



Pharmacy Management System

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System Description:

1. Overview:

The Online and On-Site Pharmacy System is a full-featured software program that makes it easier to manage pharmacy operations online and at physical locations. To meet the varied needs of clients and medical professionals, this system seamlessly combines online features for remote access and on-site capabilities for in-person transactions.

1. Main Objectives :

- Accessibility: Provide convenient access to medication and healthcare products for individuals who may have mobility limitations, or have difficulty visiting brick-and-mortar pharmacies.
- Convenience: Offer a user-friendly platform where customers can purchase from their homes, at any time of the day.
- Expanded Reach: Reach a wider customer base beyond local geographical boundaries.
- 24/7 Availability.
- Cost-Effectiveness: Enable customers to compare prices, avail discounts, and find cost-effective alternatives for medications.
- Customer Engagement: Foster ongoing engagement with customers like feedback mechanisms, and interactive features such as live chat support, community forums, and teleconsultation services.

2. Key Features:

2.1 Online Pharmacy Market:

- A user-friendly web interface allowing customers to browse products, place orders, and manage their accounts.
- Secure authentication mechanisms for user registration, login, and account management, ensuring data privacy and security.
- Intuitive search functionality with filters for easy navigation and discovery of medications, healthcare products, and related items, allowing search using barcode.
- Online payment gateway integration to facilitate secure transactions, supporting multiple payment methods.

2.2 On-Site Operations:

- Point-of-Sale (POS) System: Integrated POS terminals or software, with support for multiple payment methods.
- Inventory Management: a centralized inventory control system to manage stock levels, track expiration dates, and automate the reordering of medications and healthcare products.
- Barcode scanning: tracking of merchandise within the pharmacy.
- Patient Counseling: private consultation areas and dedicated staff for providing personalized medication counseling, dosage instructions, and addressing customer queries or concerns.
- Regulatory Compliance: Adherence to regulatory standards and best practices for pharmacy operations.

2.3 Additional Futures:

- Integration: Seamless integration between online and on-site components, ensuring synchronization of data.
- Customer Relationship Management (CRM): Customer database management for storing customer information.
- Scalability and Flexibility: Scalable architecture to accommodate a growing customer base.
- Reporting and Analytics: Advanced reporting and analytics capabilities, enabling data-driven decision-making and business optimization.
- Continuous Improvement: Commitment to ongoing system enhancements, and updates, to ensure continuous improvement in system functionality, usability, and performance.

SYSTEM DIAGRAMS

| Context Diagram:

- Is an overview of the organizational system that shows the system boundaries, external entities that interact with the system, and the major information flows between entities and the system.
- Shows only contain one process node (process 0) that generalizes whole functions in the system.

- external entities:



Owner



Pharmacist



Marketing

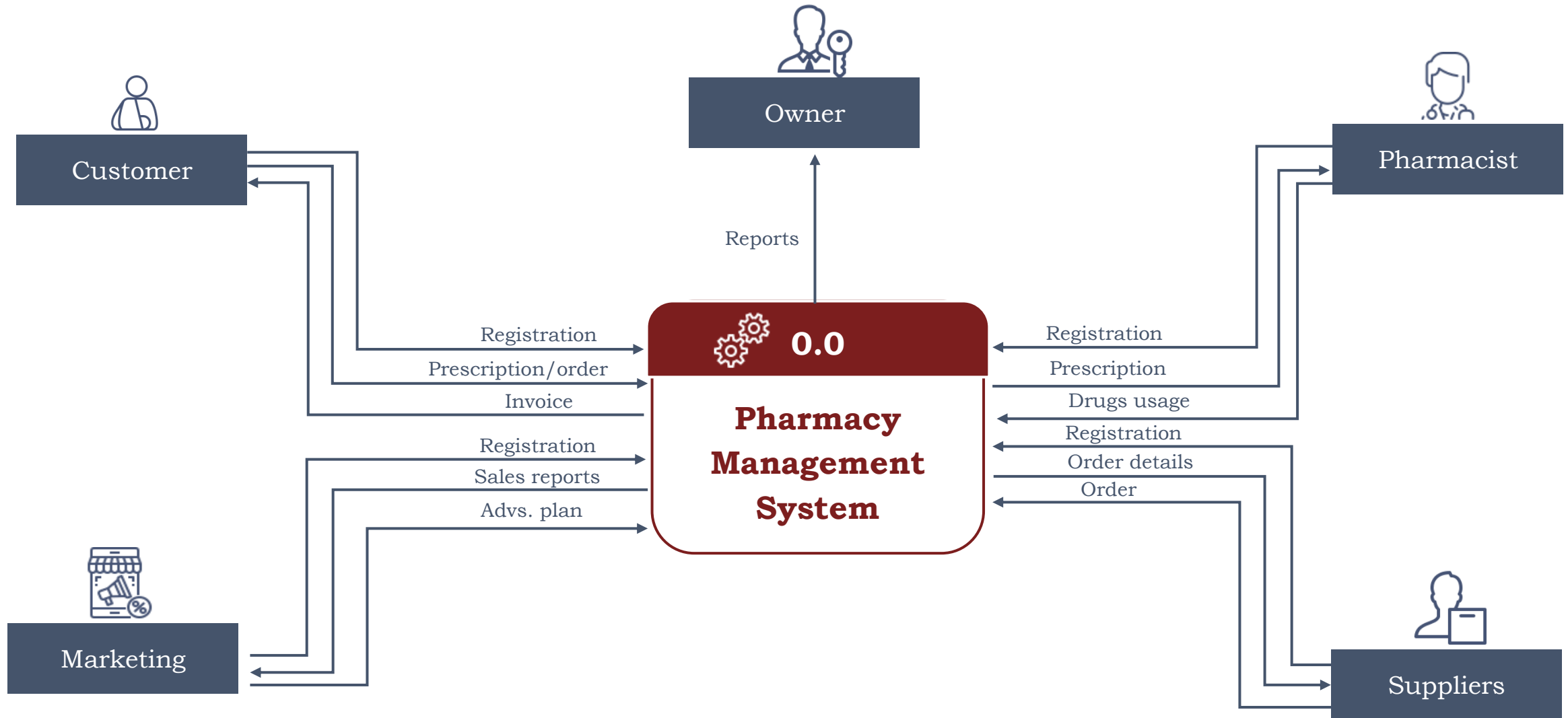


Suppliers



Customer

| Context Diagram:



| Level 0 DFD:

- The first level DFD shows the main processes within the system.
- Shows the system's major processes, data flows, and data stores at a high level of abstraction.

