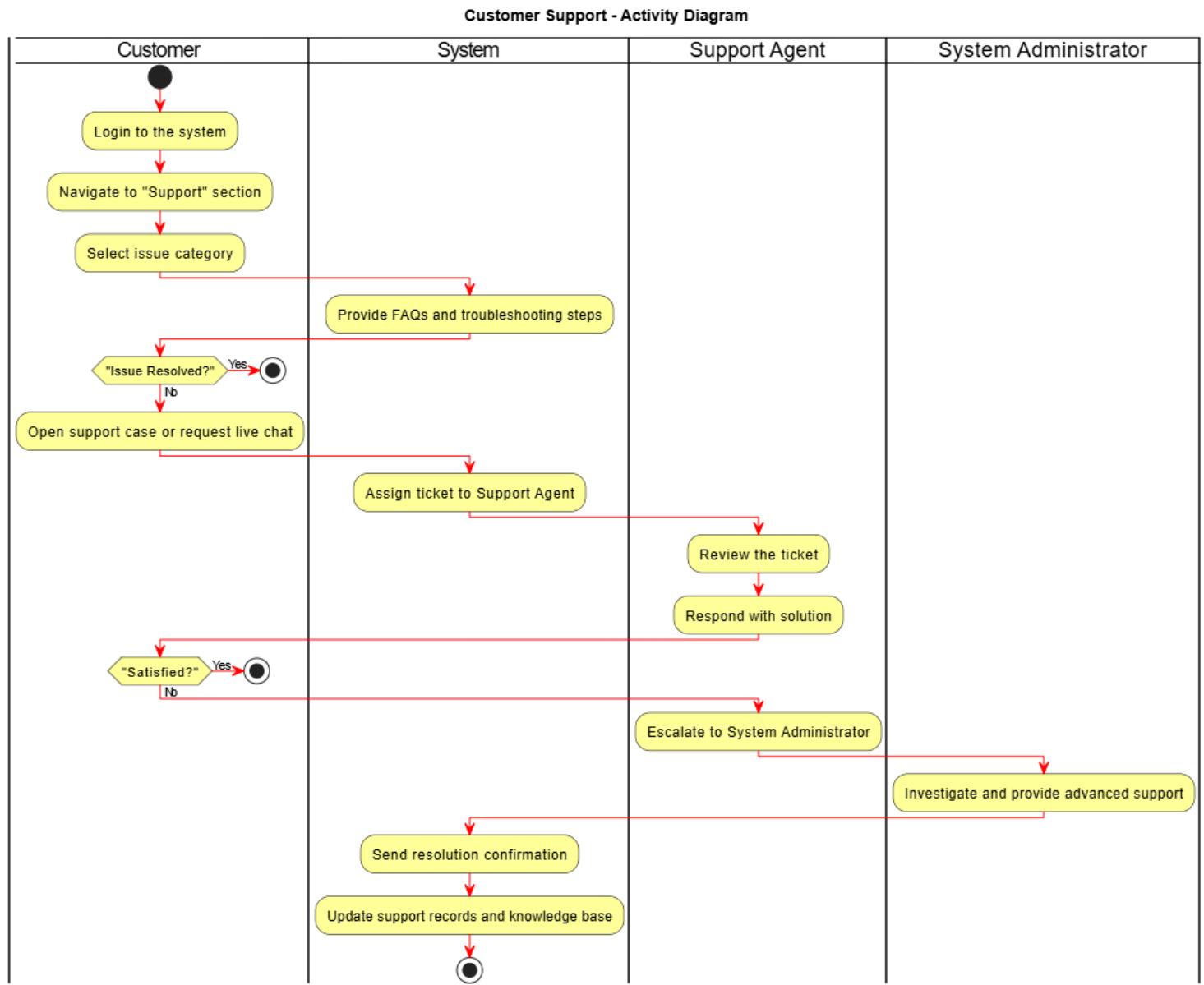
### 3) Sequence Diagram



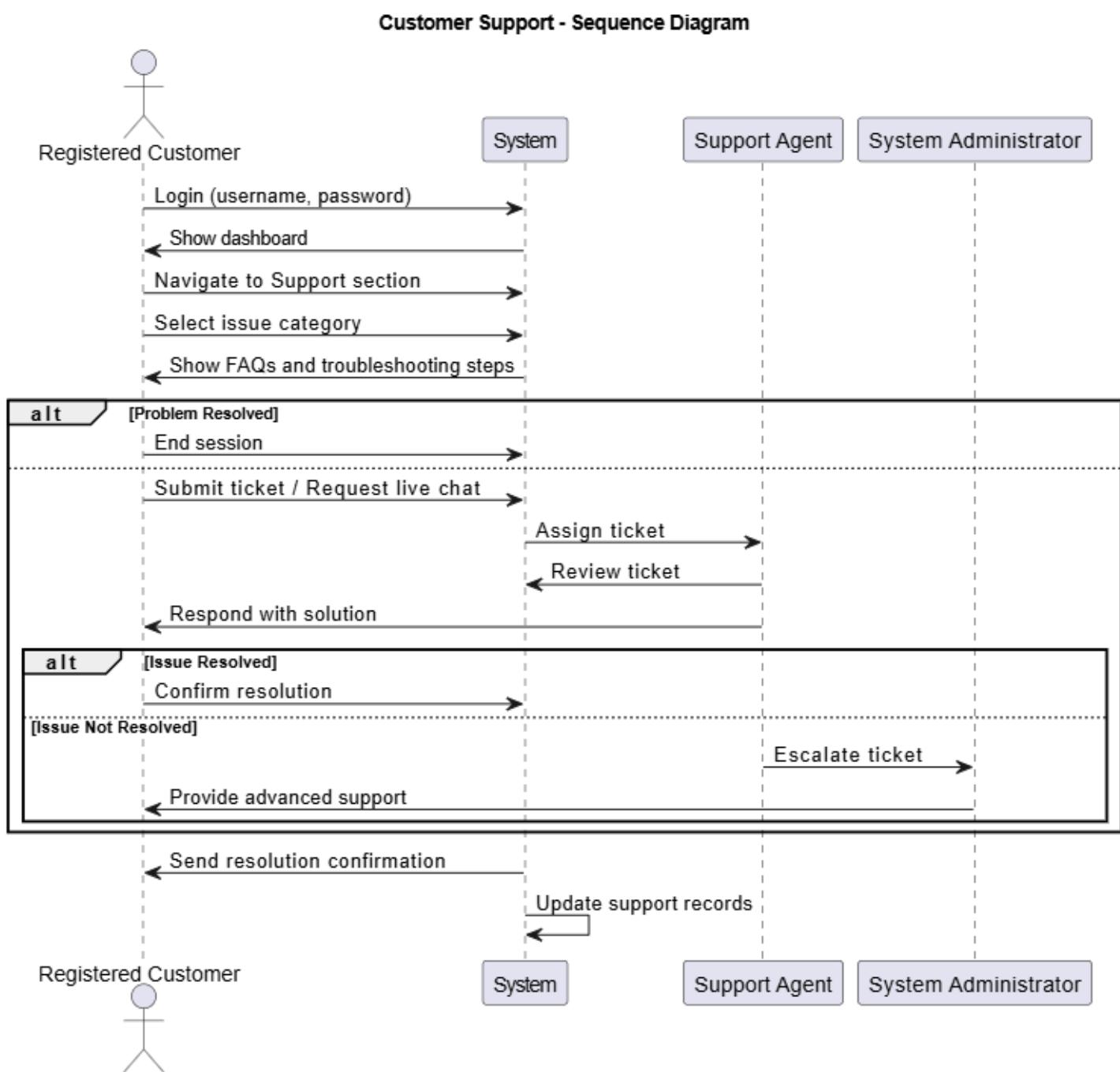
**1) Use case diagram**



## 2) Activity Diagram



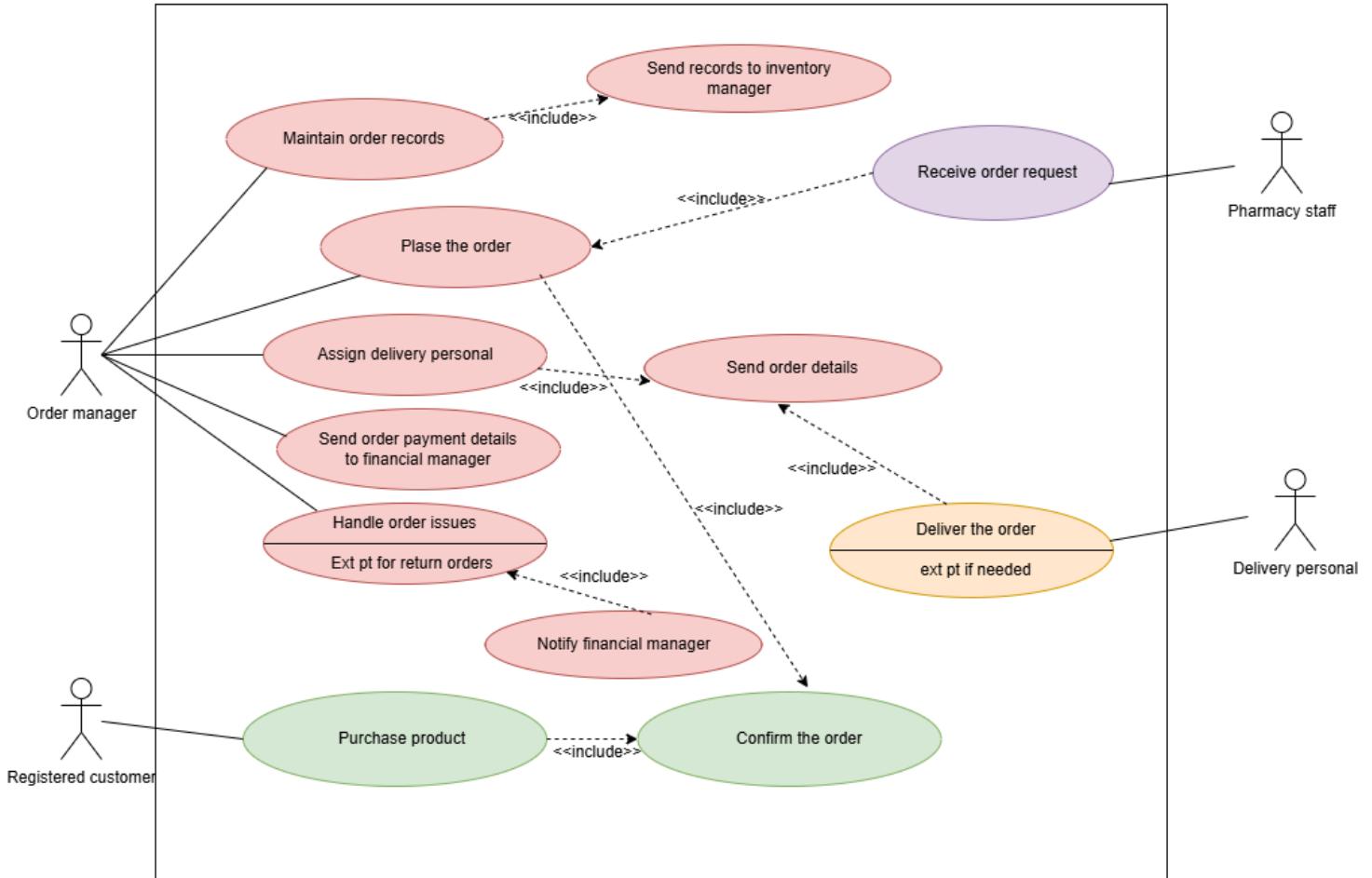
### 3) Sequence Diagram



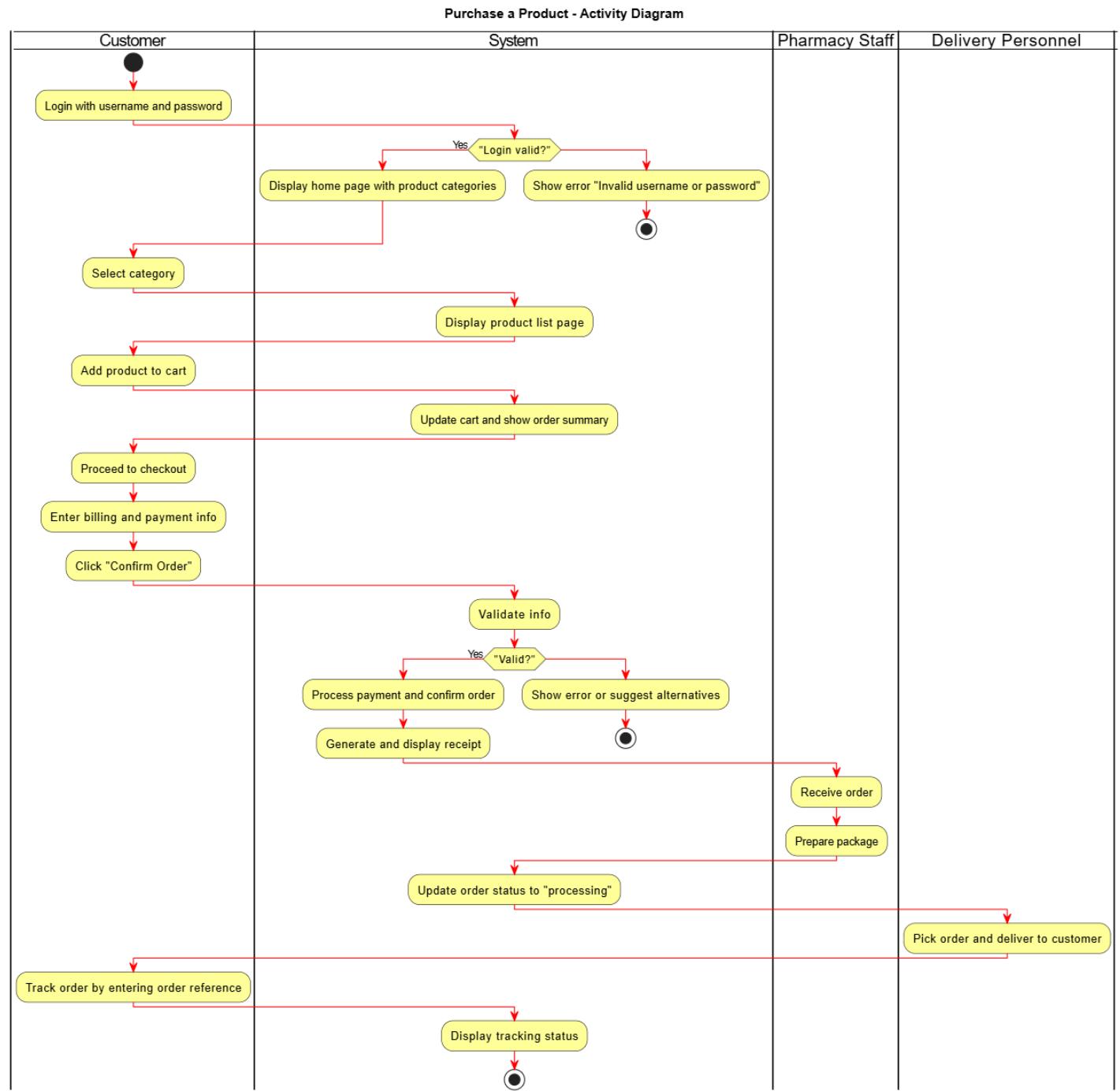
## Order Management - IT23436244 - Jayawarna J A S A

