FEASIBILITY REPORT

Skincare Product Sales System - Skinora

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1. Executive Summary

This feasibility report evaluates the viability of developing a **Skincare Product Sales System**, consisting of an e-commerce website, backend services, administrative management tools, and integrated payment and delivery services.
The analysis covers **technical, operational, economic, schedule, and risk aspects** to determine whether the project should proceed to development.

Findings show that:

- The system is **technically feasible** using standard, proven technologies.
- Operational requirements are minimal and manageable.
- The **total development cost is estimated at 98M–110M VND**, a competitive market rate.
- Monthly operating costs are low, ensuring sustainability.
  Therefore, the project is recommended for approval.

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2. Project Background

The skincare market has grown rapidly, and businesses require digital platforms to expand their customer reach, manage products efficiently, and automate sales processes.
Current manual or semi-digital methods often lead to:

- Poor inventory control
- High staff workload
- Errors in order processing
- Limited marketing analytics
- Inconsistent customer experience

A dedicated **Skincare Product Sales System** addresses these challenges by providing end-to-end digital sales and management capabilities.

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3. Problem Statement

Businesses selling skincare products face the following issues:

- No unified system to manage products, stock, customers, and orders
- Difficulty integrating multiple payment and shipping channels
- Inaccurate order tracking and delayed customer updates
- Lack of real-time analytics for decision-making

The proposed system solves these problems through automation and centralized management.

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4. Project Objectives

The main objectives of the project include:

1. Create a user-friendly e-commerce platform for selling skincare products.
2. Provide an admin dashboard for managing inventory, orders, customers, and promotions.
3. Integrate payment gateways and delivery services.
4. Improve operational efficiency and reduce manual workload.
5. Offer analytics for product performance and business decision-making.

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5. Stakeholder Analysis

Stakeholder	Role	Interest
Business Owner	Sponsor	Revenue growth, efficiency
Project Manager	Coordinator	Ensure deliverables and deadlines
Development Team	Implementers	Technical execution
Warehouse Staff	Operations	Inventory accuracy
Marketing Team	Promotion	Campaign performance
Customers	End-users	Easy buying experience

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6. Scope of the Project

6.1 In-Scope

- E-commerce website (frontend)
- Backend API & database
- Admin dashboard
- Payment gateway integration
- Shipping API integration
- UI/UX design
- Testing & deployment
- Documentation & training

6.2 Out-of-Scope

- Mobile native app
- Loyalty system phase 2
- ERP/Accounting integration
- Physical warehousing services

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7. System Requirements

7.1 Functional Requirements

Website

- User registration/login
- Product browsing, filtering, and searching
- Shopping cart and checkout
- Order tracking
- Review

Admin Dashboard

- Product CRUD
- Inventory management
- Order processing
- Customer management
- Discount
- Sales reports

7.2 Non-Functional Requirements

- High availability
- Secure payment processing
- Scalability
- Fast response time
- Modern UI/UX
- Data backup & recovery

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8. Technical Feasibility

The proposed system can be implemented using widely available technologies, reducing risk and ensuring maintainability.

Recommended Technology Stack

- **Frontend:** ReactJS / Next.js
- **Backend:** Node.js (Express/NestJS) or ASP.NET Core
- **Database:** MySQL / PostgreSQL
- **Hosting:** DigitalOcean / Vultr / AWS Lightsail
- **Security:** HTTPS, JWT, OWASP compliance

Assessment

Criteria	Feasibility
Technology Availability	High
Existing Expertise	High
Scalability	High
Integration Complexity	Medium
Security Requirements	Medium

Conclusion: **Technically feasible with low risk.**

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9. Operational Feasibility

The system significantly simplifies business operations:

- Automation of order processing
- Improved accuracy in inventory tracking
- Reduced customer service workload
- Easy-to-use dashboard for employees

Minimal staff training is required due to an intuitive interface.
Conclusion: **Operational feasibility is high.**

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10. Economic Feasibility

This section evaluates the total cost of development and ongoing operations.

10.1 Development Cost Estimate

Component	Cost (Low)	Cost (High)
Customer Website (Frontend)	18,000,000	25,000,000
Admin Dashboard	25,000,000	35,000,000
Backend API + Database	20,000,000	30,000,000
Payment Integration	4,000,000	7,000,000
Shipping Integration	4,000,000	7,000,000
UI/UX Design	6,000,000	12,000,000
Testing & Deployment	6,000,000	10,000,000
Total Cost	**83,000,000**	**126,000,000**

Recommended Project Price

98,000,000 – 110,000,000 VND
(Competitive market price with full features + 3 months support)

10.2 Operating Cost (Monthly)

Item	Cost
VPS Hosting	200,000 – 300,000 VND
Domain	300,000 – 500,000 VND/year
Email SMTP	100,000 – 200,000 VND
Estimated Total	**250,000 – 500,000 VND/month**

Operating cost feasibility: **High**

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11. Schedule Feasibility

Estimated timeline: **10–12 weeks**

Phase	Duration
Requirements & Planning	1 week
UI/UX Design	2 weeks
Backend Development	3 weeks
Frontend Development	3 weeks
Integration (Payment + Shipping)	1 week
Testing & Deployment	1–2 weeks

Schedule feasibility: **High**

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12. Risk Analysis

Risk	Probability	Impact	Mitigation
Integration API failures	Medium	Medium	Use fallback, retry mechanism
Requirement changes	High	High	Early documentation & sign-off
Security threats	Medium	High	Penetration testing, secure coding
Hosting downtime	Low	Medium	Choose reliable VPS provider
User adoption resistance	Low	Low	Provide training & simplified UI

Overall risk: **Moderate**, manageable with mitigation strategies.

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13. Conclusion

The feasibility study concludes that the **Skincare Product Sales System** is a viable project from technical, operational, economic, and scheduling standpoints.
With a reasonable investment of **98M–110M VND**, the system will provide long-term business value, improved efficiency, and enhanced customer experience.
The recommendation is to proceed with development.