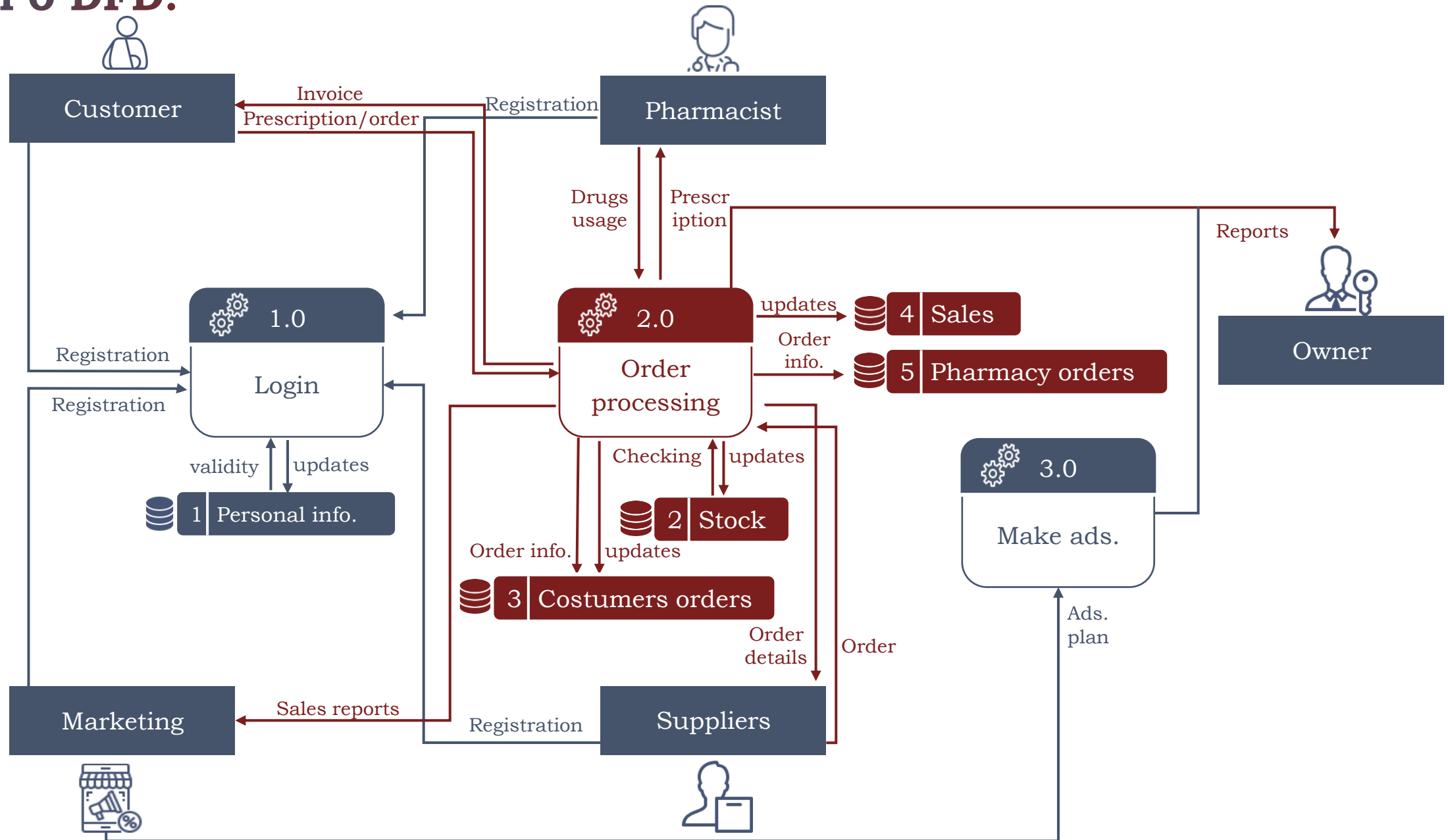
- external entities:



- data stores :

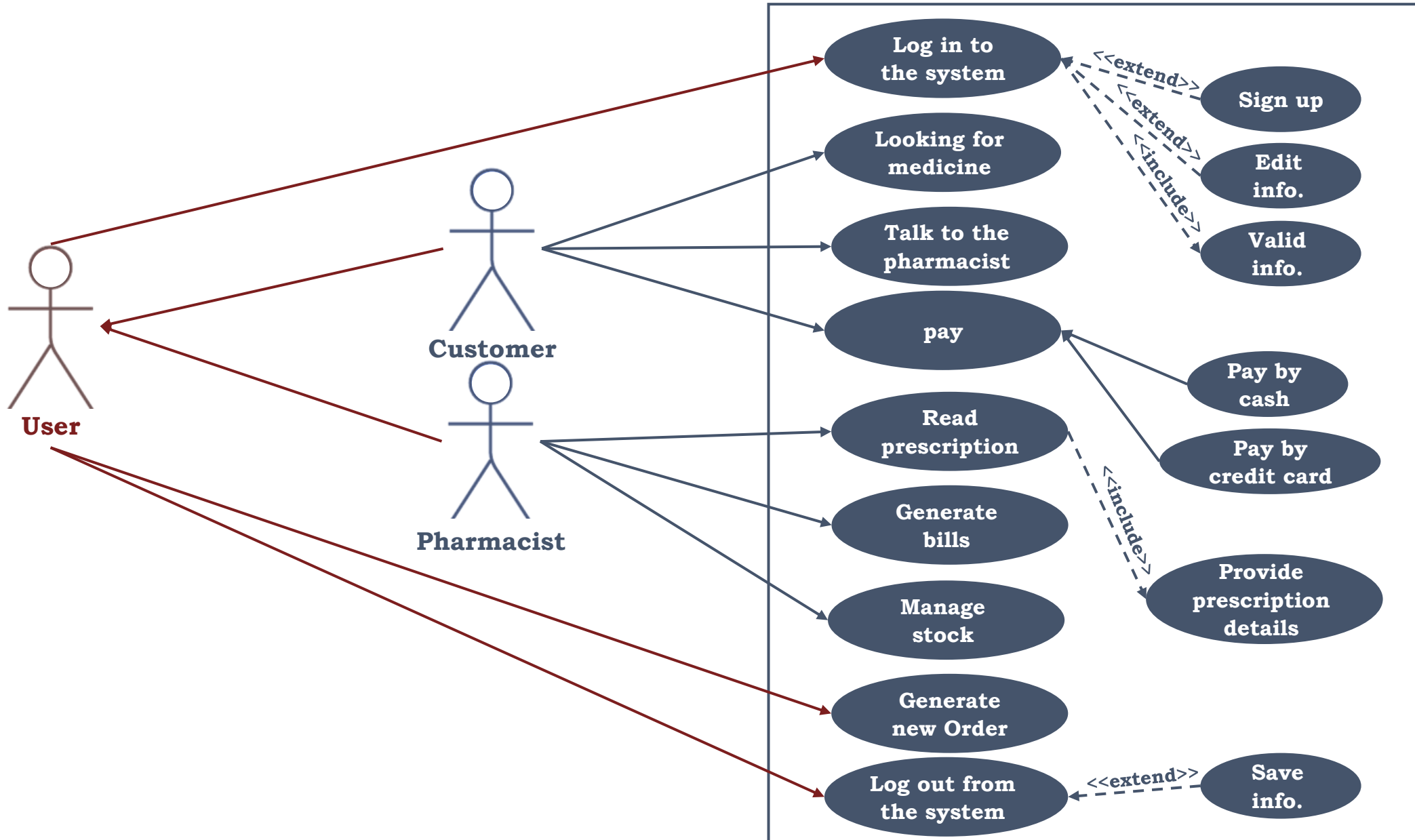


Level 0 DFD:



| Use Case :

Use cases represent system functionality from the user's perspective.