### 1) Use case diagram

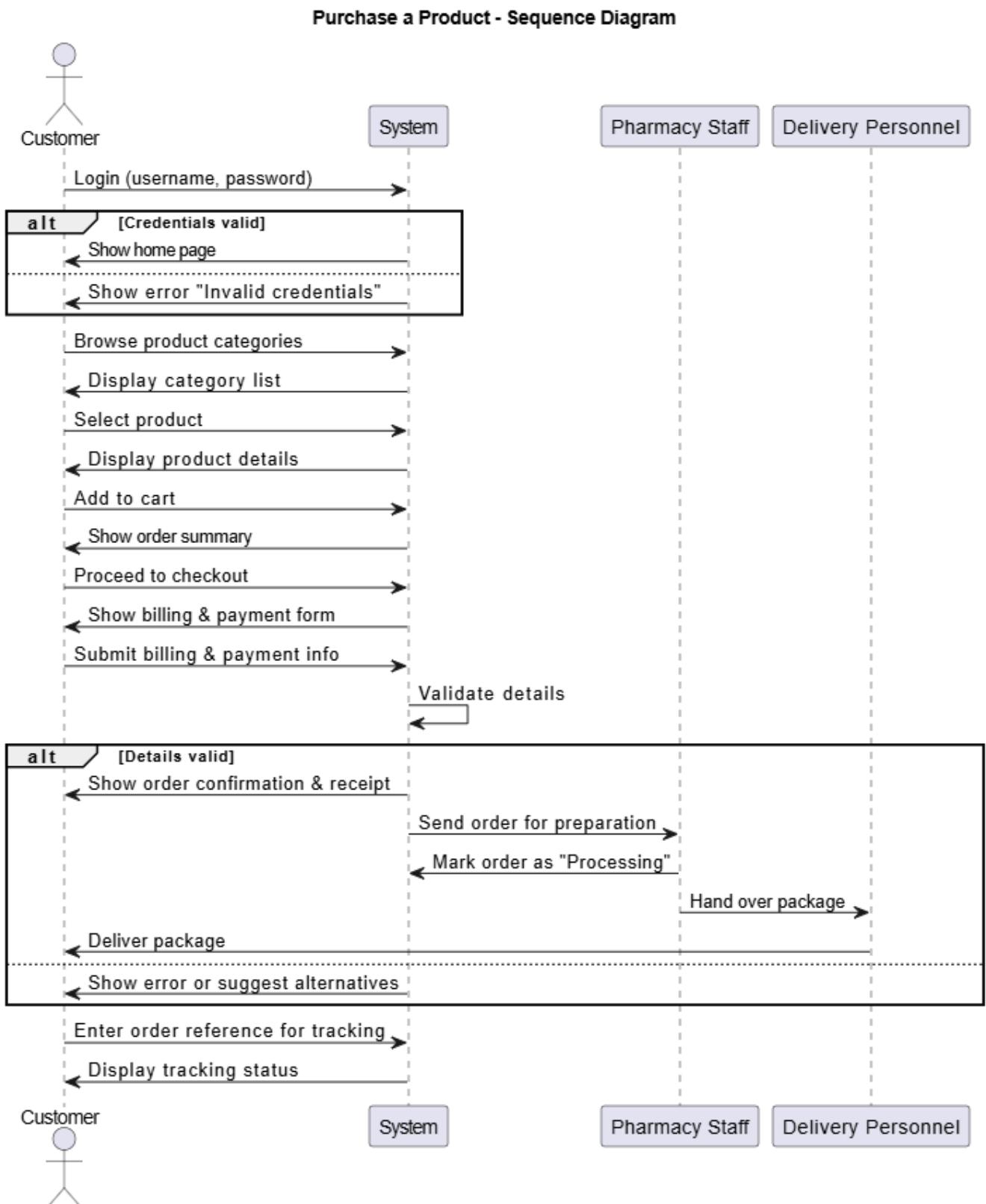
Use Case Diagram Of Order Management.