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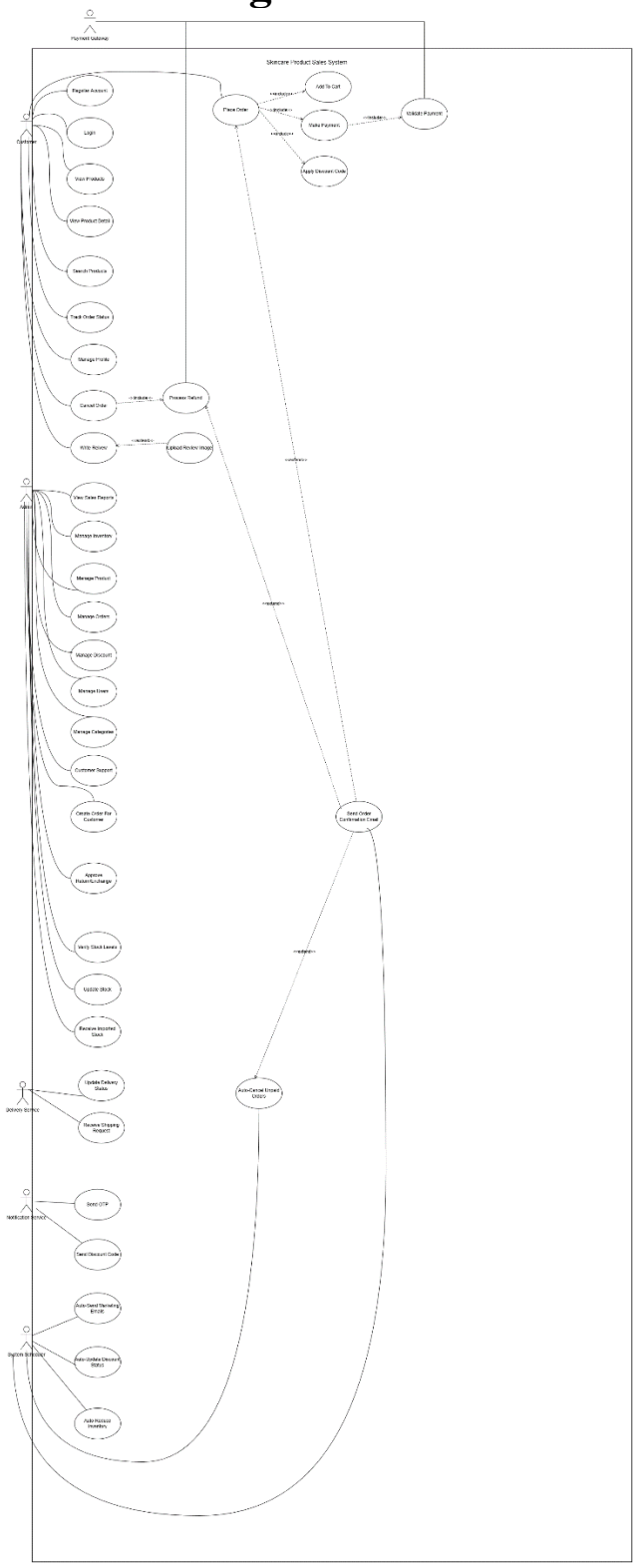
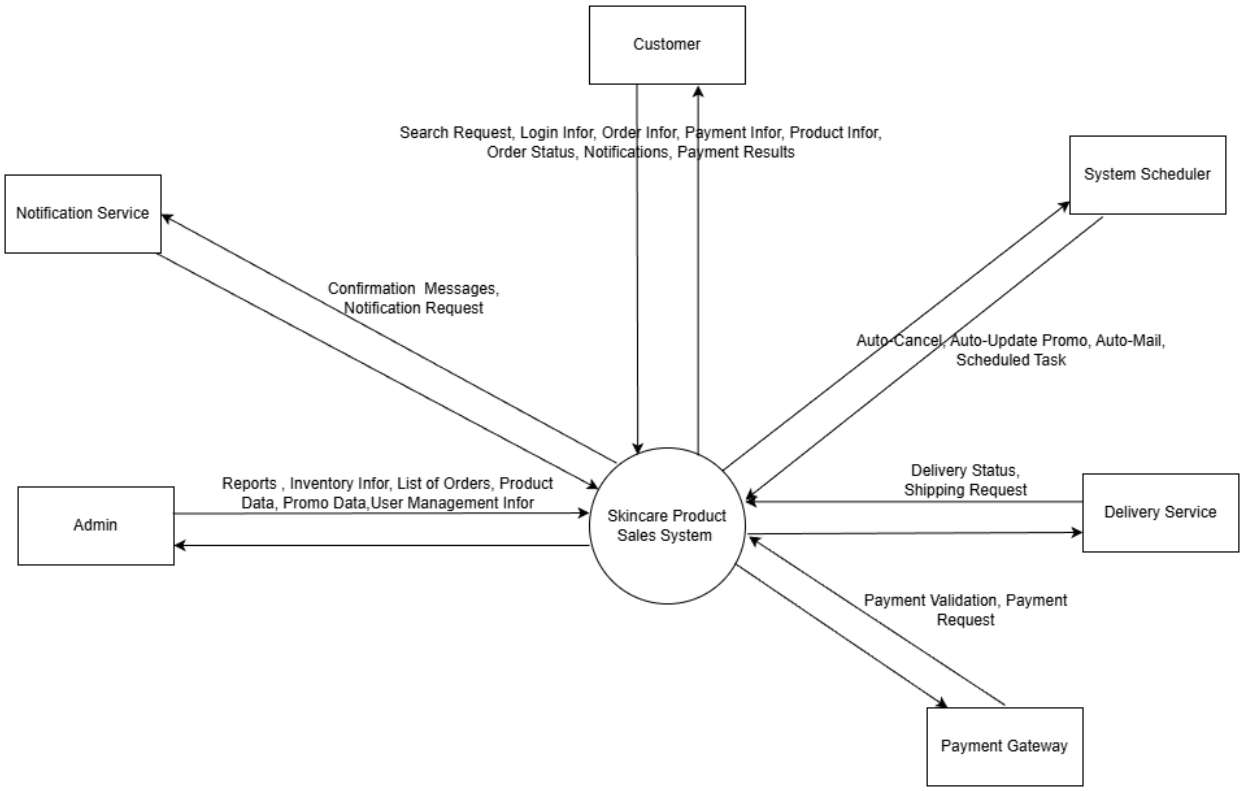
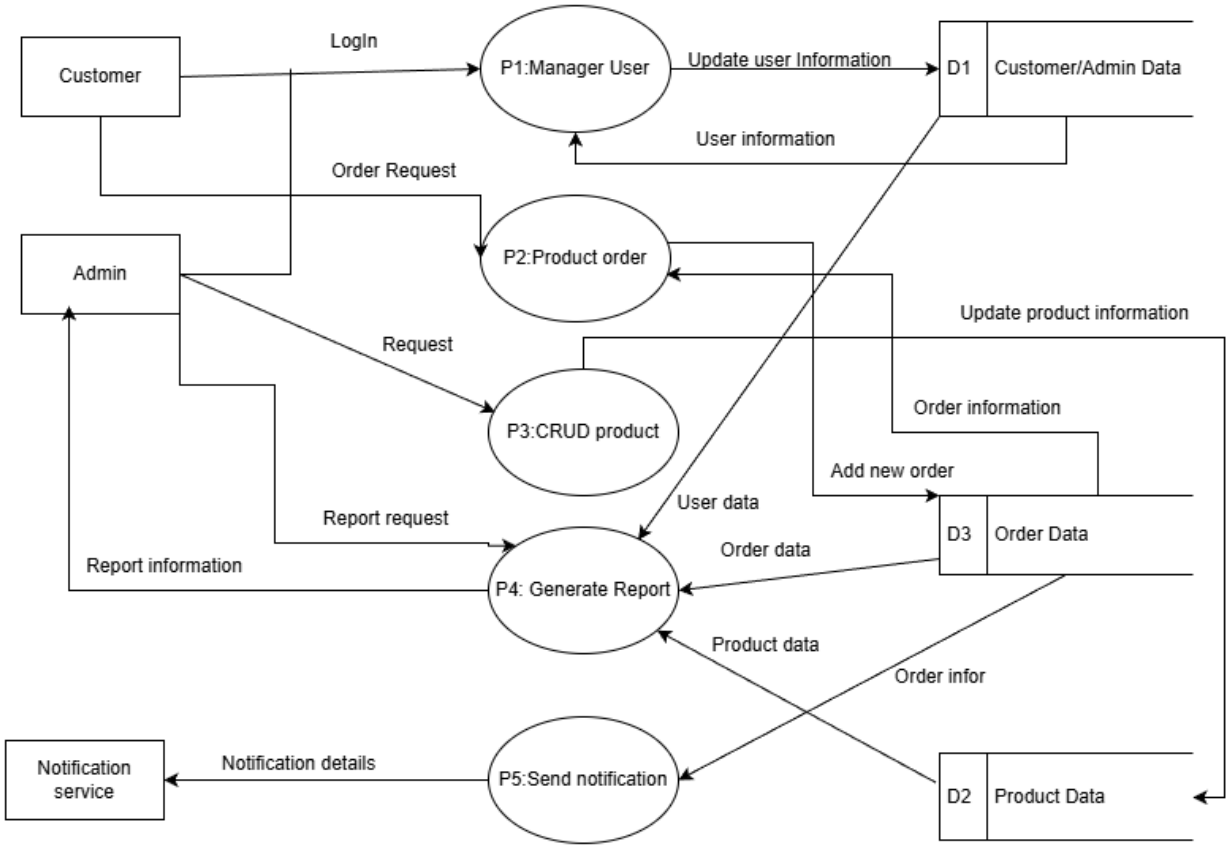
14. Appendix