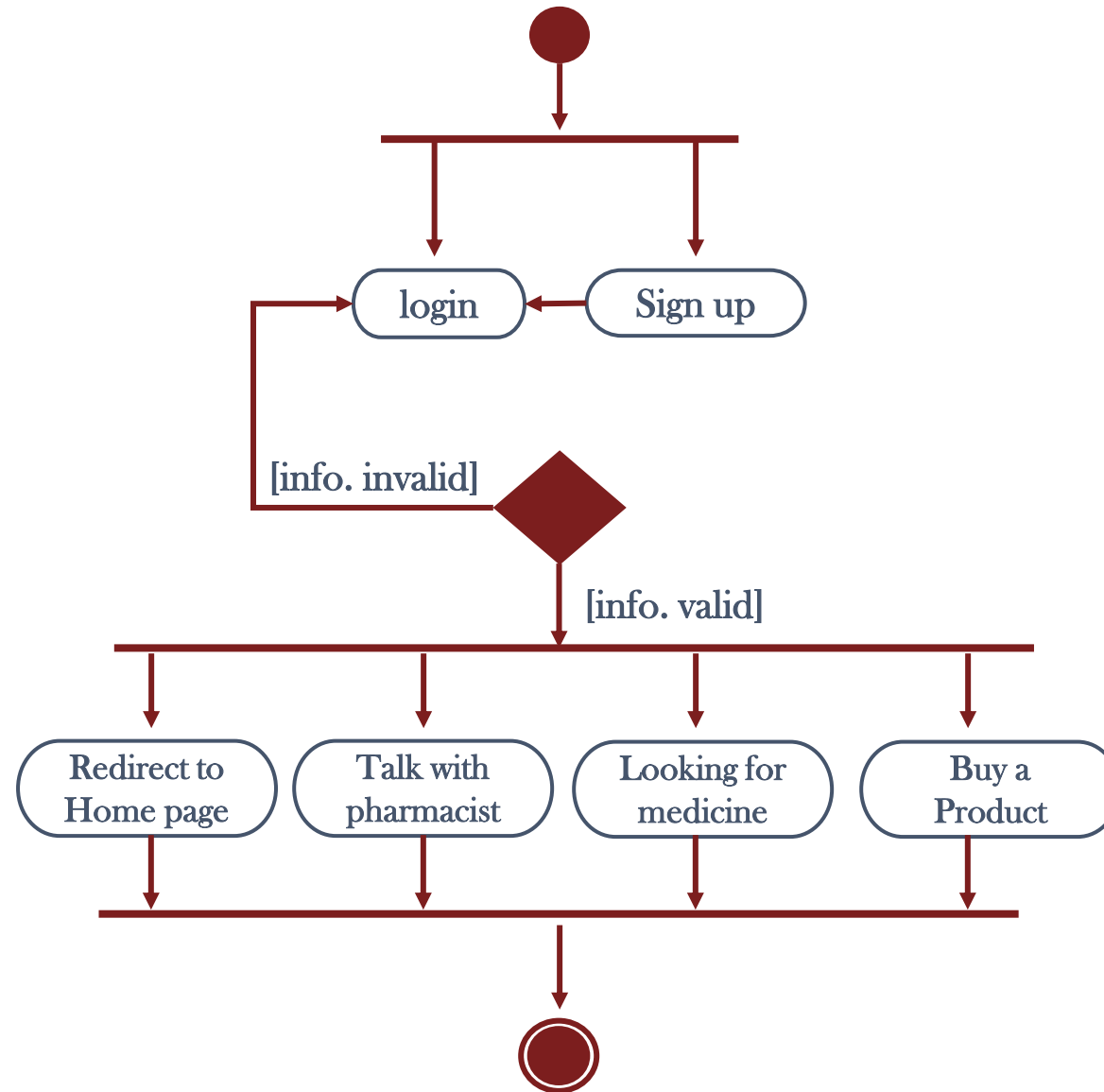


**Login to the
System use case**

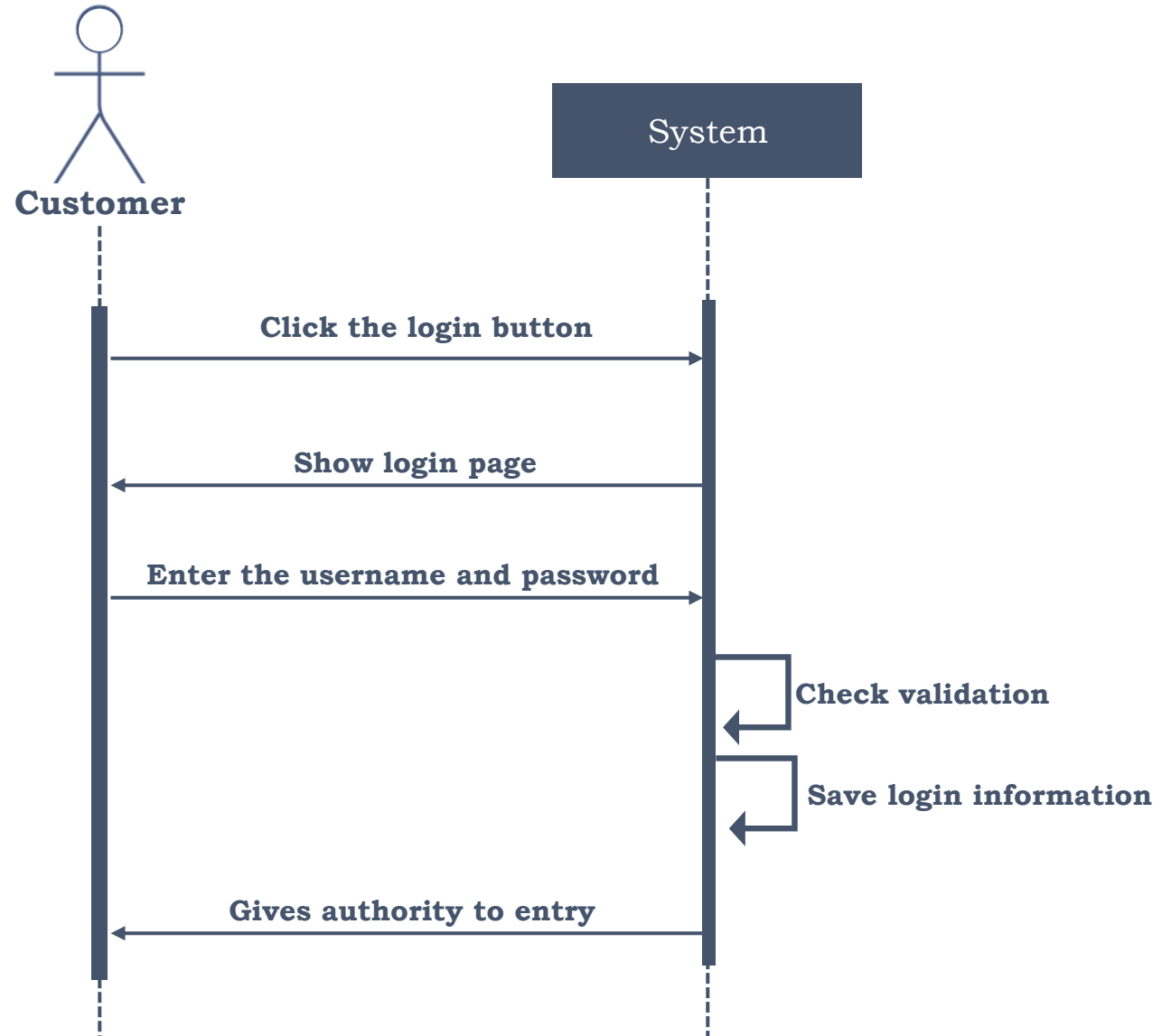
| Use Case analysis :

Use Case Name	Login to the system.	
Actor	Customer.	
Description	This use case describes the process of a customer log in to the system; The customer Get access to personal account.	
Typical Course Of Events	Actor Action	System Response
	<u>Step 1:</u> This use case is initiated when a customer enters the username and password. <u>Step 5:</u> Get access to the personal account.	<u>Step 2:</u> The customer info. checked with info. in currently on file. <u>Step 3:</u> Save login information. <u>Step 4:</u> Make the Customer Get access to the personal account.
Alternative Course	<u>Step 2:</u> If the user forgets the password let him reset it. <u>Step 4:</u> If the user cannot access his page, let him contact us.	
Precondition	User know account information.	
Postcondition	User get access to personal account	
Assumption	None at this time	