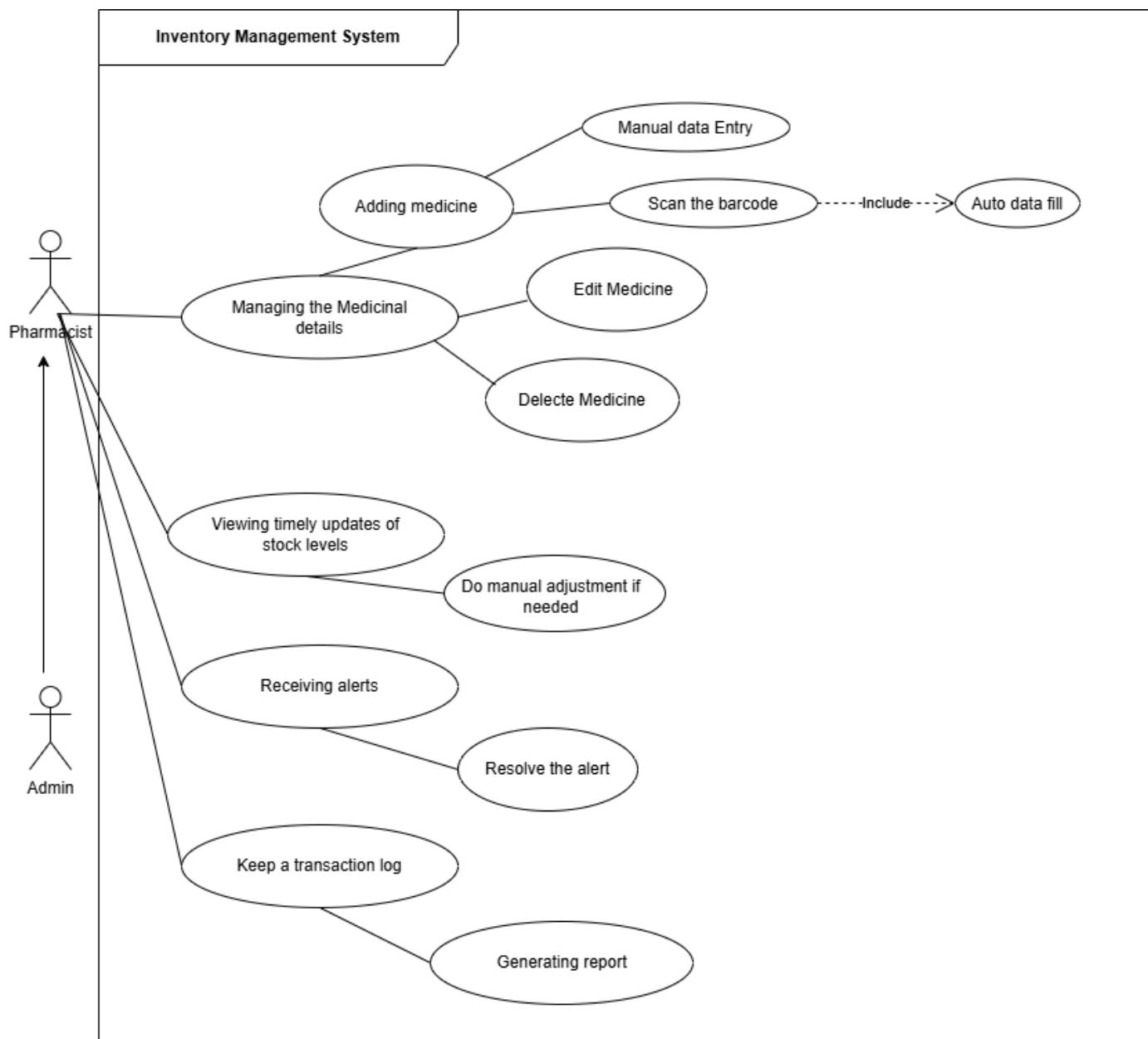
## 2) Activity Diagram



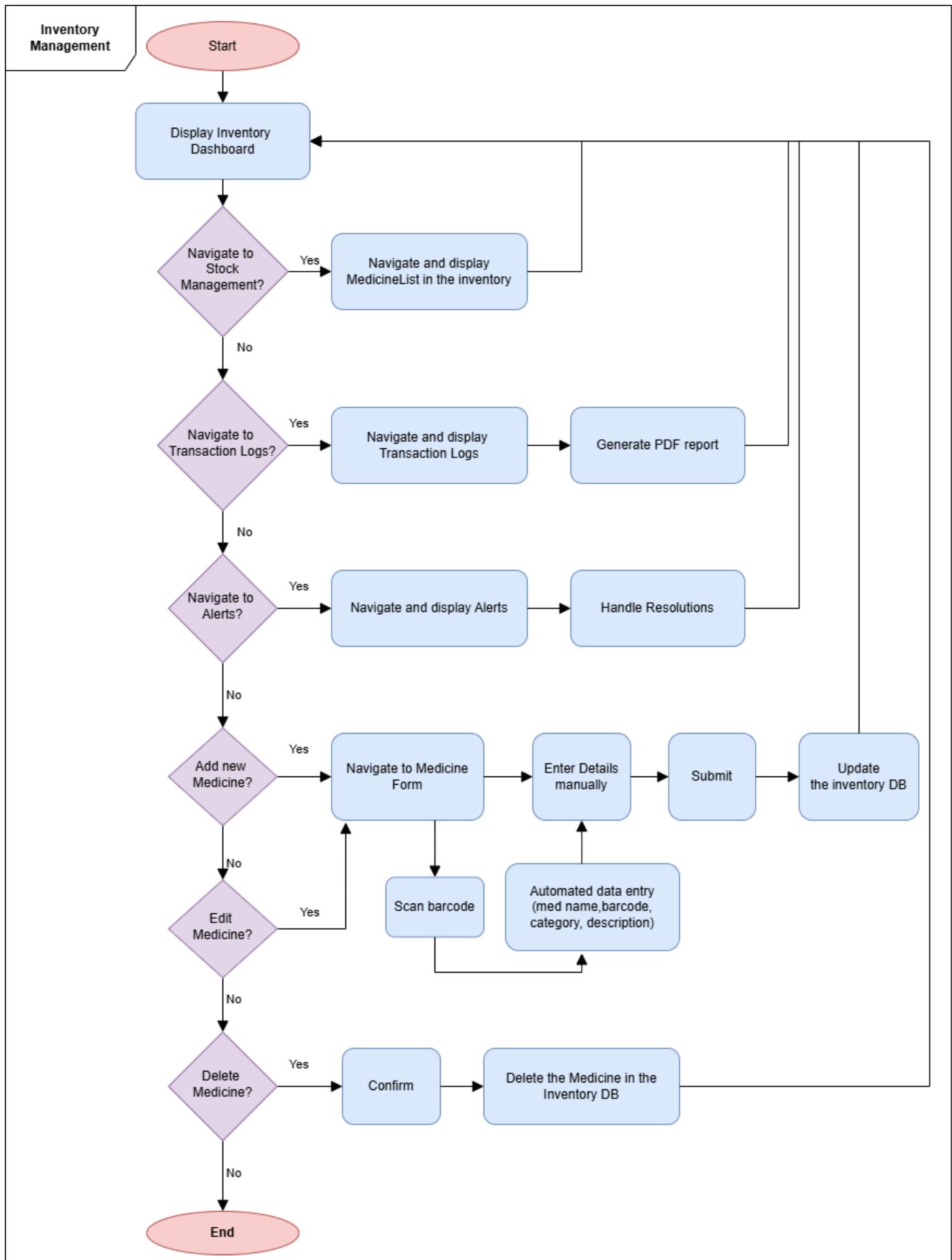
### 3) Sequence Diagram



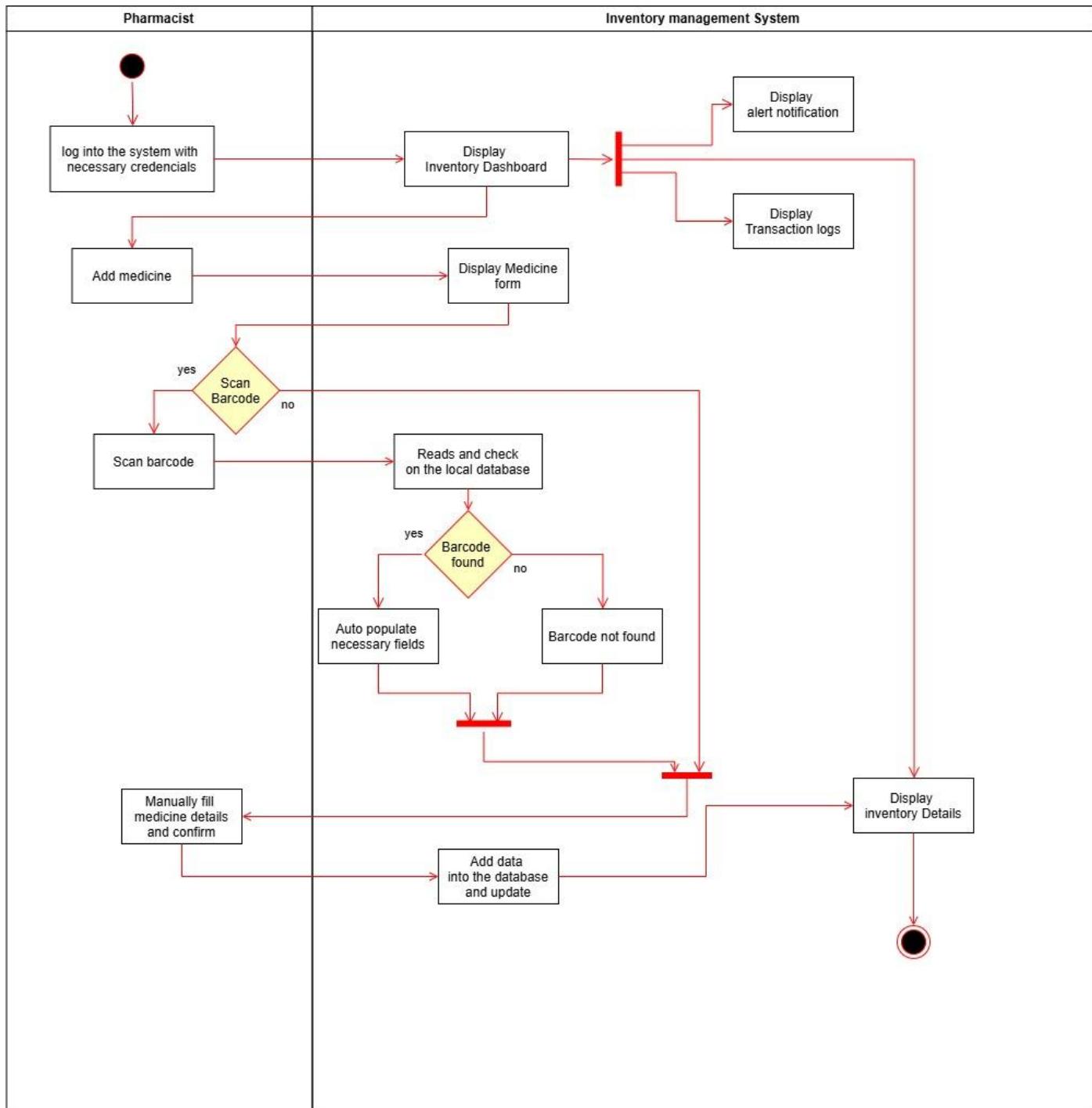
**1) Use case diagram**



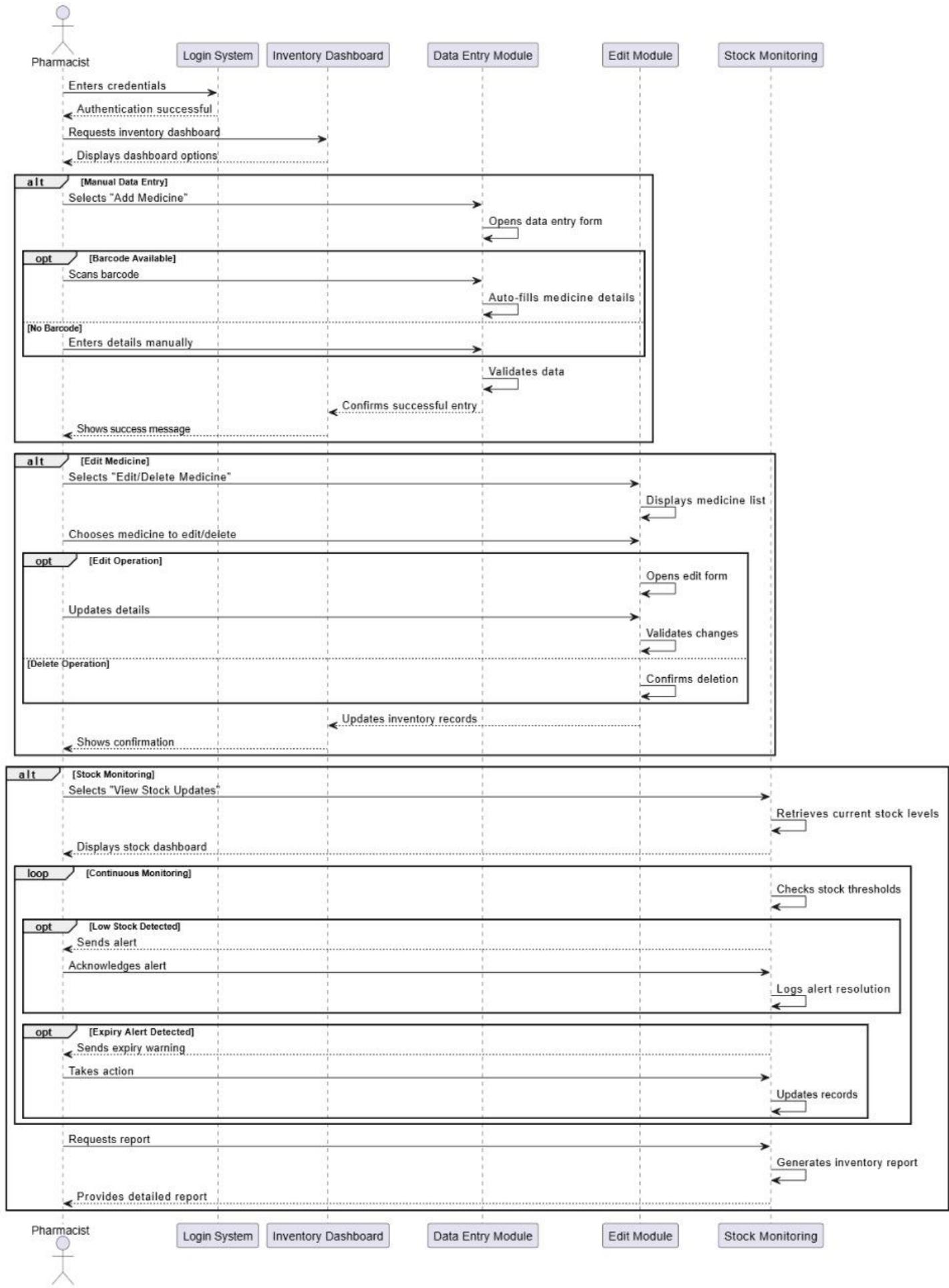
**2) Flow Chart**



### 3) Activity Diagram



#### 4) Sequence Diagram



## Chapter 4 – Testing

### Supplier Management - IT23358102 - Silva N.N.S

#### Test Case 1: Add a New Supplier

<b>Project ID :</b> PMS-SM-001	
<b>Project Name :</b> Pharmacy Management System	
<b>Testing Function :</b> Supplier Account Management	
<b>Test ID :</b>	TC-SM-001
<b>Test Priority :</b>	High
<b>Test Description :</b> Verify that the supplier manager can successfully add a new supplier with valid details.	
<b>Pre-conditions :</b> User is logged in as a Supplier Manager.	
<b>Test Steps :</b> <ol style="list-style-type: none"><li>1) Navigate to Supplier Management section.</li><li>2) Click “Add Supplier”.</li><li>3) Enter valid supplier details (name, contact, address, legal info, etc.).</li><li>4) Click “Save”.</li></ol>	
<b>Pass-conditions :</b> Supplier is saved and appears in the supplier list with correct information.	

#### Test Case 2: Verify Legal Status of Supplier

<b>Project ID :</b> PMS-SM-001	
<b>Project Name :</b> Pharmacy Management System	
<b>Testing Function :</b> Supplier Document Verification	
<b>Test ID :</b>	TC-SM-002
<b>Test Priority :</b>	High
<b>Test Description :</b> Verify legal document upload and validation.	
<b>Pre-conditions :</b>	

**Test Steps :**

- 1) Select a supplier.
- 2) Upload required legal documents
- 3) Click “Validate”

**Pass-conditions :** Documents are successfully verified and marked as valid/invalid.**Test Case 3: Choose Supplier Based on Inventory Alert****Project ID :** PMS-SM-001**Project Name :** Pharmacy Management System**Testing Function :****Test ID :** TC-SM-003**Test Priority :** High**Test Description :** Ensure supplier is chosen based on availability and reliability after low stock alert.**Pre-conditions :** Inventory manager triggers a low stock alert.**Test Steps :**

- 1) View alert.
- 2) Check supplier availability, ratings.
- 3) Select supplier.
- 4) Place order.

**Pass-conditions :** Order placed successfully with optimal supplier.**Test Case 4: Flag Underperforming Suppliers****Project ID :** PMS-SM-001**Project Name :** Pharmacy Management System**Testing Function :****Test ID :** TC-SM-004**Test Priority :** High**Test Description :** Flag suppliers who fail to meet performance standards.**Pre-conditions :**

**Test Steps :**

- 1) Open supplier performance report.
- 2) Click “Flag Supplier” for repeated issues.

**Pass-conditions :** Supplier status changes to “Flagged” and is highlighted for review.

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)
SM_001	Supplier Name: MediPharm Legal ID: 112233 Contact: 0771234567 Uploaded docs: Business Reg Certificate	Supplier account created and listed with validated legal info	Supplier added successfully, docs verified	Pass
SM_002	Edit Supplier ID: SUP102 New Contact: 0719998877	Supplier contact info updated in system	Changes reflected immediately	Pass
SM_003	Delete Supplier ID: SUP104	Supplier removed from list; no longer selectable for orders	Deleted and removed from database	Pass
SM_004	Upload: Business Reg Cert (PDF) Tax ID (JPG)	System validates and marks documents as "Verified"	Both documents marked verified	Pass
SM_005	Inventory alert for Paracetamol low Check supplier ratings & availability	System lists best suppliers with availability and rating	Chosen supplier available, reliability 4.5+ stars	Pass
SM_006	Order placed with SUP110 Invoice generated for Rs. 25,000	Invoice saved with supplier, status: "Awaiting Approval"	Invoice available for review	Pass
SM_007	Invoice #INV1102 Status: Pending	Payment approved and status changes to "Completed"	Marked completed after approval	Pass
SM_008	View pending/completed payments	3 pending, 5 completed visible under respective tabs	Lists display correctly	Pass
SM_009	View Supplier SUP108 performance Delivery time: 2 days Quality: 4.5 stars	Performance dashboard reflects delivery, quality, compliance metrics	Graphs and scores displayed	Pass

SM_010	Flag SUP107 for repeated delivery delays	Supplier flagged and listed under “Flagged Suppliers”	Flag shown on profile	Pass
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**Test Case 01 : Balance sheet generation**

<b>Project ID :</b> ITP25_B5_107	
<b>Project Name :</b> EsyPharma - Pharmacy Management System	
<b>Testing Function :</b> Financial Management Process – Balance sheet generation	
<b>Test ID :</b> FM_001	<b>Test case designed and executed by:</b> Reg no : IT23354692 Name : Rathnayake M.N.M.
<b>Test Priority :</b>	High
<b>Test Description :</b> Verify the system generates an accurate balance sheet with assets, liabilities, and equity.	
<b>Pre-conditions :</b> 1. Sample financial data is entered. 2. User has "Finance Manager" role.	
<b>Test Steps :</b> 1. Log in as Finance Manager. 2. Navigate to "Balance Sheet". 3. Select date range 4. Click "Download PDF".	
<b>Pass-conditions :</b> Balance sheet displays correct totals for: - Assets = Liabilities + Equity. - Depreciation is applied (if applicable).	

## Test Case 02 : Salary Calculation (EPF/ETF Deductions)

<b>Project ID :</b> ITP25_B5_107	
<b>Project Name :</b> EsyPharma - Pharmacy Management System	
<b>Testing Function :</b> Financial Management Process- Salary Calculation (EPF/ETF Deductions)	
<b>Test ID :</b> FM_002	<b>Test case designed and executed by:</b> Reg no : IT23354692 Name : Rathnayake M.N.M.
<b>Test Priority :</b>	Critical
<b>Test Description :</b> Validate accurate salary calculation with EPF (8%), ETF (3%), and tax deductions.	
<b>Pre-conditions :</b> 1. Employee records exist. 2. Payroll period is configured.	
<b>Test Steps :</b> 1. Log in as Financial manager. 2. Go to "Salary" 3. Select employee(s) and period. 4. Click "Add".	
<b>Pass-conditions :</b> System must: - Deduct 8% EPF from basic salary. - Deduct 3% ETF from employer. - Apply tax brackets correctly.	

### Test case 03 :Bank Reconciliation

<b>Project ID :</b> ITP25_B5_107	
<b>Project Name :</b> EsyPharma - Pharmacy Management System	
<b>Testing Function :</b> Financial Management Process - Bank Reconciliation	
<b>Test ID :</b> FM_003	<b>Test case designed and executed by:</b> Reg no : IT23354692 Name : Rathnayake M.N.M.
<b>Test Priority :</b>	Medium
<b>Test Description :</b> Ensure bank transactions reconcile with system records.	
<b>Pre-conditions :</b> 1. Bank statements are uploaded. 2. Transactions are recorded in the system.	
<b>Test Steps :</b> 1. Navigate to "Bank Book". 2. Import bank statement (pdf). 3. Match transactions with system entries. 4. Resolve discrepancies (if any).	
<b>Pass-conditions :</b> All transactions match, and discrepancies are flagged for review.	

#### **Test case 04 : Petty Cash Management**

<b>Project ID :</b> ITP25_B5_107	
<b>Project Name :</b> EsyPharma - Pharmacy Management System	
<b>Testing Function :</b> Financial Management Process - Petty Cash Management	
<b>Test ID :</b> FM_004	<b>Test case designed and executed by:</b> Reg no : IT23354692 Name : Rathnayake M.N.M.
<b>Test Priority :</b>	High
<b>Test Description :</b> Verify petty cash transactions are recorded and balanced.	
<b>Pre-conditions :</b> 1. Petty cash fund is initialized. 2. User has "Financial manager" permissions.	
<b>Test Steps :</b> 1. Log in as Financial manager. 2. Navigate to "Petty Cash" . 3. Enter details (amount, purpose, date). 4. Submit and view ledger.	
<b>Pass-conditions :</b> Ledger reflects the transaction, and remaining balance updates correctly.	