1. Usecase Diagram

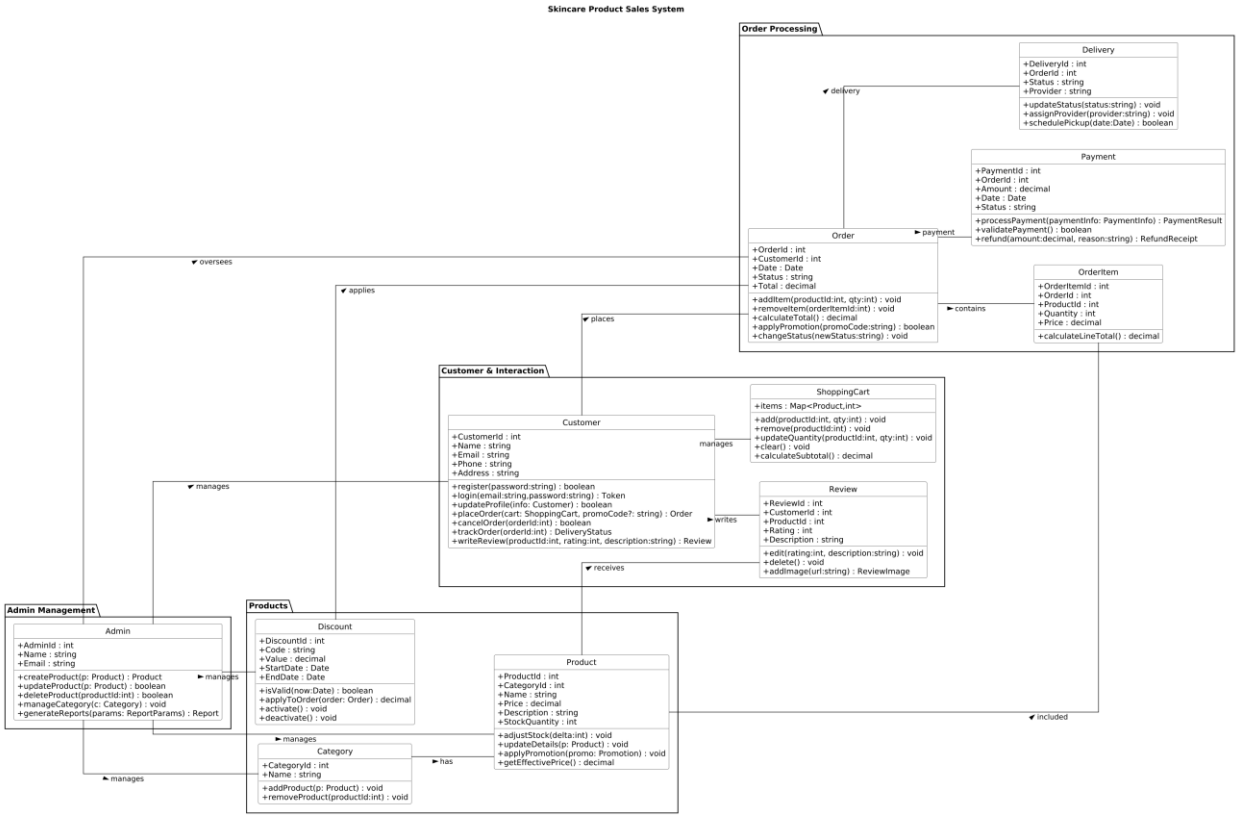


2. Data Flow Diagram

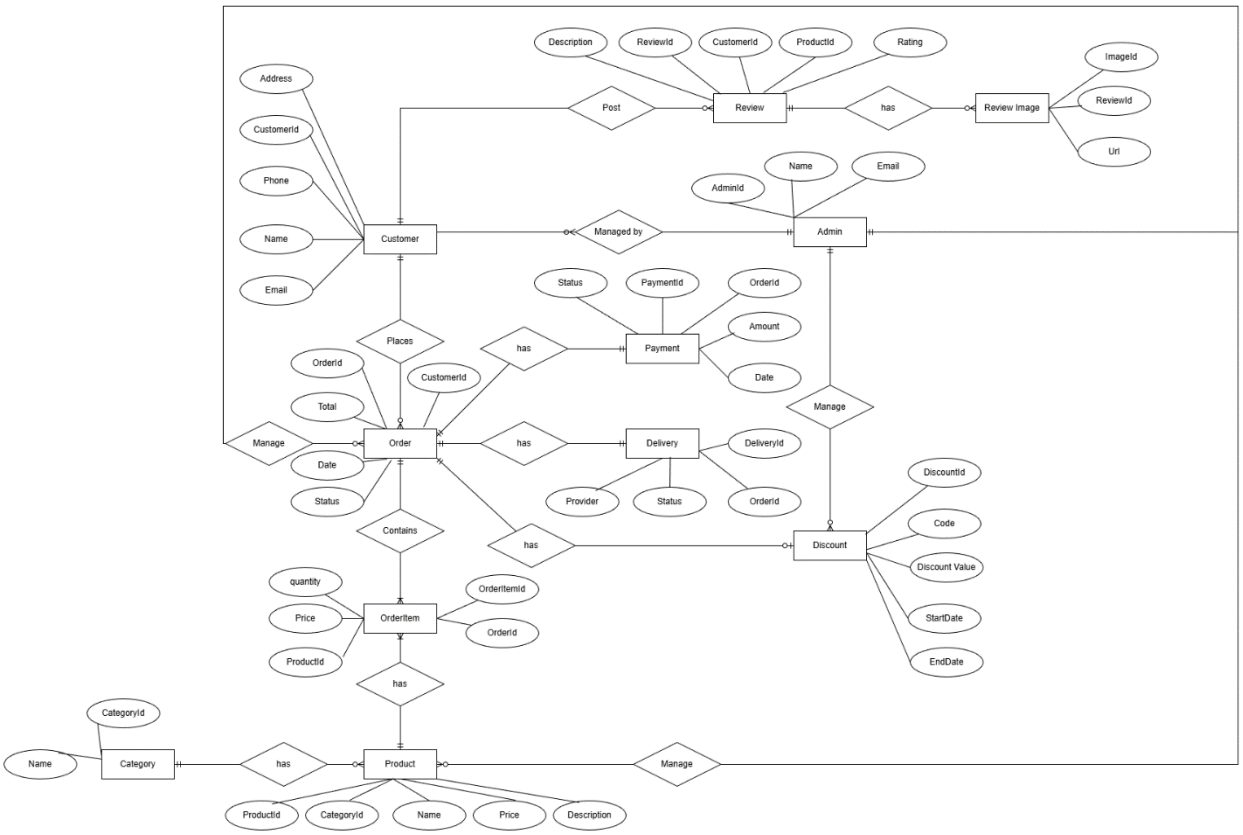




3. Class Diagram

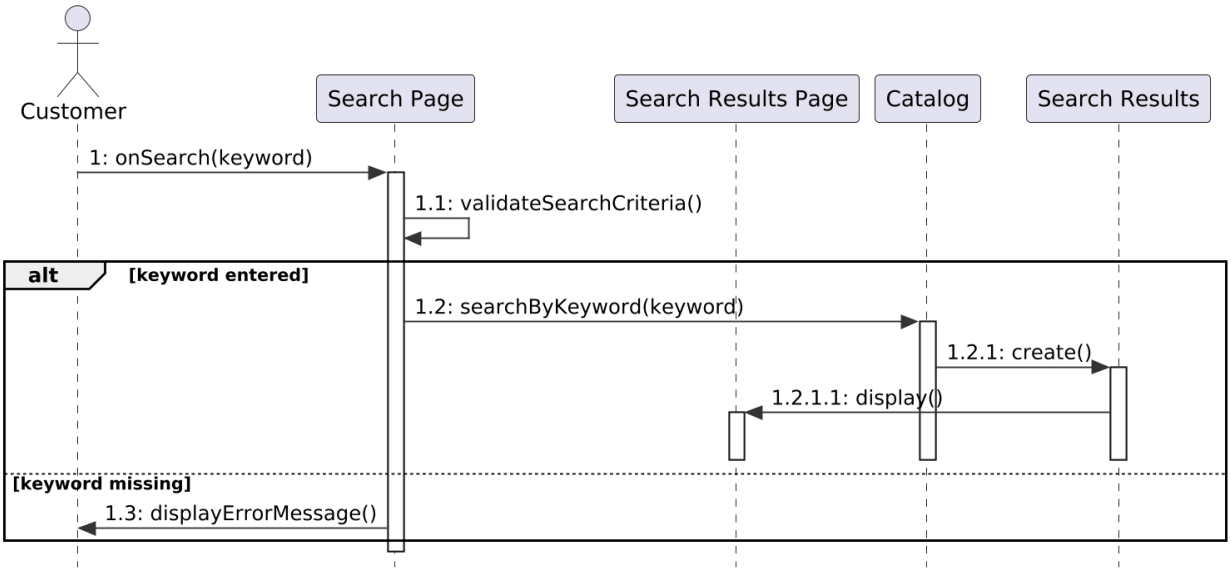


4. Entity Relationship Diagram

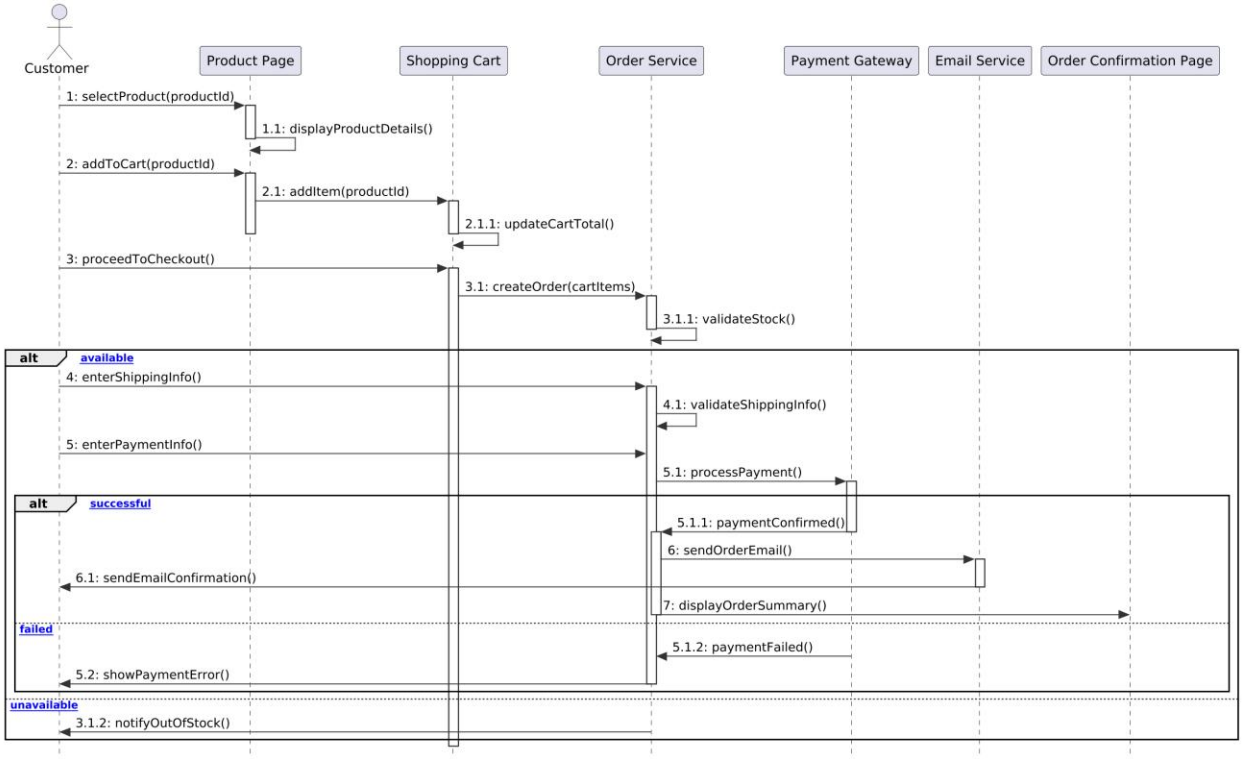


5. Sequence Diagram

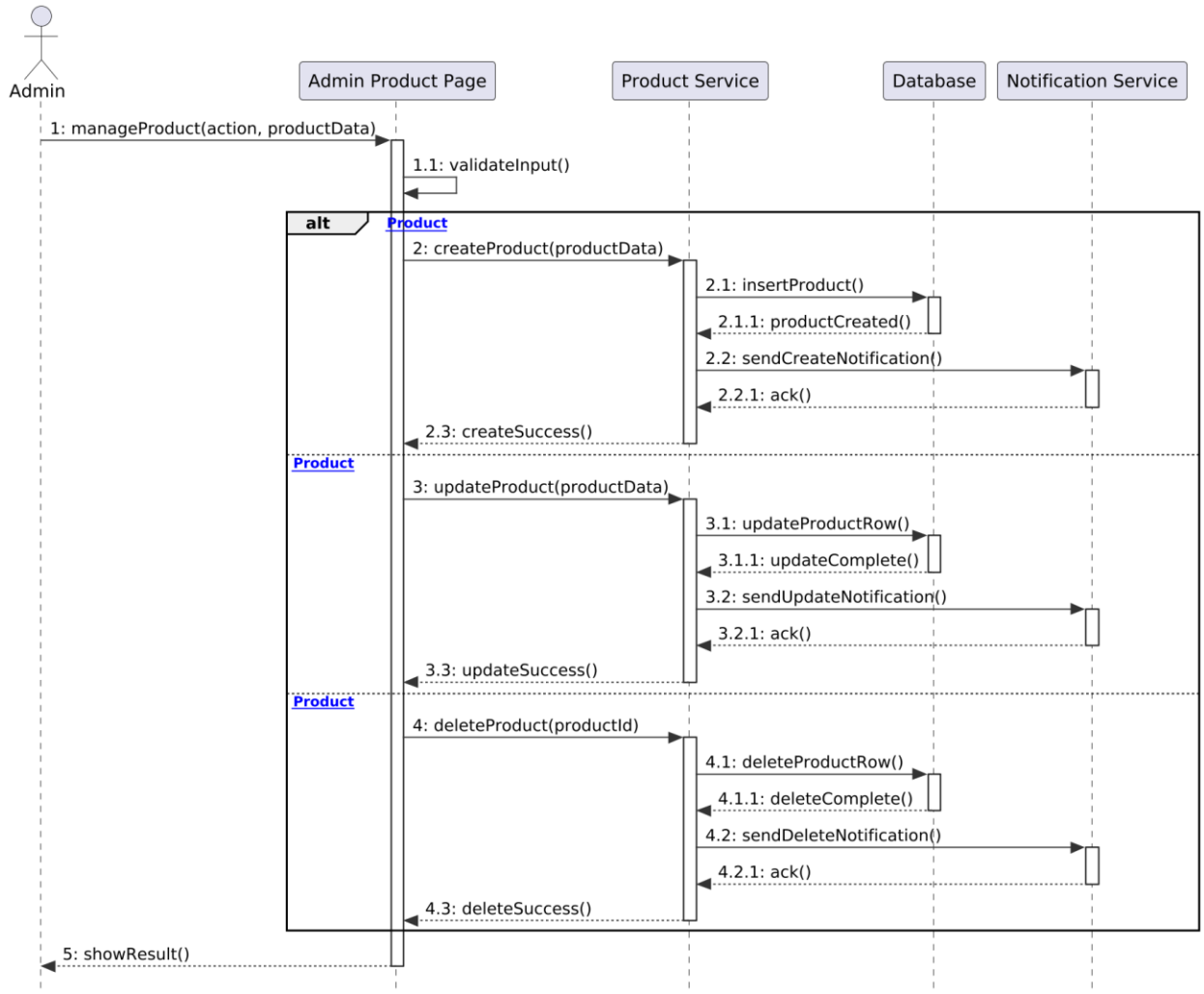