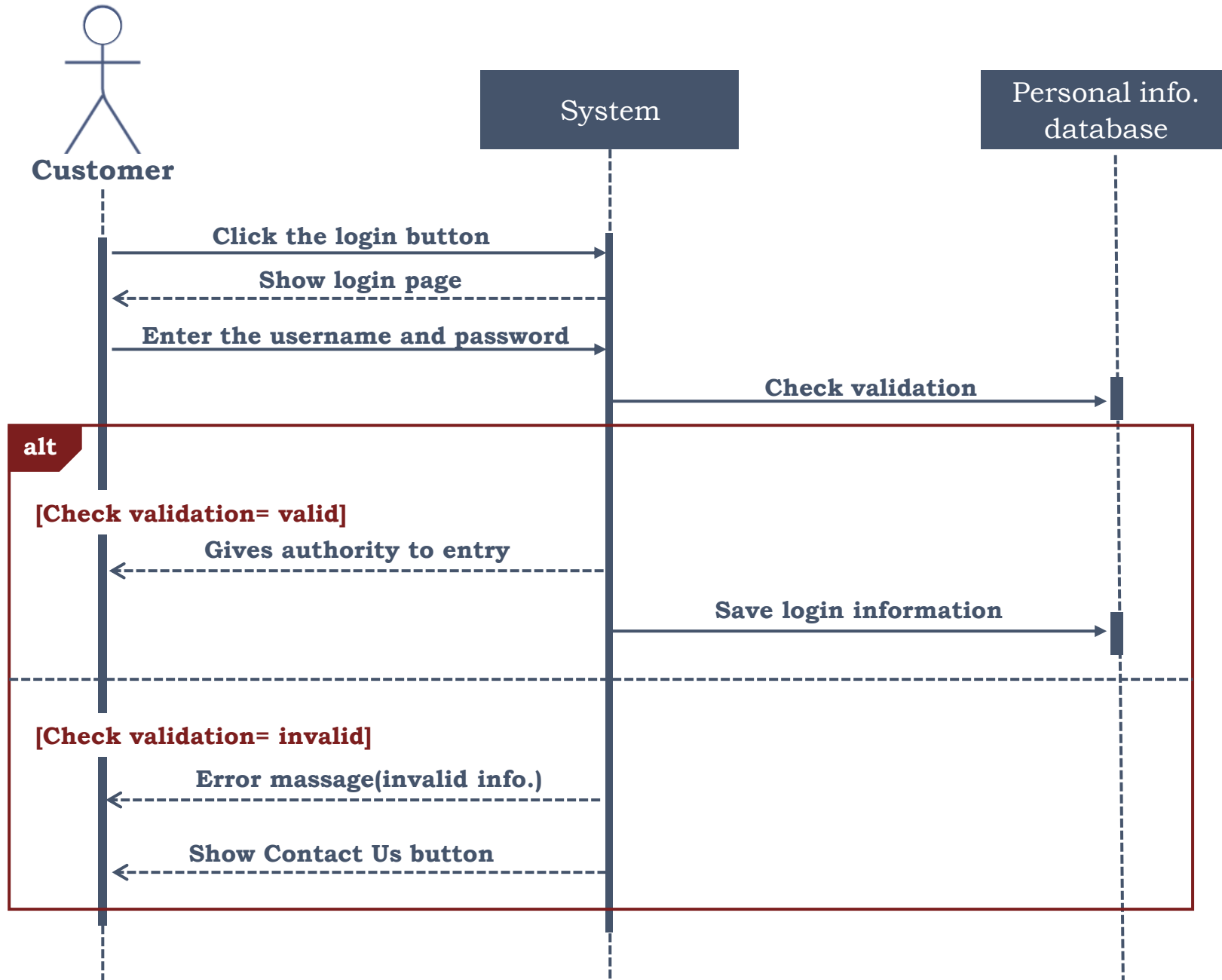
|Activity Diagram :



SSD :



|SD :





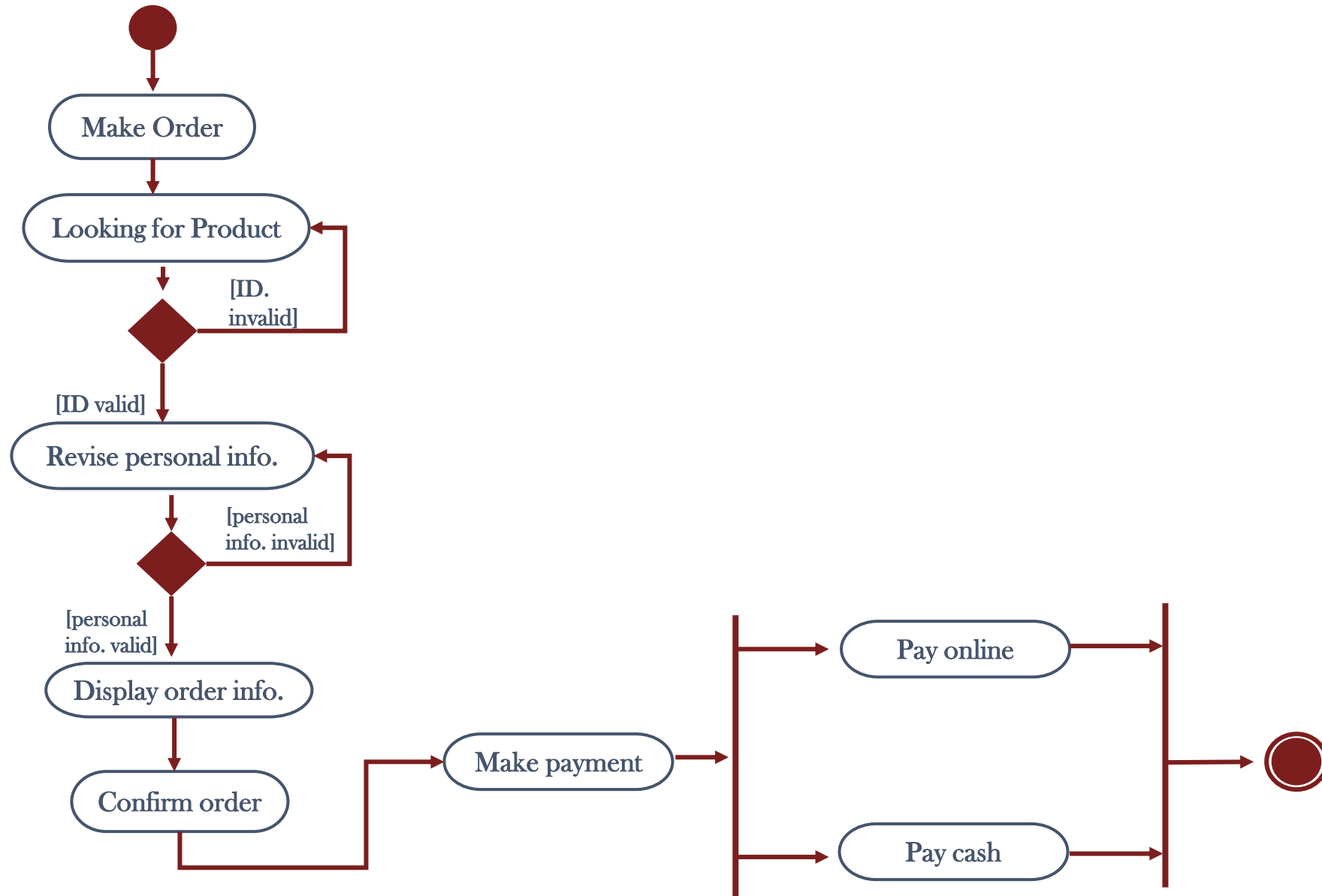
**Generate new
Order use case**

| Use Case analysis :