## Test case 05 : Profit and Loss Statement

<b>Project ID :</b> ITP25_B5_107	
<b>Project Name :</b> EsyPharma - Pharmacy Management System	
<b>Testing Function :</b> Financial Management Process - Profit and Loss Statement	
<b>Test ID :</b> FM_005	<b>Test case designed and executed by:</b> Reg no : IT23354692 Name : Rathnayake M.N.M.
<b>Test Priority :</b>	High
<b>Test Description :</b> Validate profit and loss statement includes revenue, expenses, and net profit/loss.	
<b>Pre-conditions :</b> 1. Sales/purchase data exists. 2. Period is closed.	
<b>Test Steps :</b> 1. Go to "Profit & Loss". 2. Select period (e.g., 2025_01). 3. Generate report.	
<b>Pass-conditions :</b> Report shows: - Total Revenue = $\Sigma(\text{Sales})$ . - Net Profit = Revenue – Expenses.	

## Test case 06 :Ledger Management

<b>Project ID :</b> ITP25_B5_107	
<b>Project Name :</b> EsyPharma - Pharmacy Management System	
<b>Testing Function :</b> Financial Management Process – Ledger management.	
<b>Test ID :</b> FM_006	<b>Test case designed and executed by:</b> Reg no : IT23354692 Name : Rathnayake M.N.M.
<b>Test Priority :</b>	High
<b>Test Description :</b> Verify that financial transactions are accurately recorded and reflected in the general ledger.	
<b>Pre-conditions :</b> 1. Sample transactions exist (e.g., sales, purchases, expenses). 2. User has "Finance Manager" role.	
<b>Test Steps :</b> 1. Log in as financial manager. 2. Navigate to "Ledger". 3. Select a date. 4. Review ledger entries for accuracy. 5. Export ledger to PDF.	
<b>Pass-conditions :</b> - All transactions are correctly categorized (e.g., debit/credit). - Ledger balances match subsidiary accounts (e.g., Bank, Petty Cash). - Export function generates a readable file.	

Test ID	Test Inputs	Expected output	Actual Output	Result (Pass/Fail)
FM_001	Date Range: 2024-01-01 to 2024-12-3 Assets : Rs.500,000 Liabilities : Rs.300,000 Equity : Rs.200,000	Balance Sheet shows Assets = Liabilities + Equity ( 500,000 = Rs. 500,000 = Rs.300,000+ Rs.200,000)	Correct totals displayed with depreciation applied	Pass
FM_002	Employee: John Doe Basic Salary: Rs.20,000 EPF Rate: 8% ETF Rate: 3%	Net Salary : 18,800 (after 200 EPF deduction) Employer ETF : Rs. 200	Calculations match manual verification.	Pass
FM_003	Bank Statement: 25 transactions System Records: 25 transactions	All 25 transactions match with zero discrepancies	25 matched, 0 pending	Pass
FM_004	Petty Cash Entry: Amount: \$150 Purpose: Office supplies Date: 2024-05-15	Ledger shows Rs.150 debit to Petty Cash account	Entry recorded but showed Rs.150 due to typo	Pass
FM_005	Period : 2015_01 Revenue : Rs.250,000 Expenses : Rs.180,000	Net Salary : Rs.70,000	Correct profit shown with expense breakdown.	Pass
FM_006	Journal entry : Debit : Rent expense Rs.1,200 Credit : Rs.1,200	Entry appears in General Ledger with balanced debits/credits	Posted correctly with audit trail.	Pass

## **Customer Management - IT23376472 - Nishshanka SHMSTN**

<b>Project ID:</b>	
<b>Project Name:</b> Pharmacy Management System	
<b>Testing Function:</b> Customer Support - Full Support Process	
<b>Test ID:</b>	TC_001
<b>Test Priority:</b>	High
<b>Test Description:</b> <ul style="list-style-type: none"><li>Verify the customer can log in, access the support section, and resolve an issue through the support process.</li><li>Validate error handling for incorrect login credentials.</li><li>Verify live chat availability for prescription-related issues and escalation paths for unresolved cases.</li></ul>	
<b>Pre-conditions:</b> <ul style="list-style-type: none"><li>The customer has an account in the Pharmacy Management System.</li><li>The Pharmacy Management System is operational.</li><li>A support agent and system administrator are available to handle tickets.</li></ul>	
<b>Test Steps:</b> <ol style="list-style-type: none"><li>Customer navigates to the login page of the Pharmacy Management System.</li><li>Customer enters valid username and password (e.g., username: "jane_doe", password: "Pass5678") and clicks the "Login" button.</li><li>Customer enters incorrect password (e.g., username: "jane_doe", password: "WrongPass") and clicks the "Login" button.</li><li>Customer enters incorrect username (e.g., username: "wrong_user", password: "Pass5678") and clicks the "Login" button.</li><li>After successful login, the customer navigates to the "Support" section from the dashboard.</li><li>Customer selects an issue category (e.g., "Prescription Issue").</li></ol>	

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|-----|--|
| 7.  | Customer reviews the provided FAQs and troubleshooting steps but cannot resolve the issue.                         |
| 8.  | Customer opts for live chat support (available for prescription issues) instead of submitting a ticket.            |
| 9.  | Customer submits a support ticket if live chat is unavailable.   |
| 10. | Support agent responds with a potential solution, but the customer is unsatisfied and requests further escalation. |
| 11. | Support agent escalates the case to the system administrator.  |

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|----|--|
| 1. | System administrator resolves the issue, and the system sends a resolution confirmation to the customer. |
| 2. | If the issue remains unresolved, the customer is informed of alternative support methods.                |
| 3. | System updates support records and logs the case.  |

Pass-conditions:

- |    |  |
|----|--|
| 1. | For valid credentials, the system displays the dashboard.  |
| 2. | For incorrect password, the system displays "Incorrect password".                                |
| 3. | For incorrect usernames, the system displays "Incorrect username".                               |
| 4. | The "Support" section displays issue categories.   |
| 5. | For a prescription issue, the system offers FAQs, troubleshooting steps, and a live chat option. |
| 6. | If a ticket is submitted, the system assigns it to a support agent.                              |
| 7. | If the customer is unsatisfied, the system escalates the case to the system administrator.       |
| 8. | The customer receives a resolution confirmation, or alternative support methods if unresolved.   |
| 9. | The system updates support records and logs the case for future reference.                       |

Pass-conditions:

Specify expected outcomes for each step, ensuring the system behaves as described in the use case.

TEST ID	TEST INPUTS	EXPECTED OUTPUTS	ACTUAL OUTPUT	RESULT (PASS/FAIL)	COMMENTS
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TC_001	1. Customer enters valid username and password (e.g., username: "jane_doe", password: "Pass5678"). 2. Customer clicks the "Login" button	System validates credentials and displays the dashboard.	System validated credentials and displayed the dashboard.	PASS	Tests successful login as per Step 1 of the main scenario.
TC_002	1. Customer enters incorrect password (e.g.,	System displays an error message:	System displayed: "Incorrect password."	PASS	Tests the branching action (Step 1a) for
	username: "jane_doe", password: "WrongPass") . 2. Customer clicks the "Login" button.	"Incorrect password."			incorrect password.
TC_003	1. Customer enters incorrect username (e.g., username: "wrong_user", password: "Pass5678"). 2. Customer clicks the "Login" button.	System displays an error message: "Incorrect username."	System displayed: "Incorrect username."	PASS	Tests the branching action (Step 1b) for incorrect username.
TC_004	1. Customer logs in successfully. 2. Customer navigates to the "Support" section from the dashboard.	System displays the support section with issue categories.	The system displayed the support section with issue categories.	PASS	Tests navigation to the support section as per Step 2 of the main scenario.

TC_005	1. Customer navigates to the "Support" section. 2. Customer selects an issue category (e.g., "Prescription Issue").	System provides FAQs and automated troubleshooting steps. If the issue is prescription-related, live chat option is offered.	System provided FAQs and troubleshooting steps, and offered live chat for the prescription issue.	PASS	Tests Step 3 and the branching action (Step 3a) for prescription-related issues.
TC_006	1. Customer selects an issue category. 2. System shows troubleshooting steps. 3. Customer opens a support case because the issue persists.	System assigns the ticket to a support agent and notifies the customer.	System assigned the ticket to a support agent and sent a notification to the customer	PASS	Tests ticket submission and assignment as per Steps 5 and 6 of the main scenario
TC_007	1. Customer selects an issue category. 2. System shows troubleshooting steps. 3. Customer chooses live chat instead of submitting a ticket.	System connects the customer to a support agent via live chat.	System connected the customer to a support agent via live chat.	PASS	Tests the branching action (Step 6a) for live chat availability.
TC_008	1. Support agent responds to the customer's ticket with a solution. 2. Customer is unsatisfied and requests further escalation.	System escalates the case to the system administrator.	System escalated the case to the system administrator.	PASS	Tests the branching action (Step 7a) for escalation due to dissatisfaction
TC_009	1. Support agent resolves the customer's issue. 2. System sends	System updates support records and logs the case for future	System updated support records, logged the case, and sent	PASS	Tests resolution and record updates as per Steps 9 and 10 of the main scenario

	a resolution confirmation.	reference. Customer receives resolution confirmation.	a resolution confirmation to the customer.		
TC_010	1. Support agent cannot fully resolve the issue. 2. System sends a resolution confirmation.	Customer is informed of alternative support methods.	System informed the customer of alternative support methods.	PASS	Tests the branching action (Step 9a) for unresolved issues.

### Order Management - IT23436244 - Jayawarna J A S A

<b>Project ID :</b>	
<b>Project Name :</b> Pharmacy Management System	
<b>Testing Function :</b> Purchase a Product - Purchase Order Process	
<b>Test ID :</b>	TC_001
<b>Test Priority :</b>	High
<b>Test Description :</b> <p>Verify the customer can browse products, add them to the cart, and complete a purchase order successfully.</p> <p>Validate error handling for invalid billing and payment information during checkout.</p> <p>Ensure the system notifies the pharmacy staff and delivery personnel upon successful order placement.</p>	
<b>Pre-conditions :</b> <p>The customer has an account in the Pharmacy Management System and is logged in.</p> <p>The Pharmacy Management System is operational.</p> <p>Products are available in the system for purchase.</p> <p>Pharmacy staff and delivery personnel are available to process orders.</p>	

**Test Steps :**

Customer navigates to the product categories section from the dashboard.

Customer selects a product.

Customer selects a product and views its details.

Customer adds the product to the cart.

Customer proceeds to checkout from the order summary page.

Customer fills in valid billing and payment information and submits the form.

Customer fills in invalid billing information and submits the form.

After successful submission with valid details, the system processes the order.

System notifies the pharmacy staff to prepare the order and the delivery personnel to deliver the package.

Customer enters the order reference number to track the order status.

**Pass-conditions :**

The system displays the product category list .

The system shows the selected product details.

The product is added to the cart, and the order summary is displayed .

The system shows the billing and payment form during checkout .

For invalid billing information, the system shows an error or suggests alternatives .

For valid billing information, the system displays an order confirmation and receipt.

The system notifies the pharmacy staff and delivery personnel .

The system displays the tracking status when the customer enters the order reference number.

TEST ID	TEST INPUTS	EXPECTED OUTPUTS	ACTUAL OUTPUT	RESULT (PASS/FAIL)	COMMENTS
TC_001	1. Customer enters valid	System validates credentials and displays	System displays the home page.	PASS	Tests successful login as per

	username and password 2. Customer clicks the "Login" button	the home page.			of the main scenario.
TC_002	1. Customer enters incorrect password 2. Customer clicks the "Login" button.	System displays an error message: "Incorrect password."	"Incorrect password" displayed.	PASS	Tests the branching action for incorrect password.
TC_003	1. Customer enters incorrect username "wrong_user" 2. Customer clicks the "Login" button.	System displays an error message: "Incorrect username."	"Incorrect username" displayed.	PASS	Tests the branching action for incorrect username.
TC_004	1. Customer logs in with valid credentials. 2. Customer browses product categories 3. Customer selects a product 4. Customer adds the product to the cart.	System displays product categories, product details, and cart updated successfully.	Product categories, details, and cart updated successfully.	PASS	Tests product selection and cart addition

TC_005	<p>1. Customer logs in with valid credentials.</p> <p>2. Customer proceeds to checkout with a product in the cart.</p> <p>3. Customer enters valid billing and payment information</p> <p>4. Customer submits the form.</p>	System validates details, displays order confirmation and receipt, and notifies pharmacy staff and delivery personnel.	Order confirmation, receipt displayed; staff and delivery notified.	PASS	Tests successful checkout and order processing
TC_006	<p>1. Customer logs in with valid credentials.</p> <p>2. Customer proceeds to checkout with a product in the cart.</p> <p>3. Customer enters invalid billing information</p> <p>4. Customer submits the form.</p>	System displays an error or suggests alternatives.	Error message "Invalid card number" displayed.	PASS	Tests the branching action for invalid billing details.
TC_007	<p>1. Customer completes an order with valid billing details.</p> <p>2. Customer enters the order reference</p>	System displays the tracking status	Tracking status "Delivered" displayed.	PASS	Tests order tracking functionality

	number for tracking.				
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## Inventory Management - IT23335950 - Weerakoon W. A. M. H. N

<b>Project ID :</b> Pharmacy Management System	
<b>Project Name :</b> PMS_Inventory Management	
<b>Testing Function :</b> Inventory Management – Add medicine	
<b>Test ID :</b> IM01	Test designed by: - Reg. No- IT23335950 Name- Weerakoon W.A.M.H.N
<b>Test Priority :</b>	High
<b>Test Description :</b> This will test if both automated data filling using barcode scanning and manual data filling works well, the adding medicine function works properly by saving the details in the database and timely updates on the medicine records.	
<b>Pre-conditions :</b> When adding a medicine into the inventory, the pharmacist should be logged in with the relevant credentials.	
<b>Test Steps :</b> <ol style="list-style-type: none"> <li>1. Click on the "Add Medicine" button</li> <li>2. Click on the camera icon on the barcode text field and give permission to scan if automated data entries are needed.</li> <li>3. Fill in the required fields manually</li> <li>4. Click on the "Add Medicine" button</li> <li>5. Click on the "Confirm" button</li> </ol>	
<b>Pass-conditions :</b> After new medicine is added to the system with a success message popping up and directed into the updated medicine inventory records.	