a) Search Product



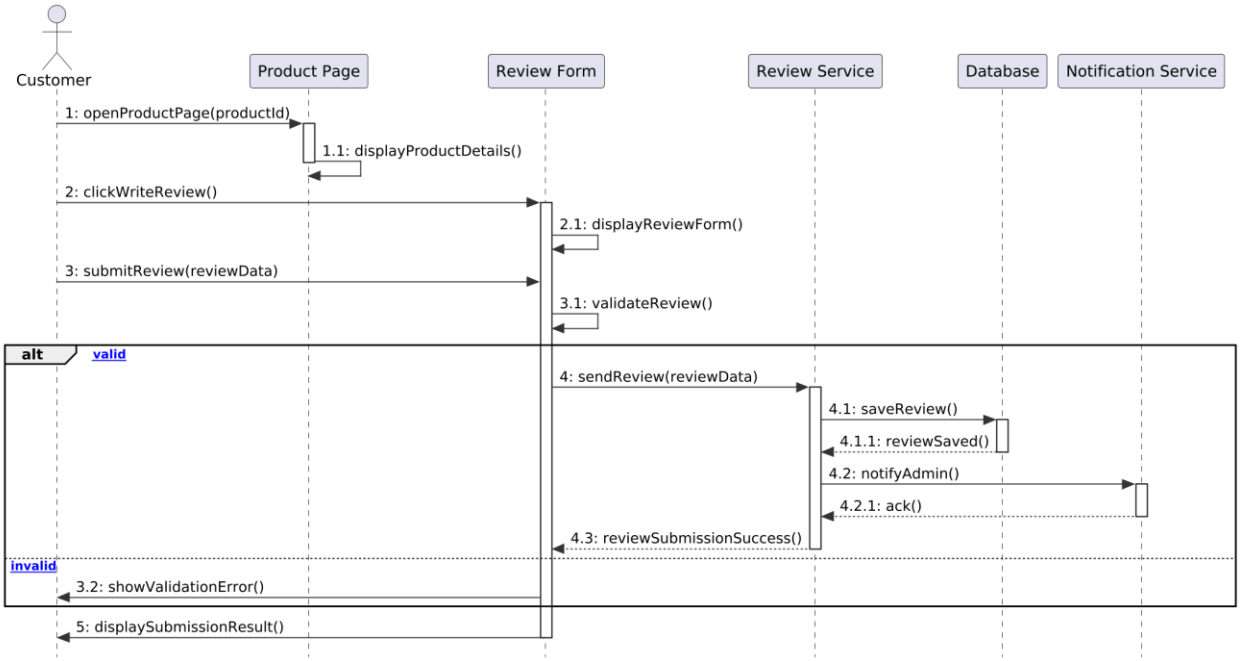
b) Place Order



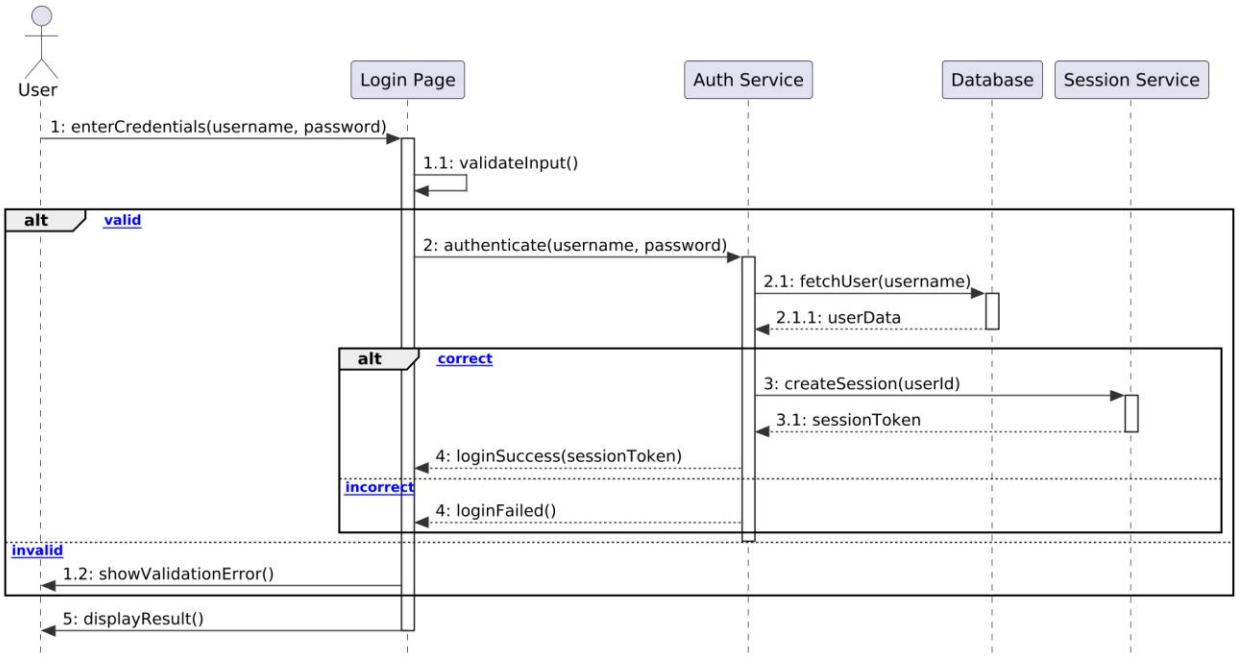
c) Manage Product



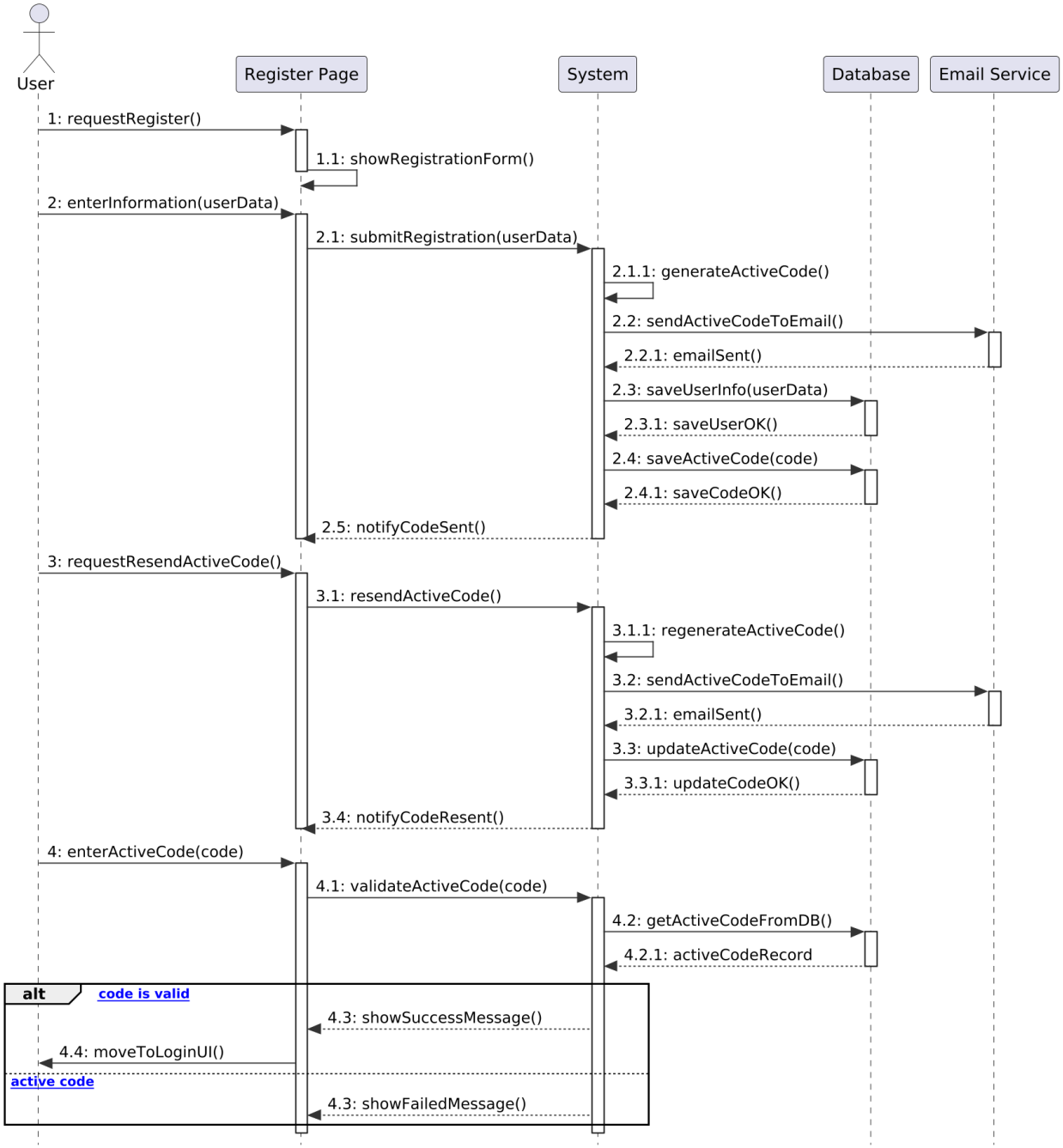
d) Write Review



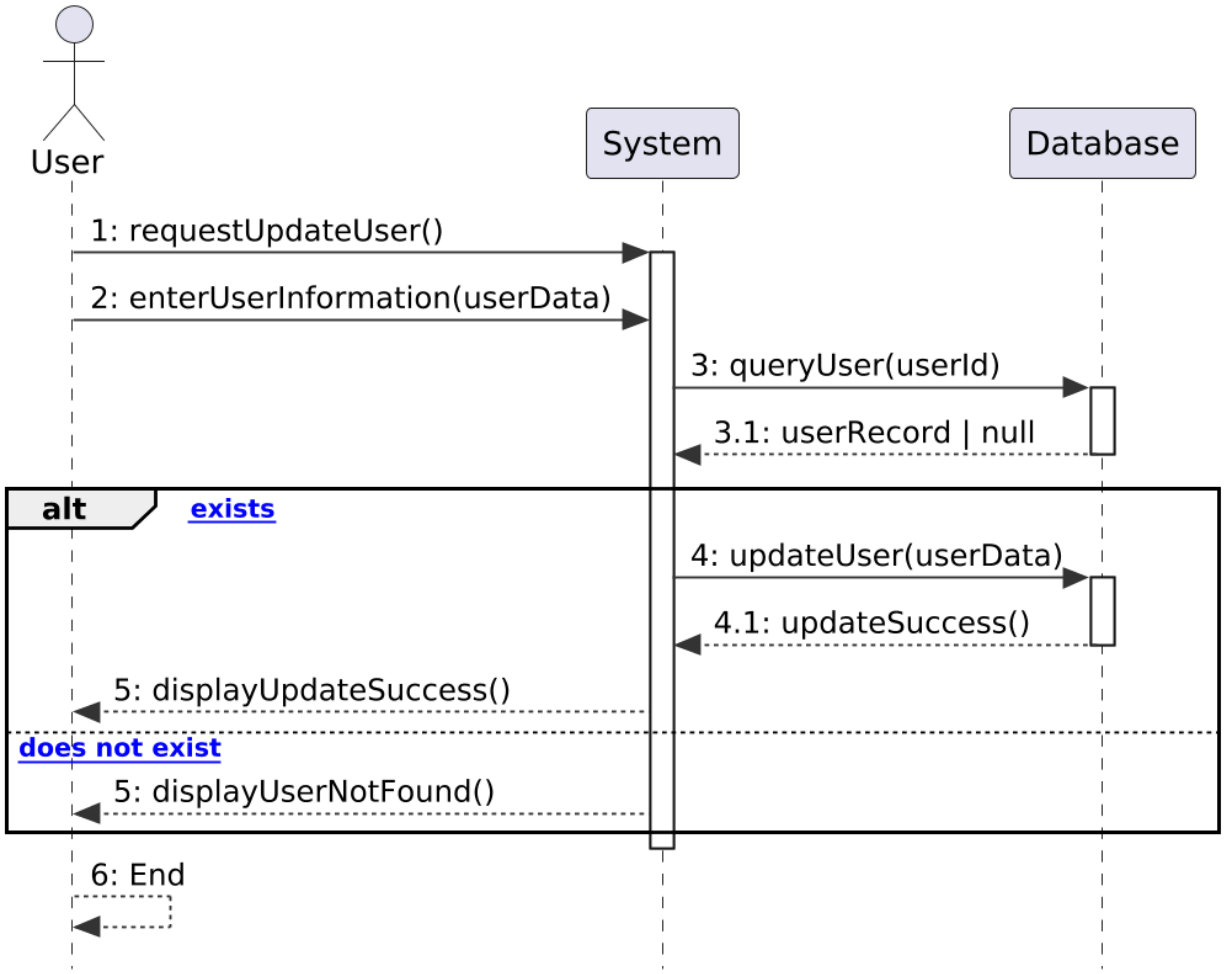
e) Login



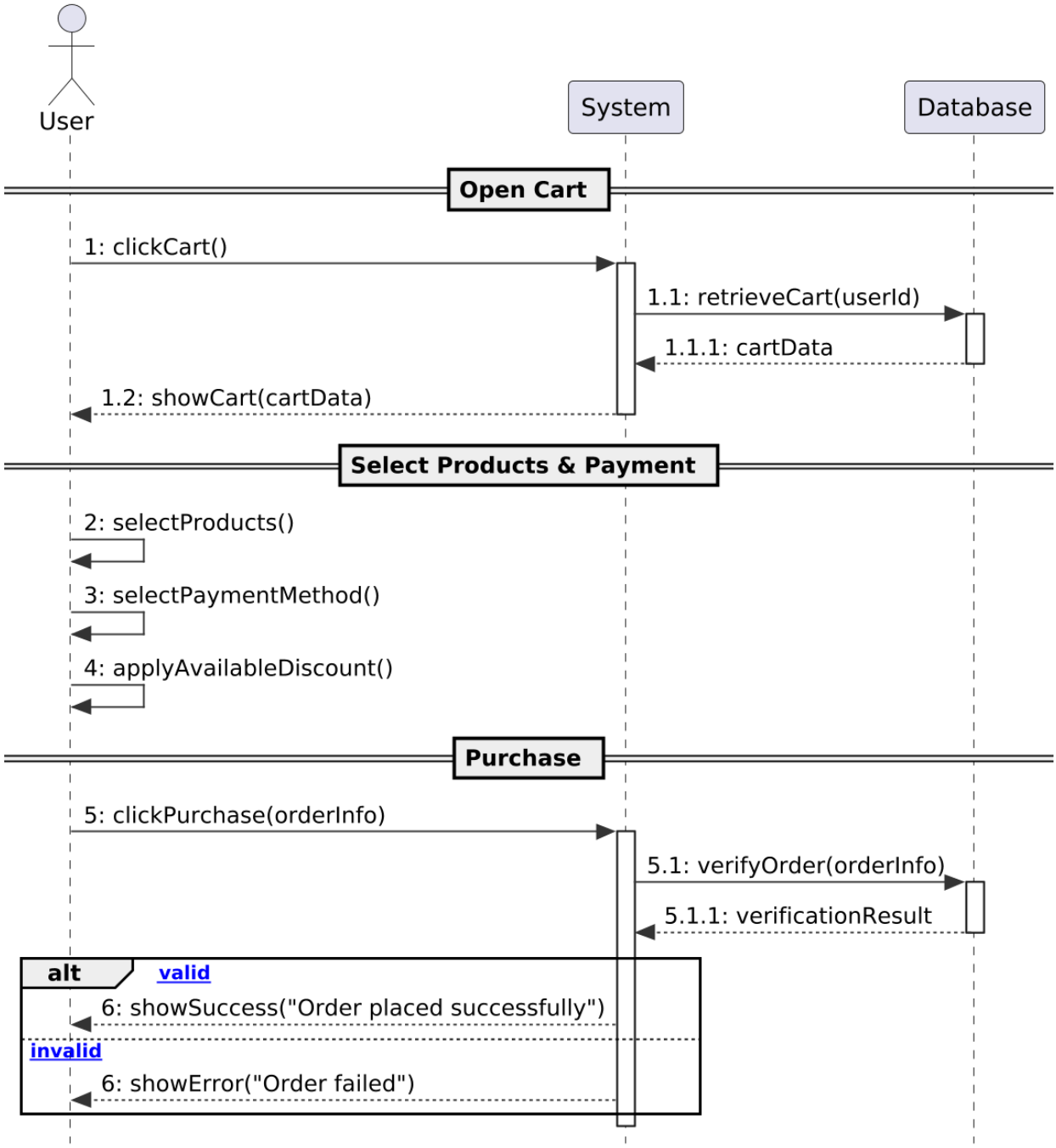
f) Register