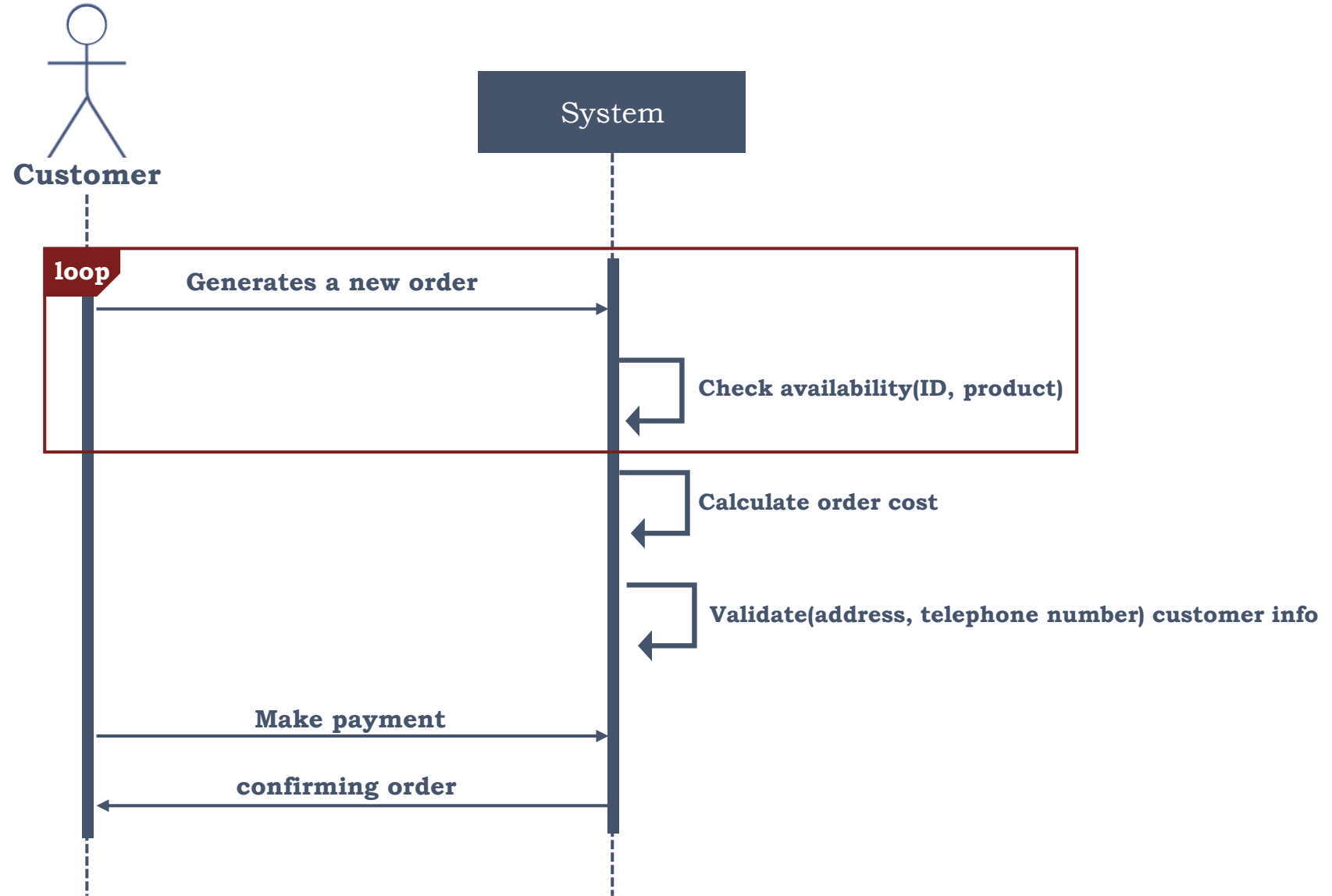
Use Case Name	Generate new Order.	
Actor	Customer.	
Description	This use case describes the process of a customer Generating a new order; the customer will receive a notification that the order has been confirmed.	
Typical Course Of Events	Actor Action	System Response
	<p><u>Step 1:</u> This use case is initiated when a customer generates a new order.</p> <p><u>Step 6:</u> The Customer chooses between paying online or in cash.</p> <p><u>Step 8:</u> This use case concludes when the customer receives the order confirmation notice & can follow the order status.</p>	<p><u>Step 2:</u> For each product being ordered, validate the product number & availability.</p> <p><u>Step 3:</u> calculate order cost.</p> <p><u>Step 4:</u> The customer's personal information such as address & telephone number is validated against what is currently on file.</p> <p><u>Step 5:</u> let the Customer choose between paying online or cash.</p> <p><u>Step 7:</u> generate order confirmation & send the status of the order to the customer.</p>

Alternative Course	<u>Step 2:</u> If the product number is not valid or unavailable, send a notification to the customer. <u>Step 4:</u> Revise the data if the customer has indicated an address or telephone number change on the order.
Precondition	Orders can only be generated by customers.
Postcondition	Customer order has been confirmed.
Assumption	None at this time

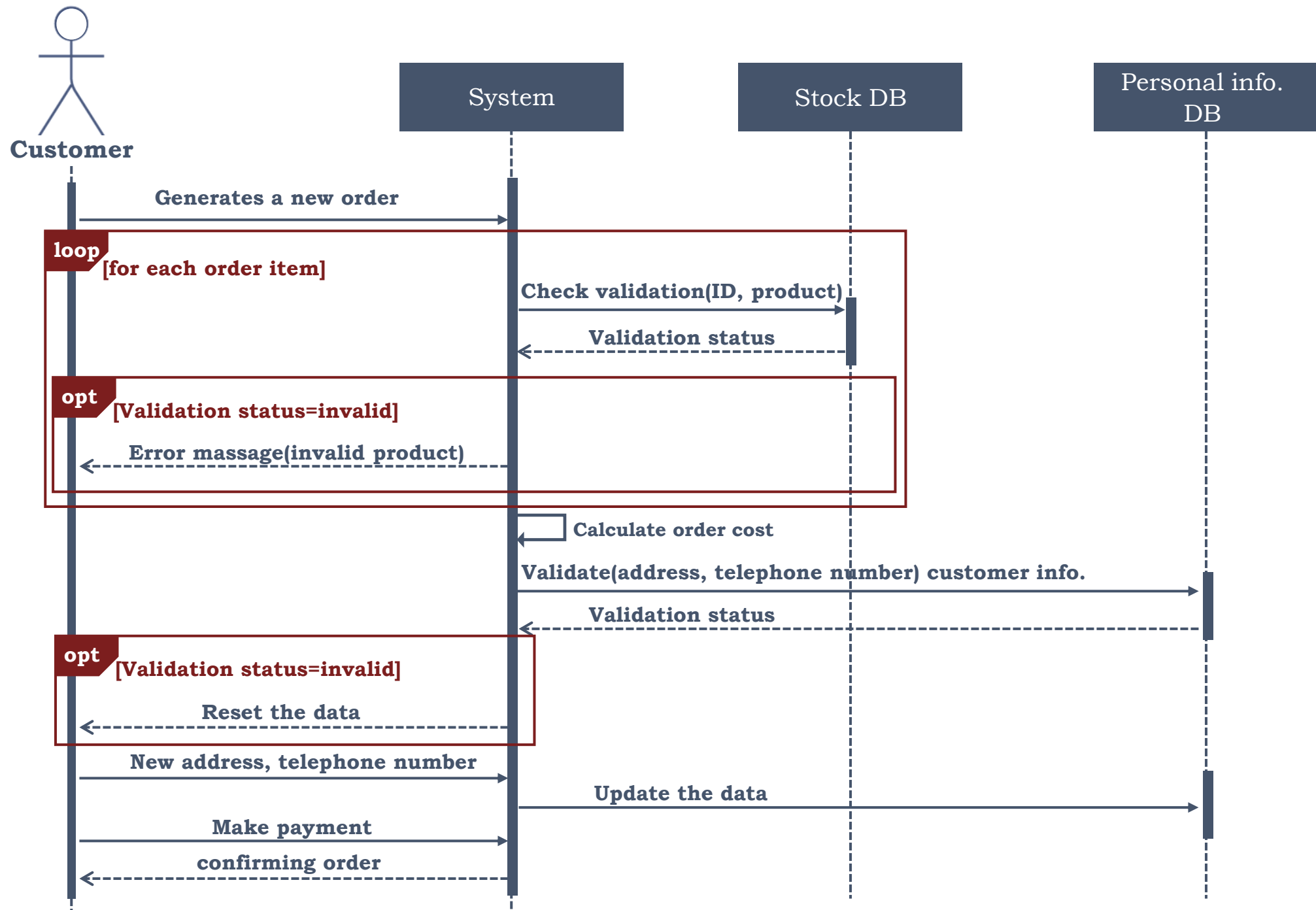
Activity Diagram :