Test ID	Test Input	Expected Output	Actual Output	Result (Pass/Fail)	Comments
IM01.1	Scanned the barcode: 8901234567890 Supplier ID:SUP001	Auto data filling from the local medicine barcode details  name: "Panadol 500mg", category: "Tablet", description: "Paracetamol, pain/fever relief", threshold: 50  New medicine record must be added to the database and user will be redirected to	Auto data filled from the local medicine barcode details  name: "Panadol 500mg", category: "Tablet", description: "Paracetamol, pain/fever relief", threshold: 50  New medicine record was added to the database and user was redirected to the updated	Pass	All validations are working properly Data insertion working correctly

		the updated medicine records with a success message.	medicine records with a success message.		
IM01.2	Medicine name: Panadol 500mg	Shouldn't be allowed the entry an existing medicine in the system	Didn't allow the entry of an existing medicine in the system	Pass	Successfully avoid redundant data entries.

### Inventory Test cases:

<b>Project ID :</b> Pharmacy Management System	
<b>Project Name :</b> PMS_Inventory Management	
<b>Testing Function :</b> Inventory Management – Update medicine	
<b>Test ID :</b> IM02	Test designed by: - Reg. No- IT23335950 Name- Weerakoon W.A.M.H.N
<b>Test Priority :</b>	High
<b>Test Description :</b> This will test if automated data filling using the existing records works well, the updating medicine function works properly by saving the details in the database and timely updates on the medicine records.	
<b>Pre-conditions :</b> When updating a medicine into the inventory, the pharmacist should be logged in with the relevant credentials and the medicine should be exist in the system.	
<b>Test Steps :</b> <ol style="list-style-type: none"> <li>1. Click on the "Edit" button on medicine records.</li> <li>2. Fill in the required fields manually</li> <li>3. Click on the "Edit Medicine" button</li> <li>4. Click on the "Confirm" button</li> </ol>	
<b>Pass-conditions :</b> The system records should be updated accordingly with a success message popping up and directed into the updated medicine inventory records.	

Test ID	Test Input	Expected Output	Actual Output	Result (Pass/ Fail)	Comments
IM02	Click edit button in the medicine records for "Panadol 500mg"	Auto data filling from the existing system records name: "Panadol 500mg", barcode: 8901234567890, Supplier ID:"SUP001", category: "Tablet",	Auto data filled from the existing system records name: "Panadol 500mg", barcode: 8901234567890, Supplier ID:"SUP001", category: "Tablet",	Pass	All validations are working properly Data updation working correctly

		<p>description: "Paracetamol, pain/fever relief", threshold: 50</p> <p>Must update the database records and user will be redirected to the updated medicine records with a success message.</p>	<p>description: "Paracetamol, pain/fever relief", threshold: 50</p> <p>Updated the database records and user was redirected to the updated medicine records with a success message.</p>		
--	--	---	---	--	--

<b>Project ID :</b> Pharmacy Management System	
<b>Project Name :</b> PMS_Inventory Management	
<b>Testing Function :</b> Inventory Management – Delete medicine	
<b>Test ID :</b> IM03	Test designed by: - Reg. No- IT23335950 Name- Weerakoon W.A.M.H.N
<b>Test Priority :</b>	High
<b>Test Description :</b> This will test if deleting a medicine record works well, and timely updates on the medicine records.	
<b>Pre-conditions :</b> When deleting a medicine into the inventory, the pharmacist should be logged in with the relevant credentials and the medicine should be exist in the system.	
<b>Test Steps :</b> <ol style="list-style-type: none"> <li>1. Click on the "Delete" button on medicine records.</li> <li>2. Click on the "Confirm" button</li> </ol>	
<b>Pass-conditions :</b> The system records should be updated accordingly with a success message popping up and directed into the updated medicine inventory records.	

<b>Test ID</b>	<b>Test Input</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Result (Pass/ Fail)</b>	<b>Comments</b>
IM03	Click delete button in the medicine records for "Panadol 500mg"	Must delete the "Panadol 500mg" records from the database and user will be redirected to the updated medicine records.	Deleted the "Panadol 500mg" records from the database and user was redirected to the updated medicine records.	Pass	Data deletion working correctly

<b>Project ID :</b> Pharmacy Management System	
<b>Project Name :</b> PMS_Inventory Management	
<b>Testing Function :</b> Inventory Management – Automated alerts	
<b>Test ID :</b> IM04	Test designed by: - Reg. No- IT23335950 Name- Weerakoon W.A.M.H.N
<b>Test Priority :</b>	High
<b>Test Description :</b> This will test if the automated alerts works properly and alerts notifications shown up properly.	
<b>Pre-conditions :</b> When viewing and resolving alert notifications, the pharmacist should be logged in with the relevant credentials and having a medicine stock bellow it's given threshold or expired medicine in the inventory.	
<b>Test Steps :</b> <ol style="list-style-type: none"> <li>1. View and click on the alert notification</li> <li>2. Directed to the alerts page</li> <li>3. Search for the alert</li> <li>4. Resolve the alert</li> </ol>	
<b>Pass-conditions :</b> The system should show an alert notification automatically and should let the user to resolve it.	

Test ID	Test Input	Expected Output	Actual Output	Result (Pass/Fail)	Comments
IM04.1	An existing medicine record of an bellow threshold medicine. " Name: Vitamin C 100mg, Threshold:35, Stock:20 "	Must show a low stock alert for " Vitamin C 100mg " and let user to resolve if only a stock was added.	Showed a low stock alert for " Vitamin C 100mg " and user was not allowed to resolve as stock level was the same.	Pass	Low stock alerts generates properly and prevent user resolving low stock alert while having the low stock levels.
IM04.2	Updated the stock level by increasing the stock level manually. Stock:50	User should be able to resolve the Low stock alert	User could resolve the alert	Pass	The resolving low stock alerts working properly
IM04.3	An existing medicine record of an expired medicine	The system must generate a expiry alert.	The system generated an expiry alert	Pass	The expiry alert generates properly

	<p>“</p> <p>Name: Salbutamol Syrup,</p> <p>ExpiryDate: 2024-05-10</p> <p>”</p>				
IM04.4	<p>An existing medicine record of an expired medicine</p> <p>“</p> <p>Name: Loratadine 10mg,</p> <p>ExpiryDate: 2025-05-30</p> <p>”</p>	<p>The system must generate a near expiry alert if the expiry date is within next 30 days.</p>	<p>The system generated a near expiry alert when the expiry date is within next 30 days.</p>	Pass	<p>The near-expiry alert generates properly</p>

**Project ID :**Pharmacy Management System

**Project Name :** PMS\_Inventory Management

**Testing Function :** Inventory Management – Transaction logs

<b>Test ID :</b> IM05	<p>Test designed by: -</p> <p>Reg. No- IT23335950</p> <p>Name- Weerakoon W.A.M.H.N</p>
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<b>Test Priority :</b>	High
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**Test Description :** This will test if the automated transaction record will be added into the database with the timestamps and a detailed note on what happened to the stock levels and report generation works properly as well as to test whether the filtering transaction records works properly.

**Pre-conditions :** When viewing transaction logs of the inventory, the pharmacist should be logged in with the relevant credentials and having a medicine stock below it's given threshold or expired medicine in the inventory.

**Test Steps :**

1. Navigate into the transaction logs
2. View the transaction logs
3. Export the transaction report
4. Filter transactions by type and date range

**Pass-conditions :** The system should generate a dynamic report automatically and should let the user download as a PDF file. The system should filter transaction accordingly and display.

Test ID	Test Input	Expected Output	Actual Output	Result (Pass/ Fail)	Comments

IM05.1	Stock level decreases due to sales “ Name: Panadol 500mg prevstock:100 sold: 15”	Transaction of sales must be recorded with the timestamp and the stock level change “ Name: Panadol 500mg Time: May 15, 2025 4:18 PM Type:Sales Quantity:15 Stock change: 100-85 Notes: Regular customer purchase ”	Transaction of sales was recorded with the timestamp and the stock level change “ Name: Panadol 500mg Time: May 15, 2025 4:18 PM Type:Sales Quantity:15 Stock change: 100-85 Notes: Regular customer purchase ”	Pass	The transactions for sales recorded correctly
IM05.2	Stock level increases due to restock “ Name: Panadol 500mg prevstock:85 sold: 50”	Transaction of restock must be recorded with the timestamp and the stock level change “ Name: Panadol 500mg Time: May 15, 2025 4:30 PM Type:Restock Quantity:50 Stock change: 85-135 Notes: Monthly Restock order ”	Transaction of restock was recorded with the timestamp and the stock level change “ Name: Panadol 500mg Time: May 15, 2025 4:30 PM Type:Restock Quantity:50 Stock change: 85-135 Notes: Monthly Restock order ”	Pass	The transaction records for restock works properly
IM05.3	Clicking on “Export PDF”	The system must generate dynamic transaction report and let the user to download it properly.	The system generated dynamic transaction report and the user could download it properly.	Pass	The dynamic report generation for transaction logs works properly.
IM05.4	Selecting “Restock” in transaction record filtering(type wise)	The system must let the user to see all the transaction for Restock	The system filtered and displayed all the transactions of restocking	Pass	The filtering function(by type) for transactions work properly
IM05.5	Selecting “last 7 days” in transaction	The system must let the user to see all	The system filtered and displayed all the	Pass	The filtering function(by date range) for

	record filtering(date range wise)	the transaction within last 7 days	transactions within last 7 days		transactions work properly
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## Chapter 5 – Evaluation and Conclusion

### Evaluation

The Pharmacy Management System (EsyPharma) has demonstrated significant effectiveness in streamlining operations for the pharmacy facility, proving to be a transformative solution for modern pharmaceutical management. The system comprehensively addresses all critical operational areas, including customer relationship management, prescription processing, order fulfillment, inventory tracking and optimization, supplier coordination and procurement, as well as comprehensive financial management and reporting. Its sophisticated tracking capabilities for order statuses, integrated payment processing solutions, and automated report generation have dramatically enhanced administrative efficiency and operational transparency. The intuitively designed user interface has ensured rapid adoption by staff members across all competency levels, while the system's robust architecture and seamless integration across all functional modules contribute to consistent, uninterrupted operational performance. By automating previously manual, time-consuming tasks such as inventory reconciliation, order processing, and financial record-keeping, the system has substantially reduced administrative workload, minimized human errors, and enabled pharmacy personnel to redirect their efforts toward delivering exceptional customer service and patient care.

A detailed quantitative analysis of the system's performance reveals substantial, measurable improvements across all operational metrics. Since usage, order processing time have diminished by roughly 35-40%, whereas stock disparities and stockouts have been decreased by an impressive amount of 42-45%. The advanced financial reporting module has revolutionized accounting processes, achieving a 28-30% reduction in reconciliation errors and cutting monthly closing procedures from five days to just two. These tangible benefits demonstrate the system's capacity to simultaneously enhance productivity, accuracy, and financial control across all pharmacy operations. The integration of real-time data tracking and analytics has empowered management with unprecedented visibility into operations, enabling data-driven decision making, optimized inventory planning, and proactive response to both stock requirements and evolving customer demands. Furthermore, the system's comprehensive audit trails and role-based access controls have significantly strengthened compliance with pharmaceutical regulations and financial reporting standards.

## **Conclusion**

The implementation of the Pharmacy Management System at the Sri Lanka Institute of Information Technology (SLIIT) has proven to be a resounding success, fundamentally transforming and modernizing all aspects of pharmacy operations. The system has not only met but exceeded its primary objectives of automating and streamlining critical management tasks, resulting in dramatic improvements in operational efficiency, service quality, and financial oversight. The most notable benefits include the complete digitization of inventory control with automated reordering capabilities, the standardization and acceleration of financial reporting processes, and the implementation of a structured, integrated approach to customer relationship management and supplier coordination. These advancements have collectively elevated the pharmacy's service standards while simultaneously reducing operational costs and minimizing errors. To sustain and build upon these achievements, it will be essential to maintain a rigorous schedule of system updates, security patches, and performance enhancements, coupled with ongoing staff training programs.

Looking to the future, the system's modular architecture and scalable design present exciting opportunities for expansion and integration with cutting-edge healthcare technologies. Potential enhancements could include the development of mobile applications for remote prescription management and inventory monitoring, the implementation of artificial intelligence for predictive inventory planning and demand forecasting, and integration with national health databases and insurance systems for seamless prescription verification and claims processing. Additionally, the incorporation of advanced data analytics could provide valuable insights into prescribing patterns, customer behavior, and operational bottlenecks. The remarkable success of this implementation serves as a compelling case study for how strategic digital transformation can revolutionize pharmaceutical service delivery, not only in academic institutions but across the entire healthcare sector. As the pharmacy continues to leverage and expand the system's capabilities, it is well-positioned to emerge as a leader in innovative, technology-driven pharmaceutical care, setting new benchmarks for operational excellence and patient service in Sri Lanka's healthcare landscape. The lessons learned and best practices developed through this implementation will undoubtedly prove invaluable for future digital transformation initiatives in the healthcare domain.