g) Update User Account

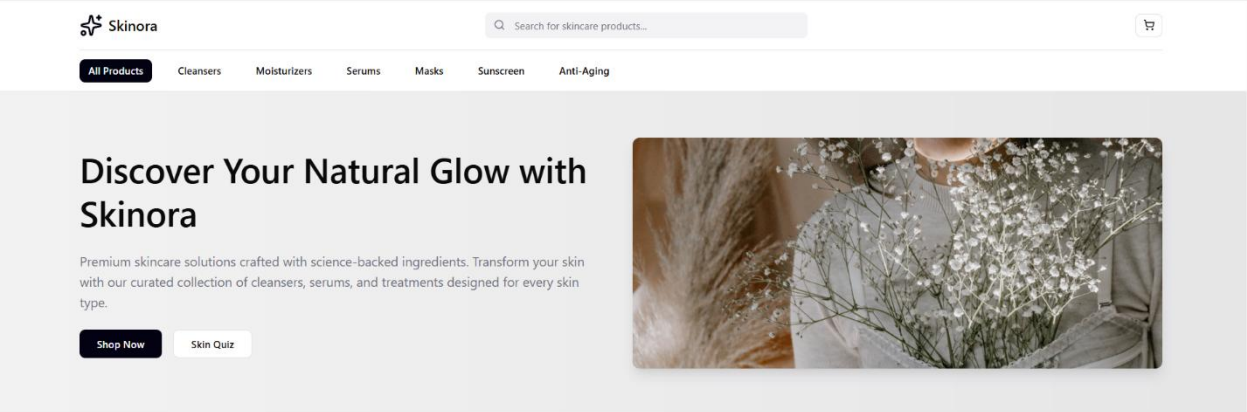


h) Process Order

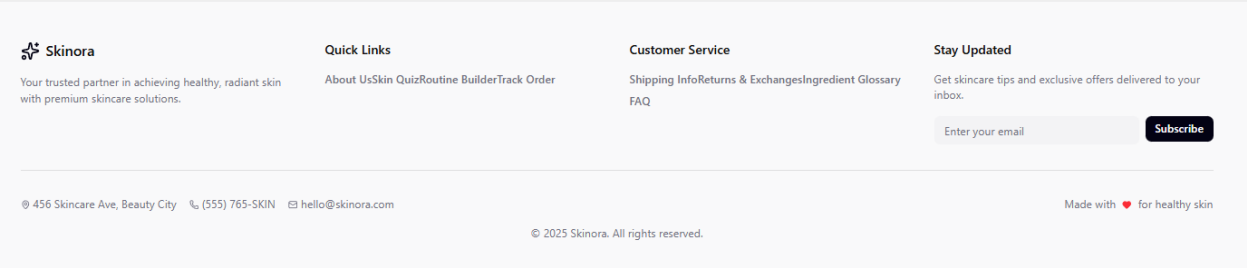


6. WireFrame

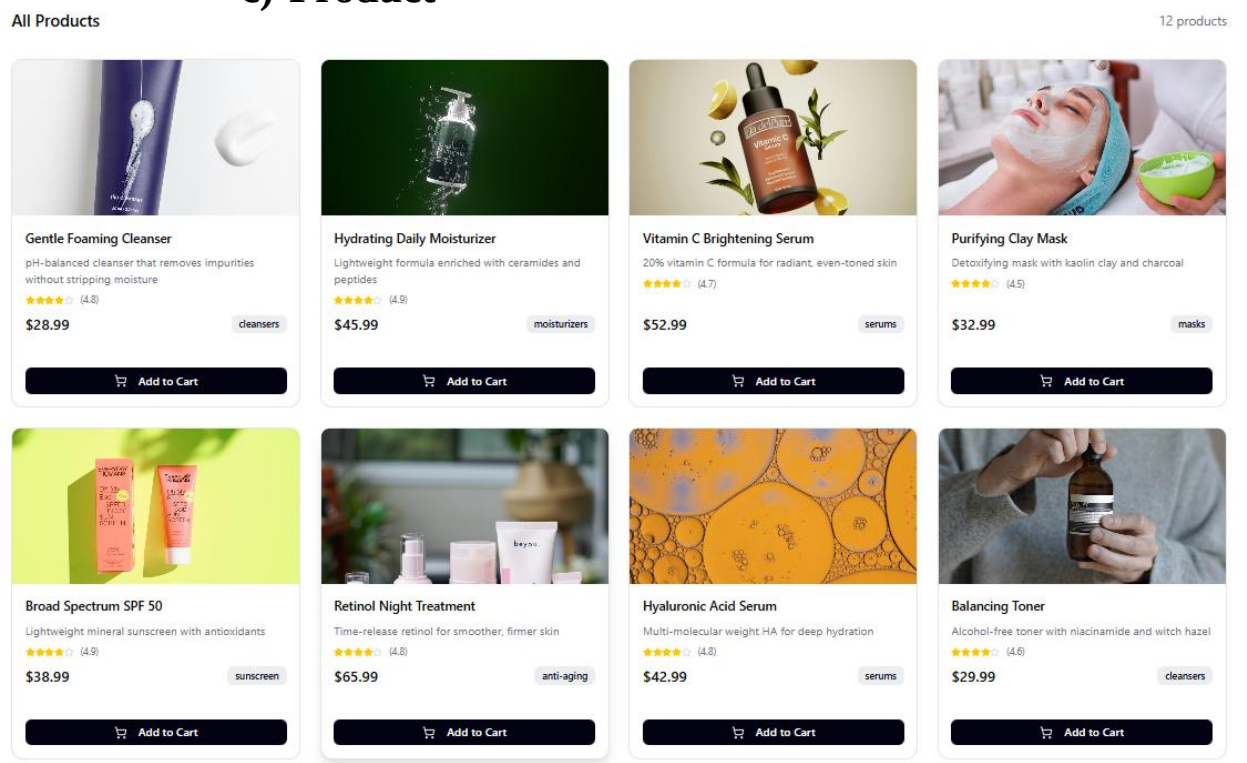
a) Header



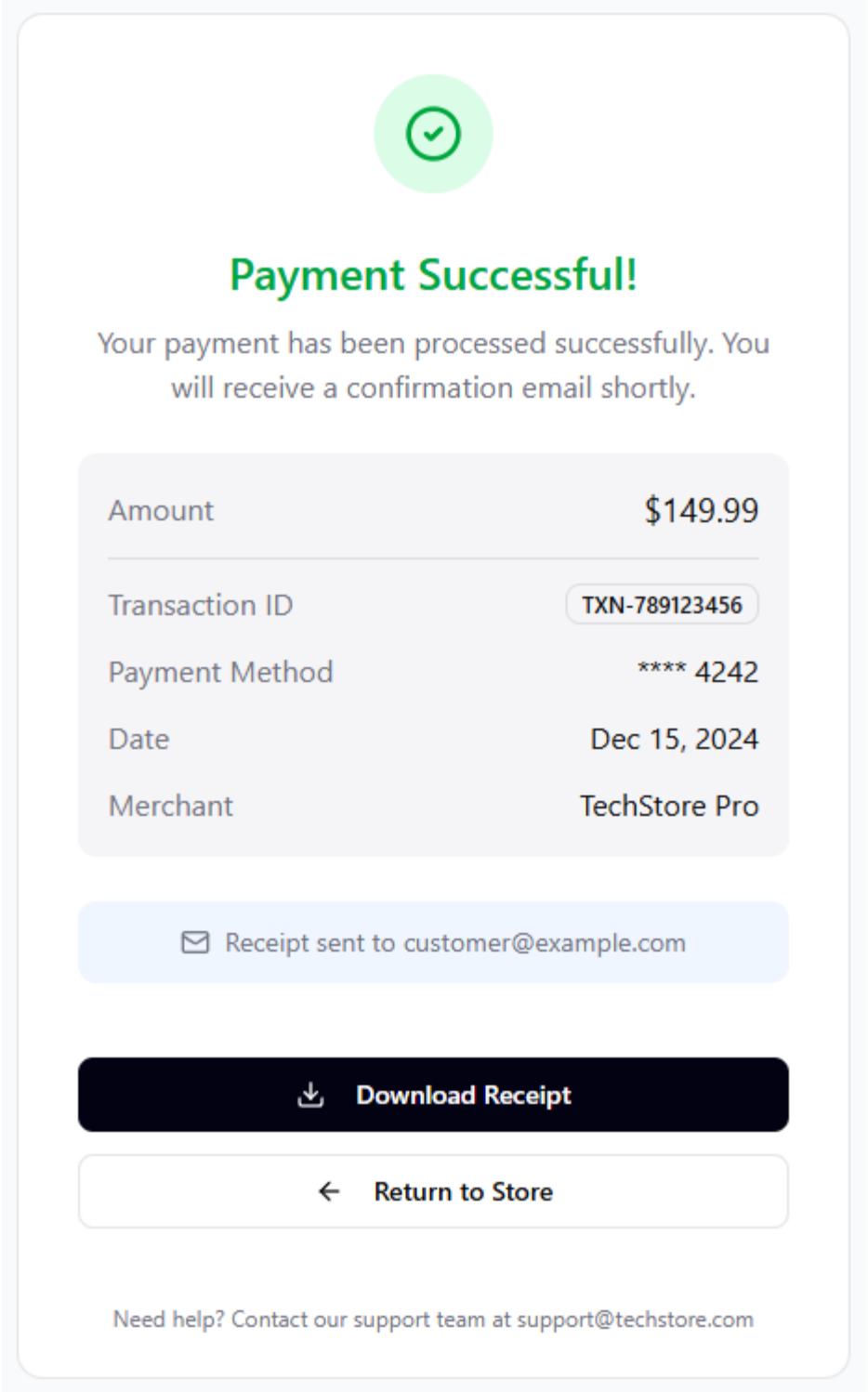
b) Footer



c) Product



d) Payment


Payment Successful!
Your payment has been processed successfully. You will receive a confirmation email shortly.
Amount
$149.99
Transaction ID
TXN-789123456
Payment Method
**** 4242
Date
Dec 15, 2024
Merchant
TechStore Pro
Receipt sent to customer@example.com
Download Receipt
Return to Store
Need help? Contact our support team at support@techstore.com