SSD :



| SD :





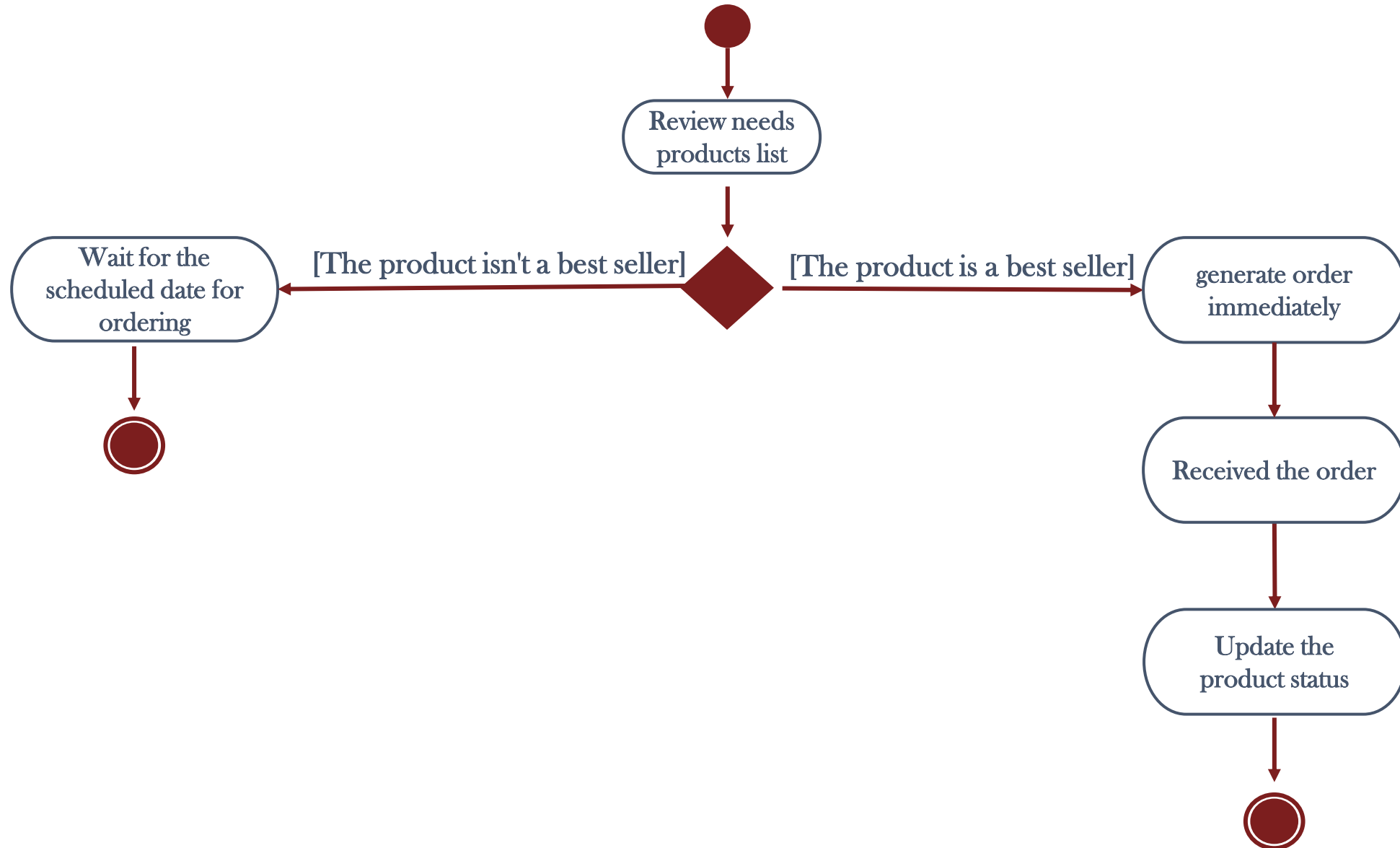
Manage Stock use case

| Use Case analysis :