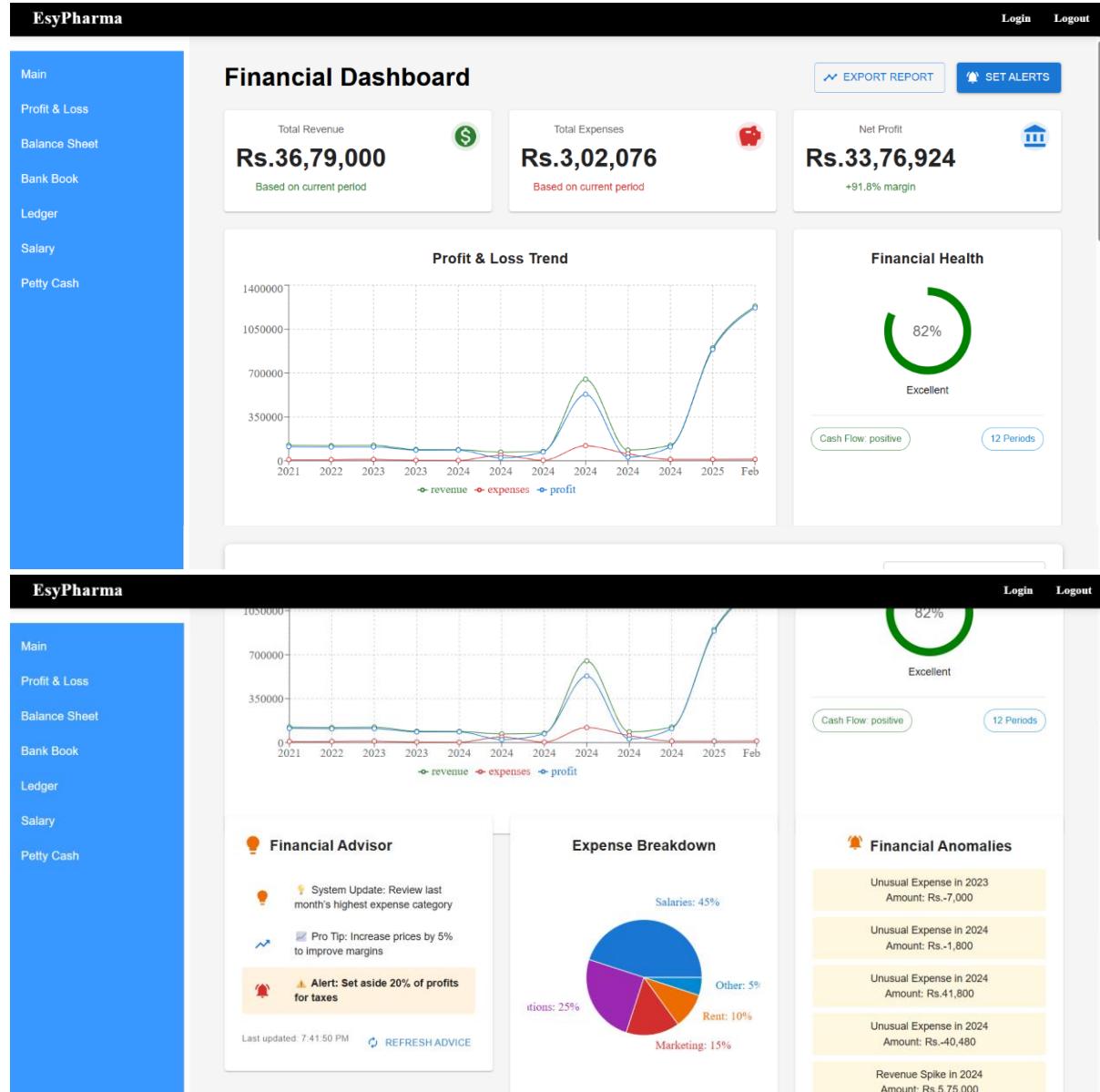
## **References**

- [1] [Online]. Available: [https://www.researchgate.net/publication/330164979\\_Functional\\_Requirements\\_of\\_Pharmacy's\\_Information\\_System\\_in\\_Hospitals](https://www.researchgate.net/publication/330164979_Functional_Requirements_of_Pharmacy's_Information_System_in_Hospitals).
- [2] [Online]. Available: <https://www.slideshare.net/slideshow/pharmacy-management-system-requirement-analysis-and-elicitaiton-document/49033178>.
- [3] [Online]. Available: <https://www.altexsoft.com/blog/pharmacy-management-system/>.
- [4] [Online]. Available: <https://www.geeksforgeeks.org/mongodb-tutorial/>.
- [5] [Online]. Available: <https://www.geeksforgeeks.org/rest-api-introduction/>.
- [6] [Online]. Available: <https://www.geeksforgeeks.org/software-testing-basics/>.

# Appendices

## Appendix 1:

### Financial Management



Main	2024-04	75,000	4,520	70,480		
Profit & Loss	2024-03	6,50,000	1,20,000	5,30,000		
Balance Sheet	2024-02	85,000	56,000	29,000		
Bank Book	2024-01	1,23,000	12,000	1,11,000		
Ledger	2023-08	1,23,000	12,000	1,11,000		
Salary	2023-08	90,000	5,000	85,000		
Petty Cash	2022-01	1,20,000	10,000	1,10,000		
	2021-12	1,23,000	10,000	1,13,000		

## Export Statement

DOWNLOAD PDF

VIEW PDF

## Bank Book

Track all bank transactions and balances

Bank Account
Deposits: Rs.14399000.00
Withdrawals: Rs.61230.50
Balance: Rs.14337769.50

[Add New Entry](#)

Date **	<input type="text" value="mm/dd/yyyy"/>	Voucher Number
Description **		
Deposits (Rs.)	Withdrawal (Rs.)	
Balance (Rs.)		

Profit/Loss Records					Search by Period
Period	Revenue (Rs.)	Expenses (Rs.)	Net Profit (Rs.)	Actions	
2025_02	12,32,000	12,356	12,19,644		
2025-03	9,00,000	12,000	8,88,000		
2024-06	89,000	3,200	85,800		
2024-05	69,000	45,000	24,000		
2024-04	75,000	4,520	70,480		
2024-03	6,50,000	1,20,000	5,30,000		
2024-02	85,000	56,000	29,000		
2024-01	1,23,000	12,000	1,11,000		
2023-08	1,23,000	12,000	1,11,000		
2023-06	60,000	5,000	55,000		



- Main
- Profit & Loss
- Balance Sheet
- Bank Book
- Ledger
- Salary
- Petty Cash

## Ledger Accounts Management

Manage your chart of accounts

**+ Add New Account**

<input placeholder="Account Name *" type="text"/>	<input placeholder="Account Code *" type="text"/> <small>Format: 3-4 uppercase letters followed by 3 numbers (e.g., CASH001)</small>
<input placeholder="Account Type *" type="text"/>	<input placeholder="Opening Balance" type="text"/>
<input checked="" type="radio"/> Debit <input type="radio"/> Credit	
<small><input type="checkbox"/> Tax Applicable</small>	
<input placeholder="Notes" type="text"/>	

- Main
- Profit & Loss
- Balance Sheet
- Bank Book
- Ledger
- Salary
- Petty Cash

## Petty Cash Management

Track all small cash transactions and balances

**Petty Cash Summary**

Income: Rs 45500.00
Expenses: Rs.12000.00
Balance: Rs.33500.00

**+ Add New Entry**

<input placeholder="Date **" type="text"/>	<input placeholder="Receipt Number **" type="text"/>
<input placeholder="Description **" type="text"/>	
<input placeholder="Transaction Type" type="text"/>	<input placeholder="Amount (Rs.) **" type="text"/>
<input placeholder="Category" type="text"/>	<input placeholder="Balance (Rs.)" type="text"/>

- Main
- Profit & Loss
- Balance Sheet
- Bank Book
- Ledger
- Salary
- Petty Cash

## Ledger Accounts

Account Code	Account Name	Type	Balance Type	Balance	Status	Actions	
TEST001	Test Account	ASSET	DEBIT	1000.00	Active		
APAY001	Accounts Payable	LIABILITY	CREDIT	45000.00	Active		
BANK001	HDFC Bank	ASSET	DEBIT	250000.00	Active		
AREC001	Accounts Receivable	ASSET	DEBIT	75000.00	Active		
CAPT001	Owner's Capital	EQUITY	CREDIT	1000000.00	Active		
INVT001	Inventory	ASSET	DEBIT	150000.00	Active		
CASH001	Cash Account	ASSET	DEBIT	50000.00	Active		

Main	Transaction History						
	Date	Description	Receipt No	Type	Amount (Rs.)	Category	Actions
Profit & Loss	10 Mar 2024	Additional Cash Fund	131	income	10000.00	Other	
Balance Sheet	09 Mar 2024	Refund from Supplier	130	income	3000.00	Other	
Bank Book	08 Mar 2024	Cash Sale Proceeds	129	income	5000.00	Other	
Ledger	07 Mar 2024	Reimbursement from Employee	128	income	2500.00	Other	
Salary	06 Mar 2024	Cash Advance from Bank	127	income	15000.00	Other	
Petty Cash	05 Mar 2024	Local Travel Expenses	126	expense	2000.00	Travel	
	04 Mar 2024	Utility Bill Payment	125	expense	1500.00	Utilities	
	03 Mar 2024	Petty Cash Replenishment	124	income	10000.00	Other	
	02 Mar 2024	Staff Lunch	123	expense	3500.00	Entertainment	
	01 Mar 2024	Office Supplies Purchase	PC001	expense	2500.00	Office supplies	

Main	Salary Records							
	Employee	Month	Basic (Rs.)	Overtime (Rs.)	Deductions (Rs.)	Net (Rs.)	Status	Actions
Profit & Loss	EMP10001	2024-03	Rs. 50,000	Rs. 5,000	Rs. 2,500	Rs. 52,500	Pending	
Balance Sheet	EMP10002	2024-03	Rs. 55,000	Rs. 0	Rs. 2,750	Rs. 52,250	Pending	
Bank Book	EMP10004	2024-03	Rs. 60,000	Rs. 10,000	Rs. 3,000	Rs. 67,000	Paid	
Ledger	EMP10006	2024-03	Rs. 65,000	Rs. 8,000	Rs. 3,250	Rs. 69,750	Paid	
Salary	EMP10005	2024-02	Rs. 70,000	Rs. 2,000	Rs. 200	Rs. 71,800	Pending	

Export Salary Report

[Download PDF](#) [View PDF](#)

## Customer Management

### Customer Management Admin Dashboard



[Customer List](#)[View Customers](#)

[Support Tickets](#)[View Feedback](#)

[Add New Customer](#)[Add Customer](#)

[View All Tickets](#)[View Tickets](#)

### Customer Manager

- [Customer List](#)
- [Customer Feedback](#)
- [Support Tickets](#)
- [Feedback Analysis](#)
- [Profile](#)

### Customer List

[+ ADD CUSTOMER](#) [DOWNLOAD PDF](#)

Search by name

Total Customers

8

#	Name	Email	Phone	Actions
1	Ishara Fernando	isharaf@gmail.com	0712345678	 
2	Lakeesha Abeysekara	lakeesha@gmail.com	0754893625	 
3	Nishshanka	shmnishshanka@gmail.com	0705436927	 
4	Samudra Ranjani	samudrananjani@gmail.com	0781122334	 
5	Sakila Laksika	laksika@gmail.com	0744455667	 
6	Nileesha Sahan	nileeshasahan1997@gmail.com	0723344556	 
7	Tekla Amarasingha	tekla@gmail.com	0701188600	 
8	Dhanuga Tashnindu	dhanugatashnindu@gmail.com	0723344556	 

## Customer Manager

- [Customer List](#)
- [Customer Feedback](#)
- [Support Tickets](#)
- [Feedback Analysis](#)
- [Profile](#)

## Customer Feedback and Analysis

### Add New Feedback

Customer Name *	Rating 	Comment *	Date mm/dd/yyyy <input type="text"/>	<b>SUBMIT</b>
-----------------	------------	-----------	---	---------------

### Feedback Summary

Total Feedbacks: 5    Average Rating: 3.8

[VIEW DETAILED ANALYSIS](#)

Customer Name	Rating	Comment	Date
Nuwan Perera		Excellent service!	5/1/2025
Ishara Fernando		Very good, but could improve response time.	5/2/2025
Lakeesha Abeysekara		Average experience, nothing special.	5/3/2025
Ravindu Wickramasinghe		Not satisfied with the support.	5/4/2025

**Customer Manager**

- [■ Customer List](#)
- [■ Customer Feedback](#)
- [■ Support Tickets](#)
- [■ Feedback Analysis](#)
  
- [● Profile](#)

## Feedback Analysis

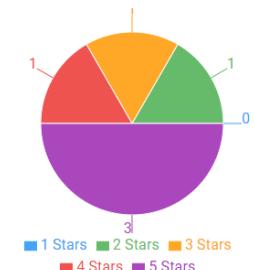
[← Back to Feedback](#)

★ Average Rating

4.0

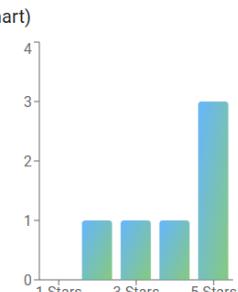
Out of 5

Rating Distribution (Pie Chart)



1 Star	2 Stars	3 Stars	4 Stars	5 Stars
1	1	1	0	3

Feedback Count by Rating (Bar Chart)



1 Stars	3 Stars	5 Stars
1	1	3

Recent Feedback Comments

4 Stars
5 Stars

Recent Feedback Comments

**Alex** (5★)  
Very good customer service!

**Nuwan Perera** (5★)  
Excellent service!

**Ishara Fernando** (4★)  
Very good, but could improve response time.

**Lakeesha Abeysekara** (3★)  
Average experience, nothing special.

**Ravindu Wickramasinghe** (2★)  
Not satisfied with the support.

**Customer Manager**

- [■ Customer List](#)
- [■ Customer Feedback](#)
- [■ Support Tickets](#)
- [■ Feedback Analysis](#)
  
- [● Profile](#)

### Customer Support

Subject	Message	Status	Actions
Login Issue	Cannot log in with my credentials.	Open	Open ▾ <span style="font-size: 0.8em; margin-left: 5px;">RESPOND ➤</span>
Order Delay	My order is delayed by 2 days.	Pending	Pending ▾ <span style="font-size: 0.8em; margin-left: 5px;">RESPOND ➤</span>
Payment Failure	Payment keeps failing on checkout.	Open	Open ▾ <span style="font-size: 0.8em; margin-left: 5px;">RESPOND ➤</span>
Product Inquiry	Need details about a product.	Resolved	Resolved ▾ <span style="font-size: 0.8em; margin-left: 5px;">RESPOND ➤</span>
Account Access	Lost access to my account.	Pending	Pending ▾ <span style="font-size: 0.8em; margin-left: 5px;">RESPOND ➤</span>