e) Cart

Shopping Cart

1 item

Vitamin C Brightening Serum

$52.99 each

− 1 +

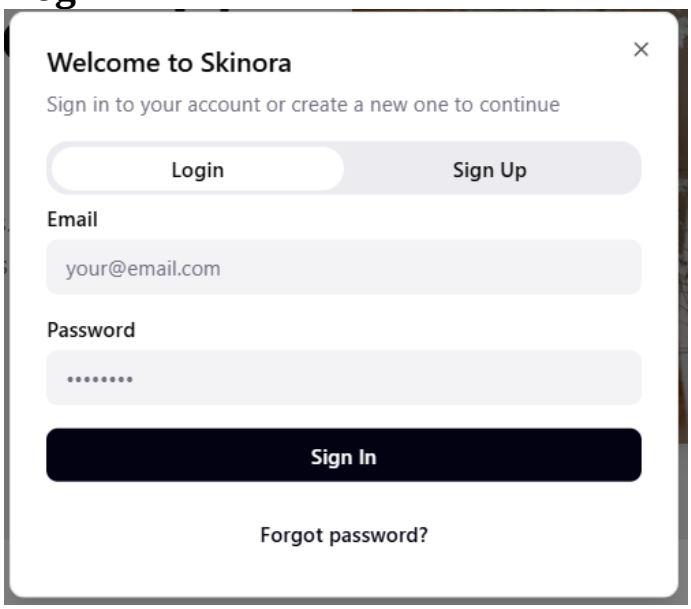
Subtotal: $52.99

Total: $52.99

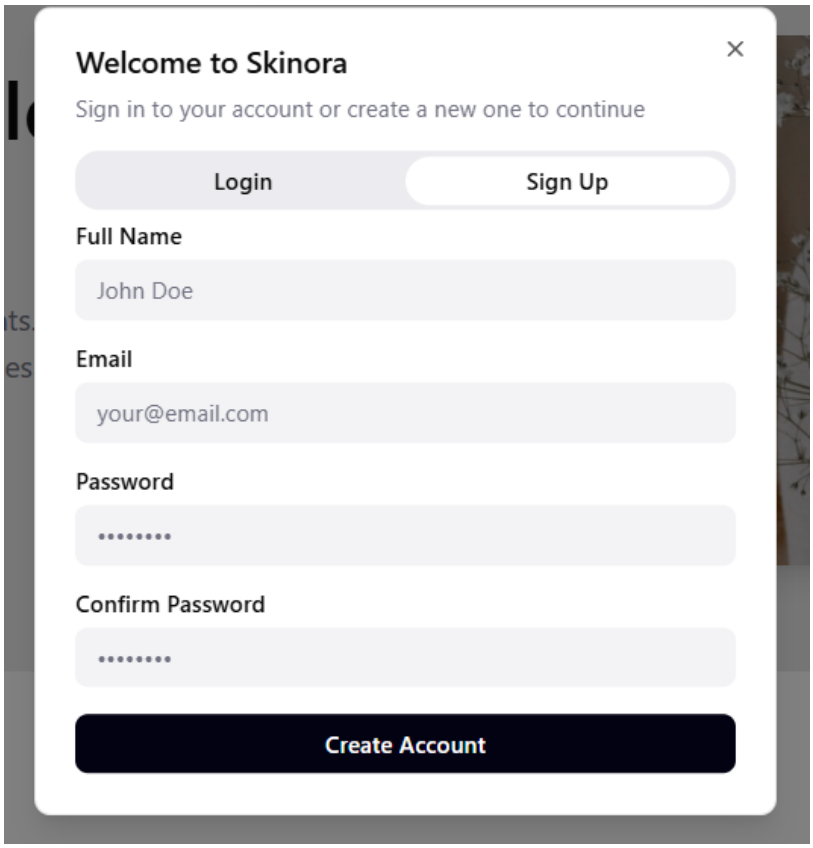
Sign In to Checkout

Continue Shopping

f) Login

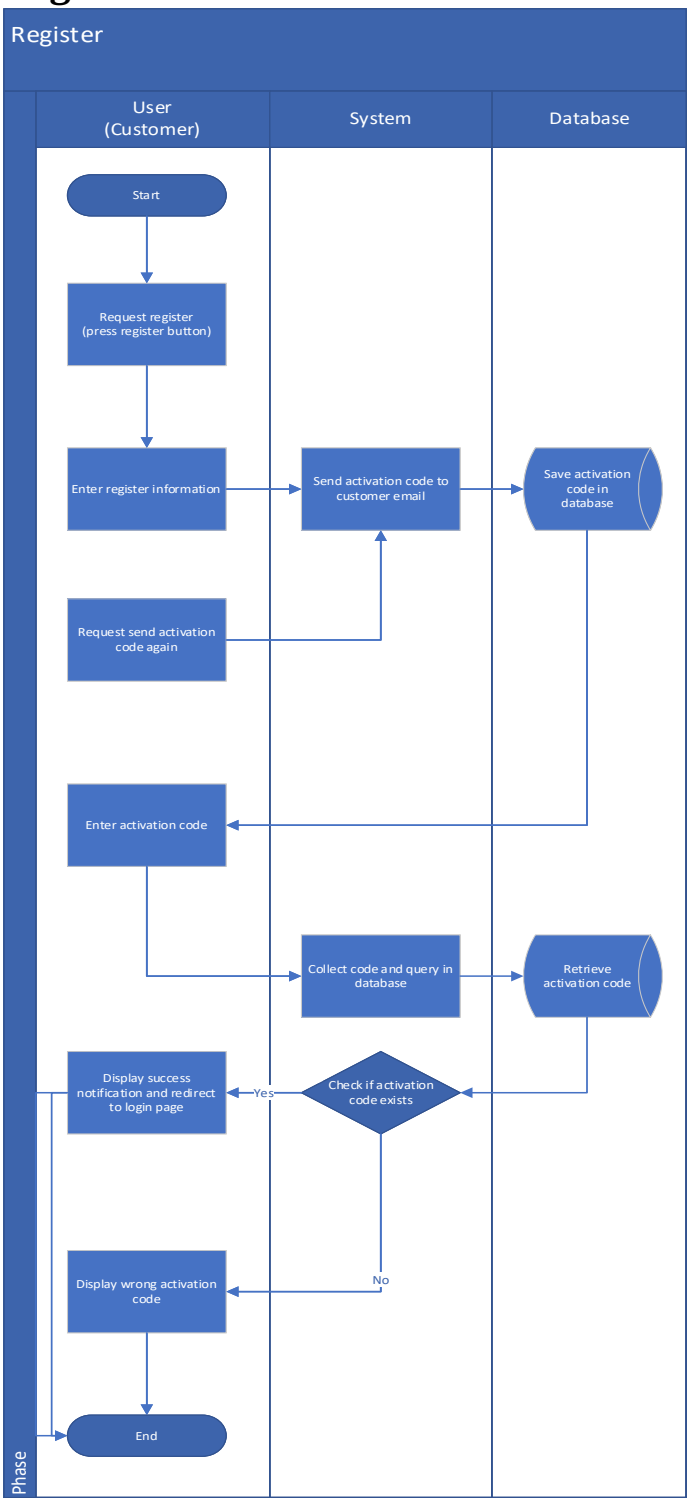


g) Register

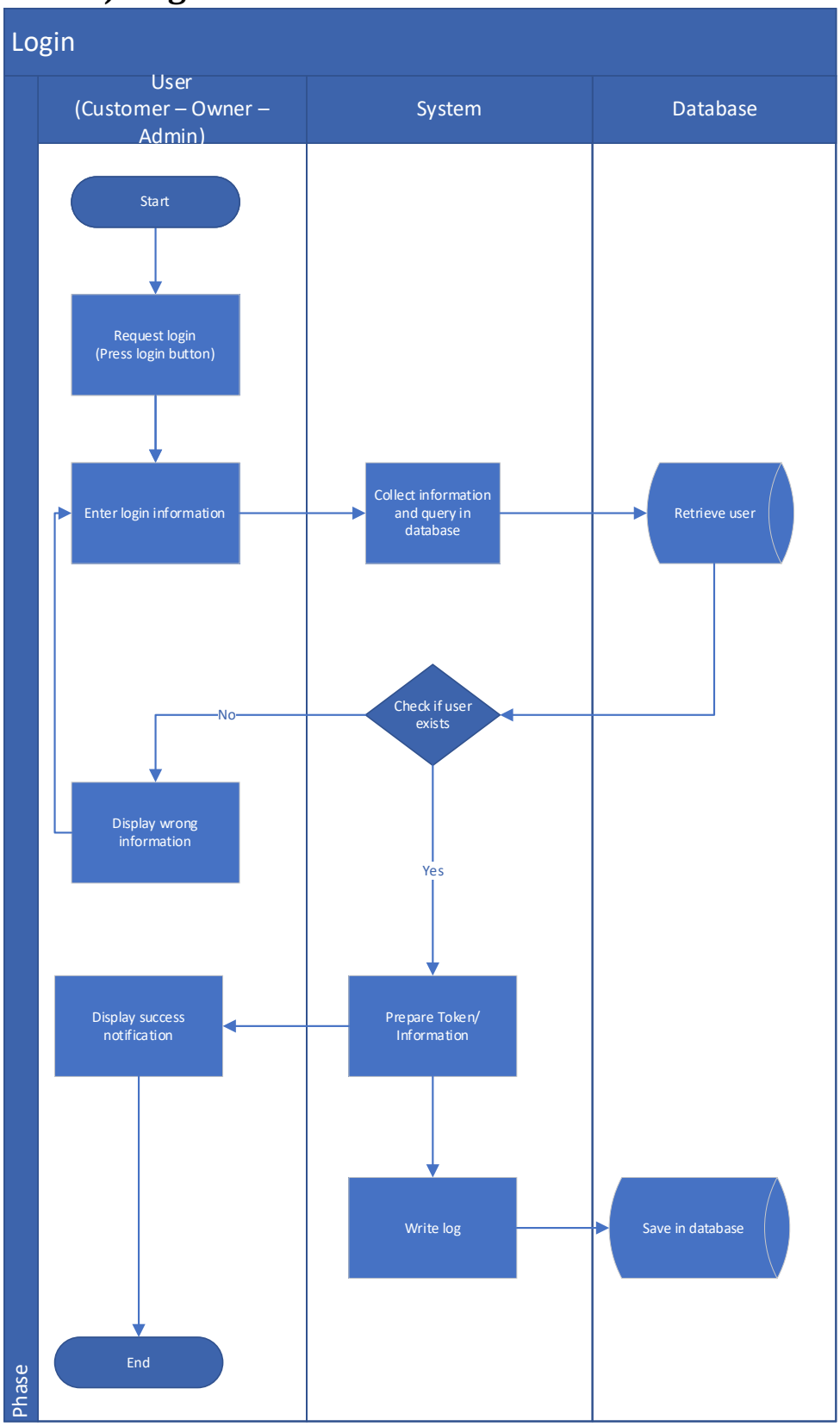


7. Activity Diagram

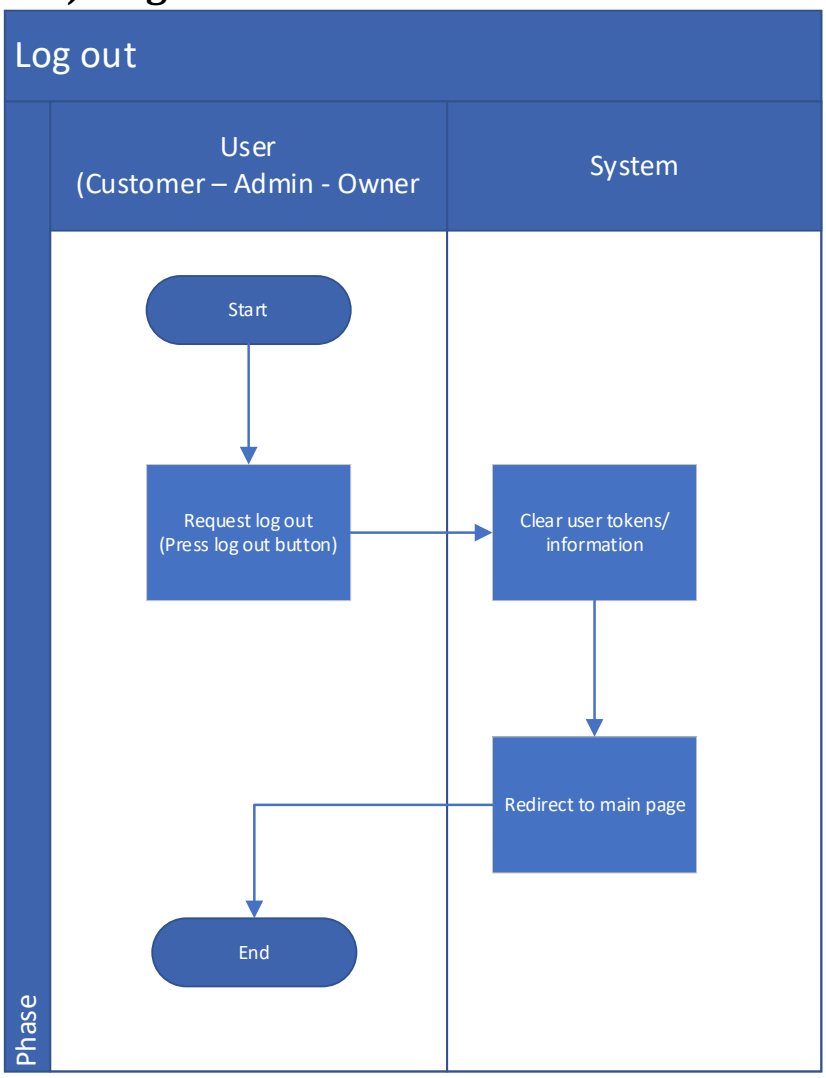
a) Register



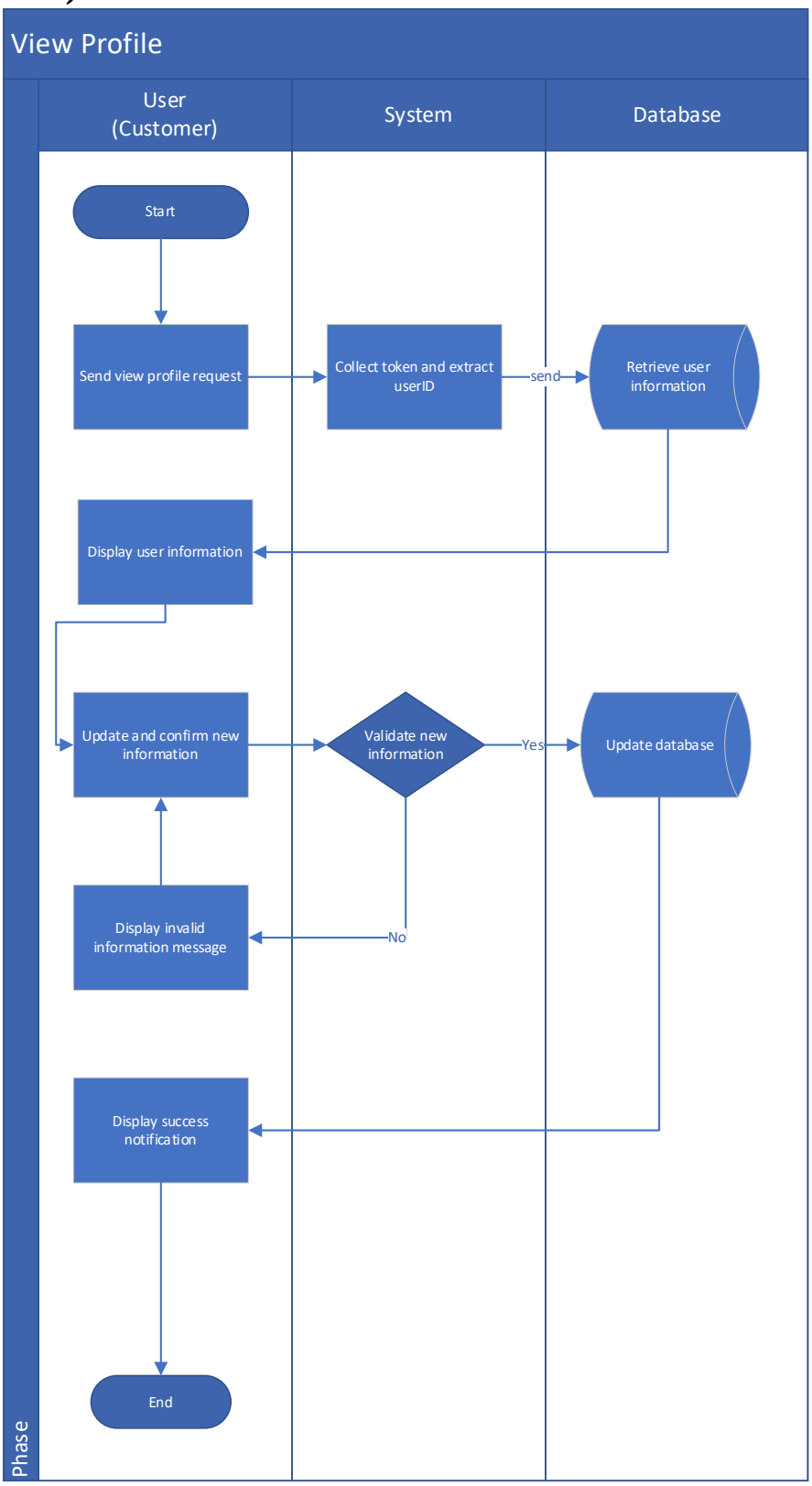
b) Login


Login
User (Customer – Owner – Admin)
System
Database
Start
Request login (Press login button)
Enter login information
Collect information and query in database
Retrieve user
Check if user exists
No
Display wrong information
Yes
Display success notification
Prepare Token/ Information
Write log
Save in database
End
Phase

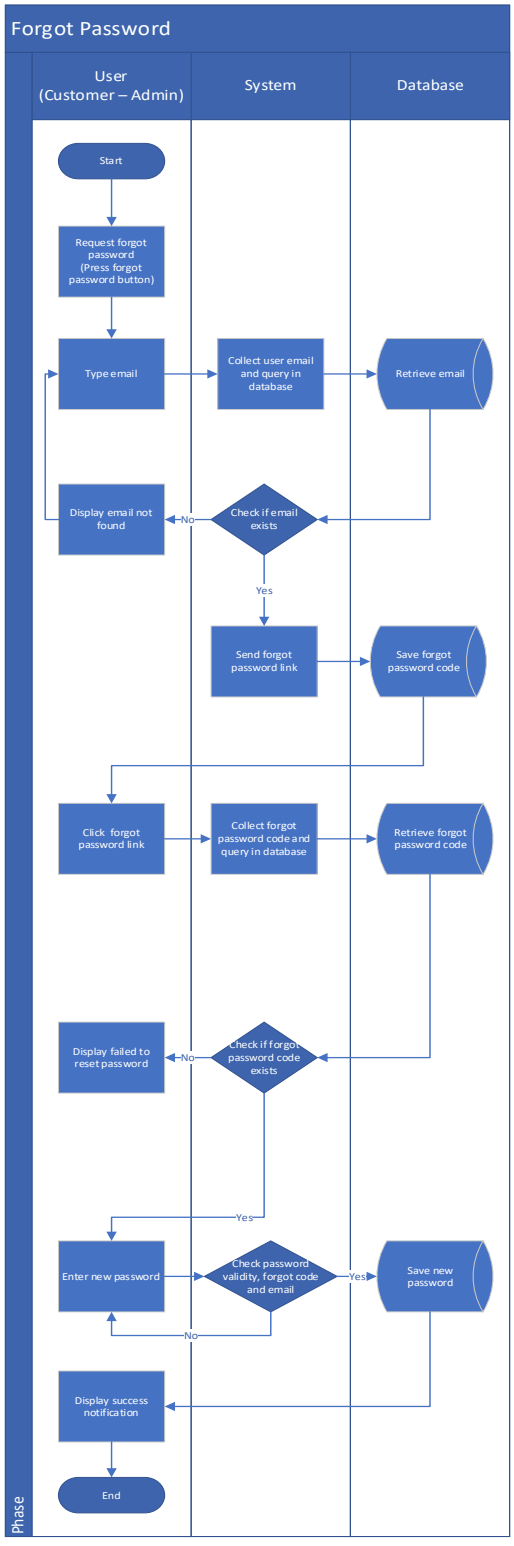
c) Log out