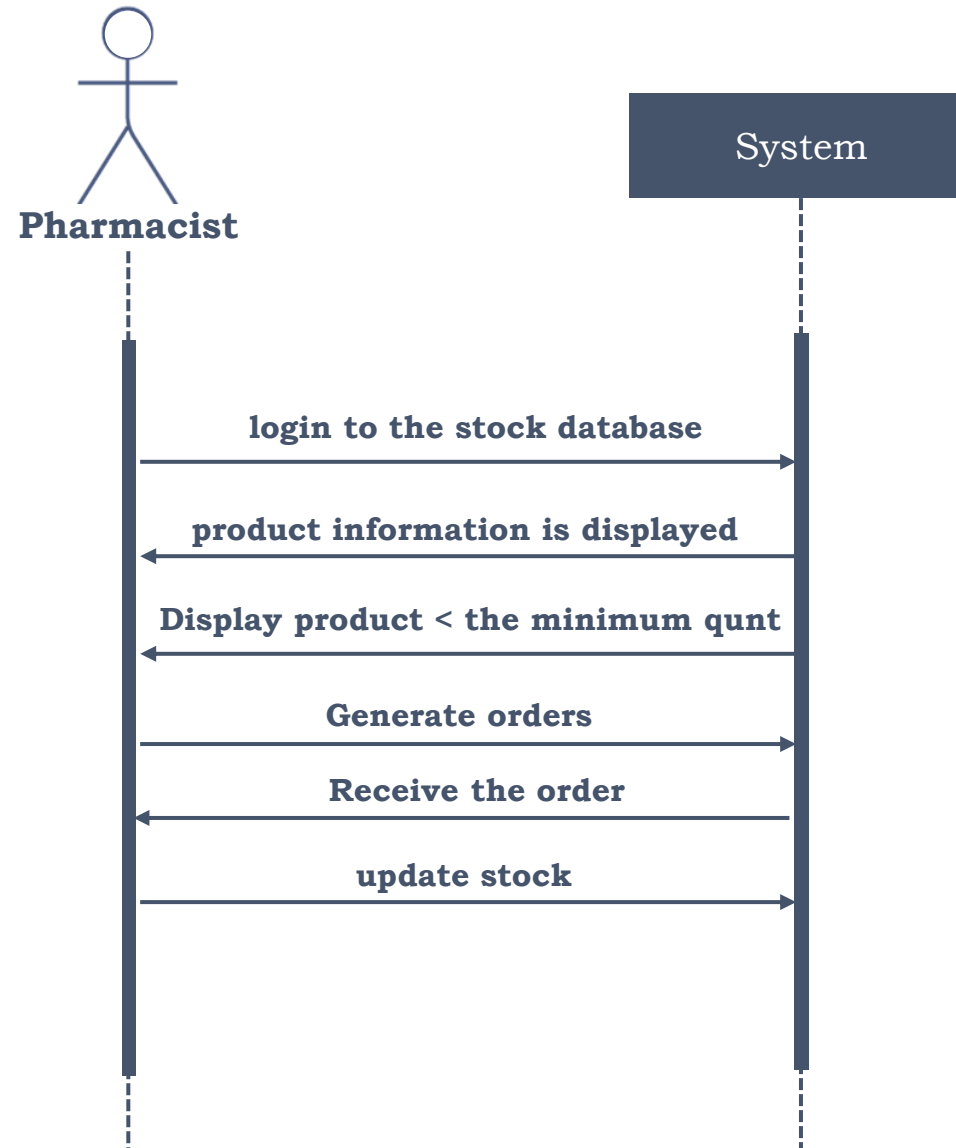
Use Case Name	Manage stock.	
Actor	Pharmacist.	
Description	This use case describes the process of a pharmacist log in to manage stock; the stock will have enough quantities of each product.	
Typical Course Of Events	Actor Action	System Response
	<p><u>Step 1:</u> This use case is Initiated when a pharmacist manage stock database.</p> <p><u>Step 4:</u> generate orders from suppliers.</p> <p><u>Step 5:</u> Receive the order and update stock.</p> <p><u>Step6:</u> this use case concludes when the stock has enough quantities for each required product</p>	<p><u>Step 2:</u> the product information such as (ID, name, price, and quantity) is displayed.</p> <p><u>Step 3:</u> for each product less than the minimum quantity is listed.</p>

Alternative Course	<p><u>Step2:</u> if there's a new product and not inserted in stock database, add it and update the stock database.</p> <p><u>Step3:</u> if there's a product less than minimum quantity and not added to the list, add it manually.</p> <p><u>Step5:</u> if there's any product not available at supplier, order an alternative product.</p>
Precondition	Orders can only be submitted by pharmacist.
Postcondition	The stock has enough quantities of each product.
Assumption	<p>-The process of (generate orders) applied at “pre-defined” date.</p> <p>-If there's any product Classified as a best seller and exist in the list, generate order immediately even if it is not time to order.</p>

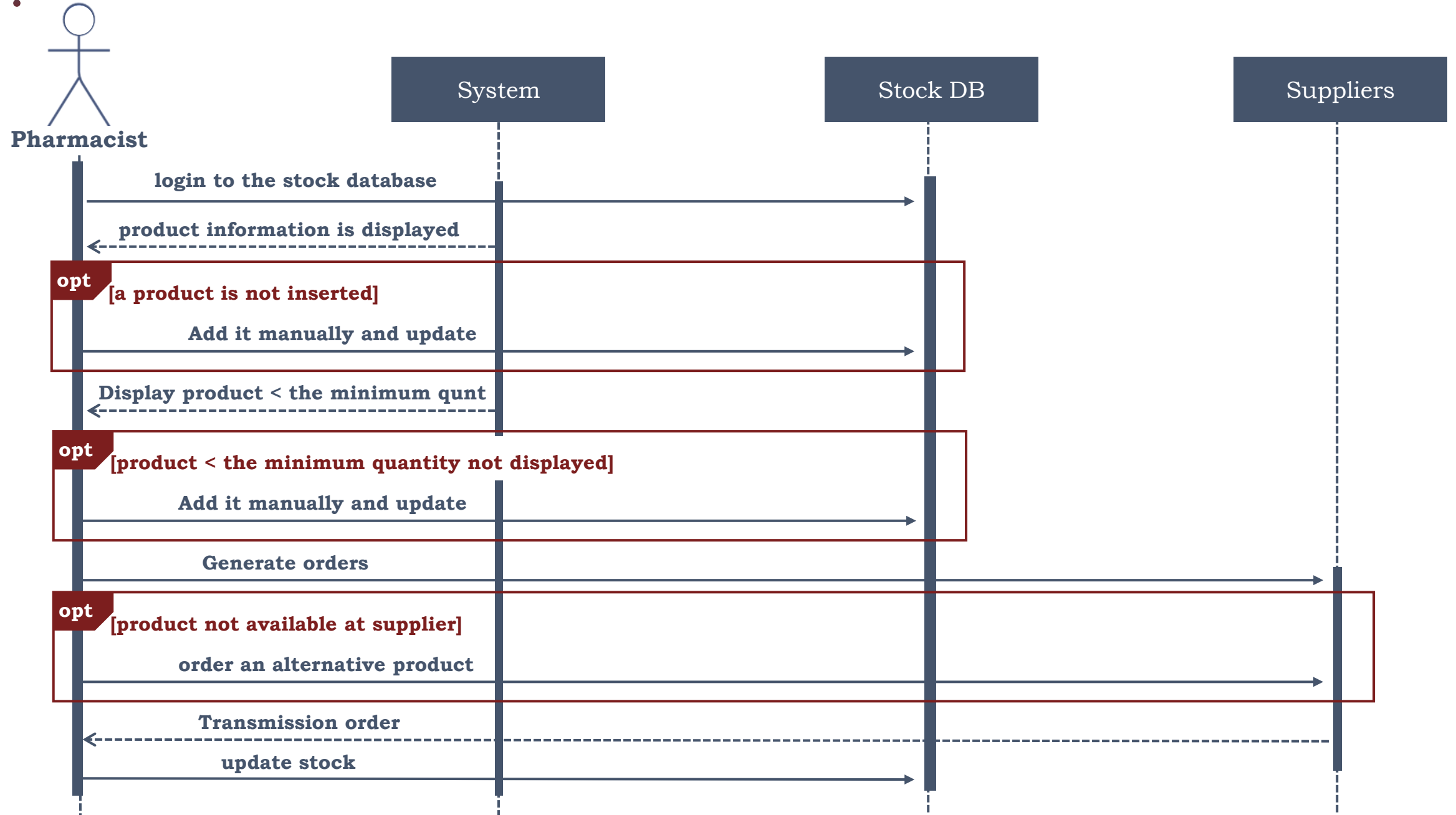
| Activity Diagram :