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**Customer Manager**

- Customer List
- Customer Feedback
- Support Tickets
- Feedback Analysis

Profile

**Customer Support**

Search tickets

Subject	Status	Actions
Login Issue	Open	<button>RESPOND &gt;</button>
Order Delay	Pending	<button>RESPOND &gt;</button>
Payment Failure	Open	<button>RESPOND &gt;</button>
Product Inquiry	Resolved	<button>RESPOND &gt;</button>
Account Access	Pending	<button>RESPOND &gt;</button>

**Respond to Ticket**

Subject: Order Delay

Response

[CANCEL](#) [SUBMIT](#)

**Customer Manager**

- Customer List
- Customer Feedback
- Support Tickets
- Feedback Analysis

Profile

**Add New Customer**

Name

Phone

Email

[CANCEL](#) [SAVE CUSTOMER](#)

## Esy Pharma - Customer List

Generated on: 5/15/2025 at 6:44:49 PM

Total Customers: 8

#	Name	Email	Phone
1	Ishara Fernando	isharaf@gmail.com	0712345678
2	Lakeesha Abeysekara	lakeesha@gmail.com	0754893625
3	Nishshanka	shmnishshanka@gmail.com	0705436927
4	Samudra Ranjani	samudraranjani@gmail.com	0781122334
5	Sakila Laksika	laksika@gmail.com	0744455667

PharmacyShop Medicines

Login Register

## Register

Full Name

Email

Password

Confirm Password

Phone Number (Optional)

Address (Optional)

[Register](#)

Already have an account? [Login here](#)

---

EsyPharma

Quick Links

- Home
- Products

Contact Info

- 123 Health Street
- Medical District, City

Opening Hours

- Monday - Friday: 8:00 AM - 9:00 PM
- Saturday: 9:00 AM - 7:00 PM

---

PharmacyShop Medicines

Login Register

## Login

Email

Password

[Login](#)

Don't have an account? [Register here](#)

---

EsyPharma

Quick Links

- Home
- Products
- Prescriptions
- Contact Us

Contact Info

- 123 Health Street
- Medical District, City
- Phone: (555) 123-4567
- Email: info@pharmacare.com

Opening Hours

- Monday - Friday: 8:00 AM - 9:00 PM
- Saturday: 9:00 AM - 7:00 PM
- Sunday: 10:00 AM - 6:00 PM

---

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**User Dashboard**
[Profile](#) [Change Password](#) [Account Settings](#) [My Orders](#)

Full Name

sadeepa

Email

sadeepa@gmail.com

Phone Number

0723475682

Address

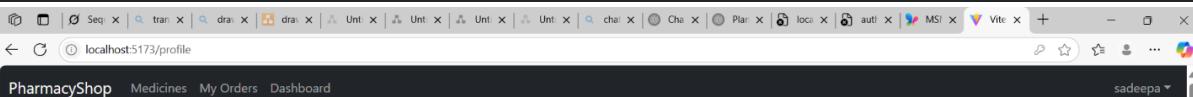
New kandy road Malabe

**Update Profile****EsyPharma****Quick Links**[Home](#)**Contact Info**

123 Health Street

**Opening Hours**

Monday - Friday: 8:00 AM - 9:00 PM

**User Dashboard**
[Profile](#) [Change Password](#) [Account Settings](#) [My Orders](#)

Current Password

Enter your current password

New Password

Enter new password

Confirm New Password

Confirm new password

**Update Password****EsyPharma****Quick Links**[Home](#)[Products](#)[Prescriptions](#)[Contact Us](#)**Contact Info**

123 Health Street

Medical District, City

Phone: (555) 123-4567

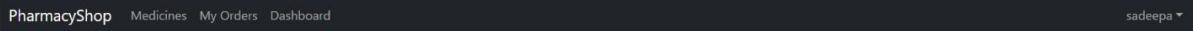
Email: info@pharmacare.com

**Opening Hours**

Monday - Friday: 8:00 AM - 9:00 PM

Saturday: 9:00 AM - 7:00 PM

Sunday: 10:00 AM - 6:00 PM

**EsyPharma****Quick Links**[Home](#)[Products](#)[Prescriptions](#)[Contact Us](#)**Contact Info**

123 Health Street

Medical District, City

Phone: (555) 123-4567

Email: info@pharmacare.com

**Opening Hours**

Monday - Friday: 8:00 AM - 9:00 PM

Saturday: 9:00 AM - 7:00 PM

Sunday: 10:00 AM - 6:00 PM

## User Dashboard

[Profile](#) [Change Password](#) [Account Settings](#) [My Orders](#)

### My Orders

Track your orders, view order history, and manage your purchases all in one place. Stay updated with real-time delivery status and access your shopping records anytime.

[View My Orders](#)
[Place new order](#)

#### Quick Tips:

- Track order status and delivery updates
- Download invoices and order details
- Manage returns and refunds easily

**EsyPharma**
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**Contact Info**
[123 Health Street](#)
**Opening Hours**
[Monday - Friday: 8:00 AM - 9:00 PM](#)

## Pharmacy Products

[All](#) [Pain Relief](#) [Antibiotics](#) [Allergy](#) [Vitamins](#)

**Paracetamol**

Panadol

[Pain Relief](#)

Pain reliever and fever reducer

[LKR 350.00](#)
[Buy Now](#)

**Amoxicillin**

Amoxil

[Antibiotics](#)

Antibiotic used to treat bacterial infections

[LKR 850.00](#)
[Buy Now](#)

**Omeprazole**

Prilosec

[Digestive Health](#)

Reduces stomach acid production

[LKR 750.00](#)
[Buy Now](#)

**Loratadine**

Claritin

[Allergy](#)

Antihistamine for allergy relief

[LKR 550.00](#)
[Buy Now](#)

**Paracetamol**

Panadol

[Pain Relief](#)

Pain reliever and fever reducer

[LKR 350.00](#)
[Buy Now](#)

## Place Your Order

**Order Details**

**Paracetamol**  
Panadol  
LKR 350.00 per unit

Quantity

1

Contact Number

0723475682

Additional Notes

Any special instructions or notes

**Delivery Address**

Street Address

New kandy road Malabe

City

City

Province

Province

Postal Code

5-digit Postal Code

**Order Summary**

Subtotal: LKR 350.00  
Delivery Fee: LKR 300.00

Total: LKR 650.00

\* Payment will be collected upon delivery (Cash on Delivery)

Cancel

Place Order

## My Orders

<b>ORD00011</b> Ordered on May 15, 2025, 06:00 PM	Pending								
<b>Order Items:</b>									
<table border="1"> <thead> <tr> <th>Item</th><th>Qty</th><th>Price</th><th>Subtotal</th></tr> </thead> <tbody> <tr> <td>Paracetamol</td><td>1</td><td>LKR 350.00</td><td>LKR 350.00</td></tr> </tbody> </table>		Item	Qty	Price	Subtotal	Paracetamol	1	LKR 350.00	LKR 350.00
Item	Qty	Price	Subtotal						
Paracetamol	1	LKR 350.00	LKR 350.00						
Subtotal: LKR 350.00 Delivery Fee: LKR 300.00									
<b>Total:</b> LKR 650.00									
<b>Delivery Address:</b> New kandy road Malabe, Colombo Western, 11200									
<b>Contact:</b> 0723475682									
<a href="#">Edit Order</a> <a href="#">Cancel Order</a>									

<b>ORD00010</b> Ordered on May 13, 2025, 12:31 AM	Accepted								
<b>Order Items:</b>									
<table border="1"> <thead> <tr> <th>Item</th><th>Qty</th><th>Price</th><th>Subtotal</th></tr> </thead> <tbody> <tr> <td>Metformin</td><td>4</td><td>LKR 950.00</td><td>LKR 3800.00</td></tr> </tbody> </table>		Item	Qty	Price	Subtotal	Metformin	4	LKR 950.00	LKR 3800.00
Item	Qty	Price	Subtotal						
Metformin	4	LKR 950.00	LKR 3800.00						
Subtotal: LKR 3800.00 Delivery Fee: LKR 300.00									
<b>Total:</b> LKR 4100.00									
<b>Delivery Address:</b> New kandy road Malabe, Colombo Western, 11200									
<b>Contact:</b> 0723475682									

### Login

Email  
admin@gmail.com

Password  
\*\*\*\*\*

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Don't have an account? [Register here](#)

EsyPharma

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#### Contact Info

 123 Health Street  
 Medical District, City  
 Phone: (555) 123-4567  
 Email: info@pharmacare.com

#### Opening Hours

 Monday - Friday: 8:00 AM - 9:00 PM  
 Saturday: 9:00 AM - 7:00 PM  
 Sunday: 10:00 AM - 6:00 PM

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Admin Portal

[Logout](#)

## Admin Dashboard

Welcome to your control center

### Order Management

Manage customer orders, track deliveries, and handle order processing

150+

Active Orders

[Manage Orders](#)

### User Management

Manage user accounts, roles, and permissions

1.2k+

Registered Users

[Manage Users](#)

### Need Help?

Contact our support team for assistance with managing your dashboard

[Contact Support](#)

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# Admin Dashboard

Welcome to your control center

## Order Management

Manage customer orders, track deliveries, and handle order processing

150+

Manage Orders

Active Orders

## User Management

Manage user accounts, roles, and permissions

1.2k+

Manage Users

Registered Users

### Need Help?

Contact our support team for assistance with managing your dashboard

Contact Support

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## Admin Portal

Logout

## Order Management

[Back to Dashboard](#)

Search by Order ID or Customer

Search

Filter by Status: All Orders ▾

Generate Report

Order ID	Customer	Date	Items	Total	Status	Delivery Person	Actions
ORD00011	sadeepa	May 15, 2025, 06:00 PM	1x Paracetamol	LKR 650.00	Pending	Not Assigned	<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00010	sadeepa	May 13, 2025, 12:31 AM	4x Metformin	LKR 4100.00	Accepted	amal	<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00009	sandali	May 8, 2025, 10:18 AM	4x Paracetamol	LKR 1700.00	Pending	Not Assigned	<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00008	lakshitha	May 7, 2025, 07:58 PM	1x Paracetamol	LKR 650.00	Pending	Not Assigned	<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00007	lakshitha	May 7, 2025, 11:30 AM	1x Amoxicillin	LKR 1150.00	Pending	Not Assigned	<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00006	sadeepa	May 7, 2025, 09:29 AM	1x Paracetamol	LKR 650.00	Pending	Not Assigned	<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00005	sadeepa	May 6, 2025, 10:37 PM	1x Paracetamol	LKR 650.00	Accepted	amal	<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00004	lakshitha	May 6, 2025, 05:02 PM	3x Omeprazole	LKR 2550.00	Accepted	Test delivery	<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00003	inoka	May 4, 2025, 01:54 PM	1x Omeprazole	LKR 1050.00	Accepted	Test delivery	<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>

## Order Management

[Back to Dashboard](#)

Search by Order ID or Customer

[Search](#)[Generate Report](#)

Order ID	Customer	Date	Items	Quantity	Price	Status	Delivery Person	Actions
ORD00011	sadeepa	May 15, 2025, 06:00 PM	1x Paracetamol	LKR 650.00	Pending	Not Assigned		<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00010	sadeepa	May 13, 2025, 12:31 AM	1x Paracetamol	LKR 650.00	Accepted	amal		<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00009	sandali	May 8, 2025, 10:18 AM	3x Omeprazole	LKR 2550.00	Accepted	Test delivery		<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00008	lakshitha	May 7, 2025, 07:58 PM	1x Omeprazole	LKR 1050.00	Accepted	Test delivery		<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00007	lakshitha	May 7, 2025, 11:30 AM				Assigned		<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00006	sadeepa	May 7, 2025, 09:29 AM	1x Paracetamol	LKR 650.00	Pending	Not Assigned		<a href="#">View</a> <a href="#">Assign Delivery</a> <a href="#">Delete</a>
ORD00005	sadeepa	May 6, 2025, 10:37 PM	1x Paracetamol	LKR 650.00	Accepted	amal		<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00004	lakshitha	May 6, 2025, 05:02 PM	3x Omeprazole	LKR 2550.00	Accepted	Test delivery		<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>
ORD00003	inoka	May 4, 2025, 01:54 PM	1x Omeprazole	LKR 1050.00	Accepted	Test delivery		<a href="#">View</a> <a href="#">Update Delivery</a> <a href="#">Delete</a>

Assign Delivery Person

Order ID: ORD00011 | Status: pending

Name:

Email:

Contact Number:

Address:

[Cancel](#) [Assign](#)

# EsyPharma Order Report

Generated on: 5/15/2025

Status Filter: All Orders

Order ID	Customer	Date	Status	Items	Total (LKR)
ORD00011	sadeepa	5/15/2025	Pending	1x Paracetamol	650.00
ORD00010	sadeepa	5/13/2025	Accepted	4x Metformin	4100.00
ORD00009	sandali	5/8/2025	Pending	4x Paracetamol	1700.00
ORD00008	lakshitha	5/7/2025	Pending	1x Paracetamol	650.00
ORD00007	lakshitha	5/7/2025	Pending	1x Amoxicillin	1150.00
ORD00006	sadeepa	5/7/2025	Pending	1x Paracetamol	650.00
ORD00005	sadeepa	5/6/2025	Accepted	1x Paracetamol	650.00
ORD00004	lakshitha	5/6/2025	Accepted	3x Omeprazole	2550.00
ORD00003	inoka	5/4/2025	Accepted	1x Omeprazole	1050.00
ORD00002	inoka	5/4/2025	Delivered	1x Paracetamol	650.00

Total Orders: 10

Order Status Summary:

Pending: 5 order(s)

Accepted: 4 order(s)

Delivered: 1 order(s)

## Inventory Management

- [Back to Staff Dashboard](#)
- [Dashboard](#)
- [Stock Management](#)
- [Transaction History](#)
- [Alerts \(3\)](#)
- [Add Medicine](#)

John Smith  
pharmacist

[Logout](#)

### Inventory

Good morning, John Smith!

**Inventory Overview**  
 Your inventory at a glance
 


**244**

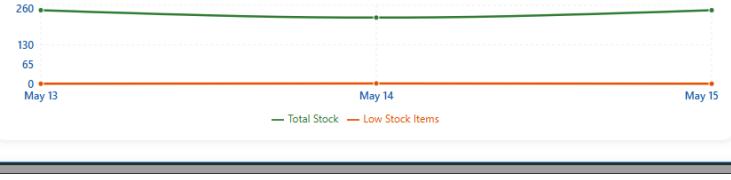

**2**


**1**


**3**

⚠ 2 low stock ⚠ 1 expired 🔔 3 unresolved alerts

**Stock Overview**



— Total Stock — Low Stock Items

Medicine	Category	Stock	Threshold	Expiry	Actions
Panadol 500mg	Tablet	135	50	Dec 31, 2025	<a href="#">EDIT</a> <a href="#">DELETE</a>
Amoxil 250mg	Capsule	15	30	Oct 15, 2024	<a href="#">EDIT</a> <a href="#">DELETE</a>
Salbutamol Syrup	Syrup	24	20	Nov 30, 2025	<a href="#">EDIT</a> <a href="#">DELETE</a>
Metformin 200mg	Tablet	50	40	Jan 15, 2026	<a href="#">EDIT</a> <a href="#">DELETE</a>
Vitamin C 100mg	Tablet	20	35	Sep 30, 2025	<a href="#">EDIT</a> <a href="#">DELETE</a>

## Stock Management

Total Medicines
5
⚠ Low Stock
2
⚠ Expiring Soon
0
⚠ Expired
1

Category

Tablet

Sort by

Name

Medicine	Category	Stock	Threshold	Expiry	Actions
Metformin 200mg Barcode: 8901234567968	Tablet	50	40	Dec 31, 2025	<a href="#">EDIT</a> <a href="#">DELETE</a>
Panadol 500mg Barcode: 8901234567890	Tablet	135	50	Dec 31, 2025	<a href="#">EDIT</a> <a href="#">DELETE</a>
Vitamin C 100mg Barcode: 8901234567845	Tablet	20	35	Sep 30, 2025	<a href="#">EDIT</a> <a href="#">DELETE</a>

90

Search medicines... Category Tablet

Sort by Expiry Date

Medicine	Category	Stock	Threshold	Expiry	Action
Vitamin C 100mg Barcode: 8901234567845	Tablet	20 <span>Low Stock</span>	35	Sep 30, 2025	<span>EDIT</span> <span>DELETE</span>
Panadol 500mg Barcode: 8901234567890	Tablet	135	50	Dec 31, 2025	<span>EDIT</span> <span>DELETE</span>
Metformin 200mg Barcode: 8901234567968	Tablet	50	40	Jan 15, 2026	<span>EDIT</span> <span>DELETE</span>

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**Contact Info**

123 Health Street  
Medical District, City  
Phone: (555) 123-4567  
Email: info@esypharma.com

**Opening Hours**

Monday - Friday: 8:00 AM - 9:00 PM  
Saturday: 9:00 AM - 7:00 PM  
Sunday: 10:00 AM - 6:00 PM

Medicine	Category	Stock	Threshold	Expiry	Actions
Metformin 200mg Barcode: 8901234567968	Tablet	50	40	Jan 15, 2026	<span>EDIT</span> <span>DELETE</span>
Panadol 500mg Barcode: 8901234567890	Tablet	135	50	Dec 31, 2025	<span>EDIT</span> <span>DELETE</span>
Vitamin C 100mg Barcode: 8901234567845	Tablet	20 <span>Low Stock</span>	35	Sep 30, 2025	<span>EDIT</span> <span>DELETE</span>

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Sunday: 10:00 AM - 6:00 PM

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**Transaction History**

Total Transactions: 7 | Total Value: \$0.00 | Avg. Value: \$0.00 | Sales: 1

EXPORT PDF ↻

Search transactions...

Date Range: All Time | Type: All Types

Transaction Trends

Transaction Count: 1.5 | Transaction Value: 0.00

Date & Time	Medicine	Type	Quantity	Stock Change	Notes
May 7, 2025 4:16 PM	Deleted Medicine N/A	ADJUSTMENT	5	15 → 10 ↘	Manual stock adjustment from 15 to 10
May 7, 2025 12:35 PM	Salbutamol Syrup 8901234567883	RESTOCK	16	8 → 24 ↗	Manual stock restock from 8 to 24
May 7, 2025 10:47 AM	Metformin 200mg 8901234567968	RESTOCK	15	35 → 50 ↗	Manual stock restock from 35 to 50
May 7, 2025 10:46 AM	Deleted Medicine N/A	RESTOCK	3	12 → 15 ↗	Manual stock restock from 12 to 15
May 15, 2025 10:56 AM	Panadol 500mg 8901234567890	RESTOCK	100	0 → 100 ↗	Initial stock setup for Panadol 500mg
May 15, 2025 10:56 AM	Panadol 500mg 8901234567890	SALE	15	100 → 85 ↘	Regular customer purchase
May 15, 2025 10:56 AM	Panadol 500mg 8901234567890	RESTOCK	50	85 → 135 ↗	Monthly restock order

← Transaction History

Total Transactions  
**7**

Total Value  
**\$0.00**

Avg. Value  
**\$0.00**

Search transactions...
Date Range  
All Time
Type  
All Types

#### Transaction Trends

Downloads

What do you want to do with transactions\_2025-05-15.pdf?

[Open](#) [Save as](#) [Save](#)

See more

## Transaction Report

EsyPharma

Generated on: 5/15/2025, 10:59:29 AM

Date	Medicine	Type	Quantity	Stock Change	Notes
May 7, 2025	Deleted Medicine	ADJUSTMENT	5	15 !' 10	Manual stock adjustment from 15 to 10
May 7, 2025	Salbutamol Syrup	RESTOCK	16	8 !' 24	Manual stock restock from 8 to 24
May 7, 2025	Metformin 200mg	RESTOCK	15	35 !' 50	Manual stock restock from 35 to 50
May 7, 2025	Deleted Medicine	RESTOCK	3	12 !' 15	Manual stock restock from 12 to 15
May 15, 2025	Panadol 500mg	RESTOCK	100	0 !' 100	Initial stock setup for Panadol 500mg
May 15, 2025	Panadol 500mg	SALE	15	100 !' 85	Regular customer purchase
May 15, 2025	Panadol 500mg	RESTOCK	50	85 !' 135	Monthly restock order

## ← Alerts

RESOLVE ALL



Total Alerts

3

Low Stock

2

Expiring Soon

0

Expired

1

UNRESOLVED ALERTS (3)

RESOLVED ALERTS (2)

Search alerts...

Type	Medicine	Message	Date	Status	Actions
Low Stock	Vitamin C 100mg	Vitamin C 100mg stock is low (20 remaining)	a year ago	Active	RESOLVE
Low Stock	Amoxil 250mg	Amoxil 250mg stock is low (15 remaining)	a year ago	Active	RESOLVE
Expired	Salbutamol Syrup	Salbutamol Syrup expires in 204 days (30/11/2024)	a year ago	Active	RESOLVE

Type	Medicine	Message	Date	Status	Actions
Low Stock	Vitamin C 100mg	Vitamin C 100mg stock is low (20 remaining)	a year ago	Active	RESOLVE
Low Stock	Amoxil 250mg	Amoxil 250mg stock is low (15 remaining)	a year ago	Active	RESOLVE
Expired	Salbutamol Syrup	Salbutamol Syrup expires in 204 days (30/11/2024)	a year ago	Active	RESOLVE

Rows per page: 10 ▾ 1–3 of 3 < >

### EsyPharma

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Medical District, City  
Phone: (555) 123-4567  
Email: info@esypypharma.com

### Opening Hours

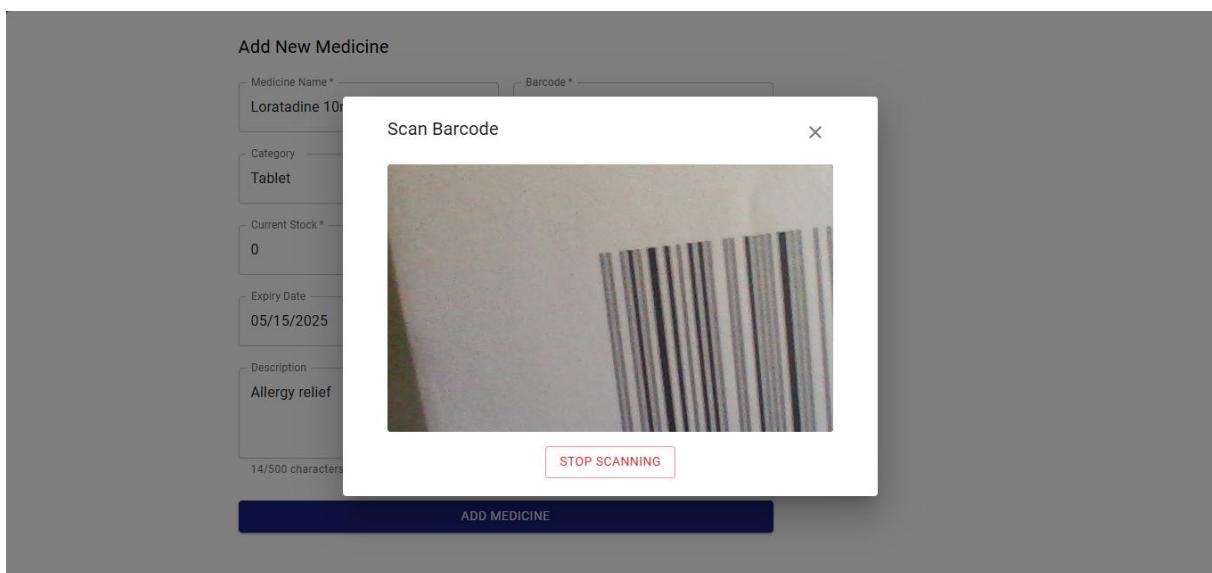
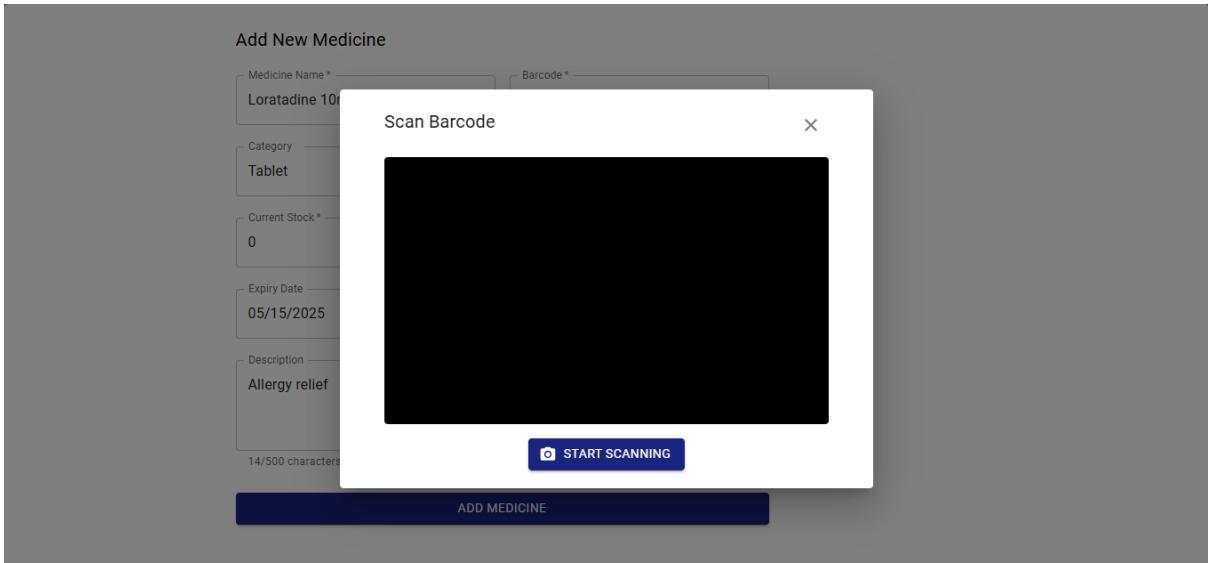
Monday - Friday: 8:00 AM - 9:00 PM  
Saturday: 9:00 AM - 7:00 PM  
Sunday: 10:00 AM - 6:00 PM

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### Add New Medicine

Medicine Name *	Barcode *
<input type="text"/>	<input type="text"/>
Category	Supplier ID *
Tablet	<input type="text"/>
Current Stock *	Low Stock Threshold *
0	10
Expiry Date	Status
05/15/2025	Active
Description	
0/500 characters	

**ADD MEDICINE**



Add New Medicine

Medicine Name \* Loratadine 10mg

Barcode \* 1112565132818 

Category Tablet

Supplier ID \*

Current Stock \* 0

Low Stock Threshold \* 25

Expiry Date 05/15/2025 

Status Active

Description Allergy relief

14/500 characters

ADD MEDICINE

### Add New Medicine

Medicine Name \* Loratadine 10mg

Barcode \* 1112565132818 

Category Tablet

Supplier ID \* ad66

Current Stock \* 0

Low Stock Threshold \*

Expiry Date 05/15/2025

Description Allergy relief

14/500 characters

**ADD MEDICINE**

**Confirm Addition**

Are you sure you want to add this new medicine?

**CANCEL** **CONFIRM**

### Edit Medicine

Medicine Name \* Panadol 500mg

Barcode \* 8901234567890 

Category Tablet

Supplier ID \* SUP001

Current Stock \* 135

Low Stock Threshold \* 50

Expiry Date 12/31/2025 

Status Active

Description Paracetamol, pain/fever relief

30/500 characters

**UPDATE MEDICINE**