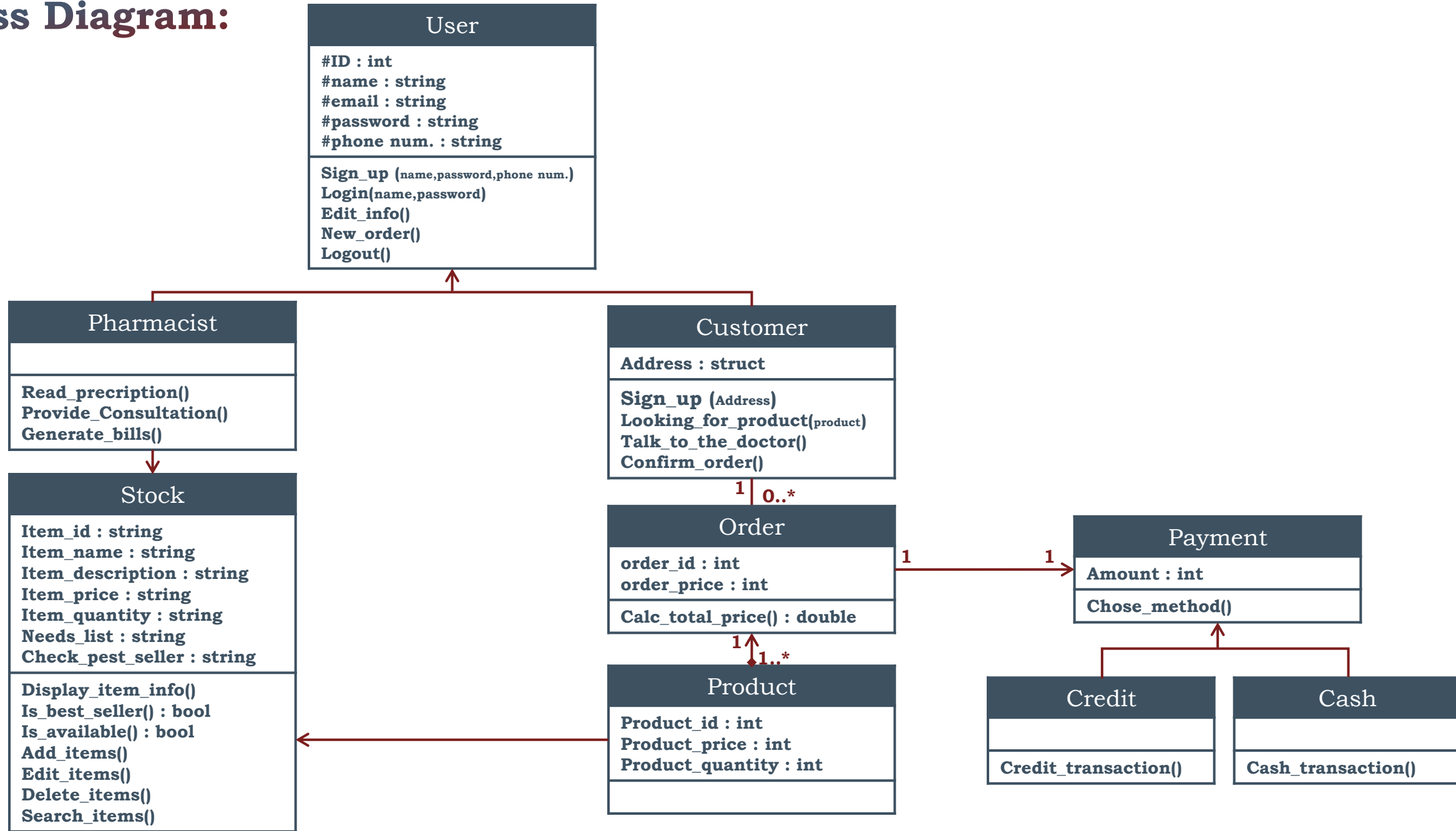
SSD :



|SD :



Class Diagram:



SYSTEM INTERFACES



English



Login/Register



Favorites



My Cart



SEARCH



10% DISCOUNT FOR THE FIRST ORDER



Treatments



Vitamins



Daily Essentials



Health Care



Skin



Hair



Baby



Makeup

BABY DIAPERS

ONLINE EXCLUSIVE



35%



BABY MEAL

2+2
FREE



BEAUTY COLLAGEN

50%



WE ARE ALWAYS HERE FOR YOU

USER LOGIN



USERNAME



PASSWORD

LOGIN

FORGET USERNAME, PASSWORD?

CREATE A NEW ACCOUNT

1-Customer interfaces



SEARCH



10% DISCOUNT FOR THE FIRST ORDER



Treatments



Vitamins



Daily Essentials



Health Care



Skin



Hair



Baby



Makeup

BABY DIAPERS

ONLINE EXCLUSIVE



35%

BABY DIAPERS

ONLINE EXCLUSIVE



BABY MEAL

2+2 FREE




BEAUTY COLLAGEN


50%




BEAUTY COLLAGEN




[NAME]




ENGLISH




MY PAGE




NOTIFICATIONS




WISH LIST




MY CART




PAYMENT




ORDERS DETAILS



BILLS HISTORY





ASK THE DOCTOR




BRANCHES LOCATIONS

SEARCH







10% DISCOUNT FOR THE FIRST ORDER




Daily Essentials




Health Care




Skin




Hair




Baby




Makeup




BABY MEAL 2+2 FREE



BEAUTY COLLAGEN 50%



BABY MEAL 2+2 FREE



BEAUTY COLLAGEN 50%

2-Pharmacist interfaces



STOCK ITEMS

Code	name	Details	Quantity	price
29747245	Ibuprofen	Pain reliever and fever reducer	40	10\$
29747246	Acetaminophen	Analgesic and antipyretic	150	15\$
29747247	Omeprazole	Proton pump inhibitor	80	20\$
29747248	Simvastatin	HMG-CoA reductase inhibitor	120	30\$
29747249	Amoxicillin	Antibiotic	90	10\$
29747250	Cetirizine	Antihistamine	110	25\$
29747251	Metformin	Antidiabetic agent	100	9\$
29747252	Warfarin	Anticoagulant	70	33\$
29747253	Fluoxetine	Selective serotonin reuptake inhibitor	80	20\$
29747254	Lisinopril	Angiotensin-converting enzyme inhibitor	100	21\$
29747255	Prednisone	Corticosteroid	60	5\$

NEEDS

Code	products	QNT.
Best seller products		
29747252	Warfarin	130
29747255	Prednisone	180
29747245	Ibuprofen	200
Normal products		
29747247	Omeprazole	80

SEND ORDER

3-Supplier interfaces



NOTIFICATIONS!

ORDERS

NEW ORDERS:

ID	Ordered time	Delivered time
#230961	MAY 1, 2024, 11:00	

LAST OEDERS:

#230960	APR 20, 2024, 21:45	APR 21, 2024, 10:43
#230959	APR 15, 2024, 11:40	APR 17, 2024, 14:30
#230958	APR 1, 2024, 13:20	APR 5, 2024, 3:25
#230957	MAR 15, 2024, 09:15	MAR 17, 2024, 09:05
#230956	MAR 1, 2024, 02:15	MAR 5, 2024, 09:15



NOTIFICATIONS!

ORDERS

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#230957	MAR 15, 2024, 09:15	MAR 17, 2024, 09:05
#230956	MAR 1, 2024, 02:15	MAR 5, 2024, 09:15



NOTIFICATIONS!

Quantity		
Code	products	QNT.
29747252	Warfarin	130
29747255	Prednisone	180
29747245	Ibuprofen	200
29747247	Omeprazole	80

Mark as delivered

CONCLUSION

Future goals headlines

- **Personalization:**
offering personalized recommendations, medication reminders, and health-related content based on their medical history and preferences.
- **Medication Management:**
manage customers medication refills, set reminders for dosage schedules, and access information about drug interactions and side effects.

By applying this system that offers a seamless blend of online convenience and on-site expertise, the Online and On-Site Pharmacy System aims to improve pharmacy operations, enhance customer experience, and improve healthcare outcomes for individuals and communities.



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