Log out
User
(Customer – Admin - Owner
System
Start
Request log out
(Press log out button)
Clear user tokens/
information
Redirect to main page
End
Phase

d) View Profile



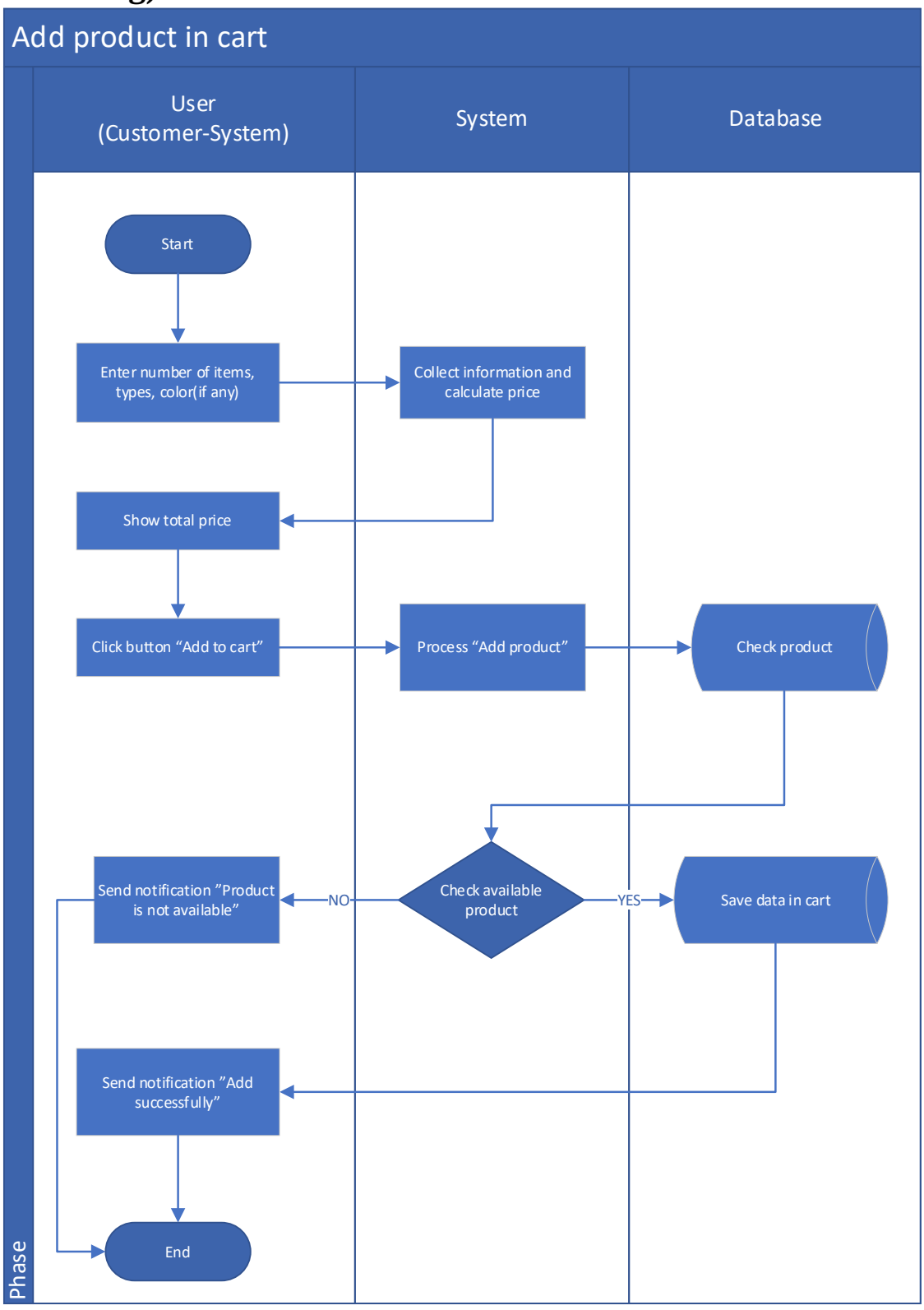
e) Forgot Password


Forgot Password
User (Customer – Admin)
System
Database
Start
Request forgot password (Press forgot password button)
Type email
Collect user email and query in database
Retrieve email
Display email not found
No
Check if email exists
Yes
Send forgot password link
Save forgot password code
Click forgot password link
Collect forgot password code and query in database
Retrieve forgot password code
Display failed to reset password
No
Check if forgot password code exists
Yes
Enter new password
Check password validity, forgot code and email
Yes
Save new password
No
Display success notification
End
Phase

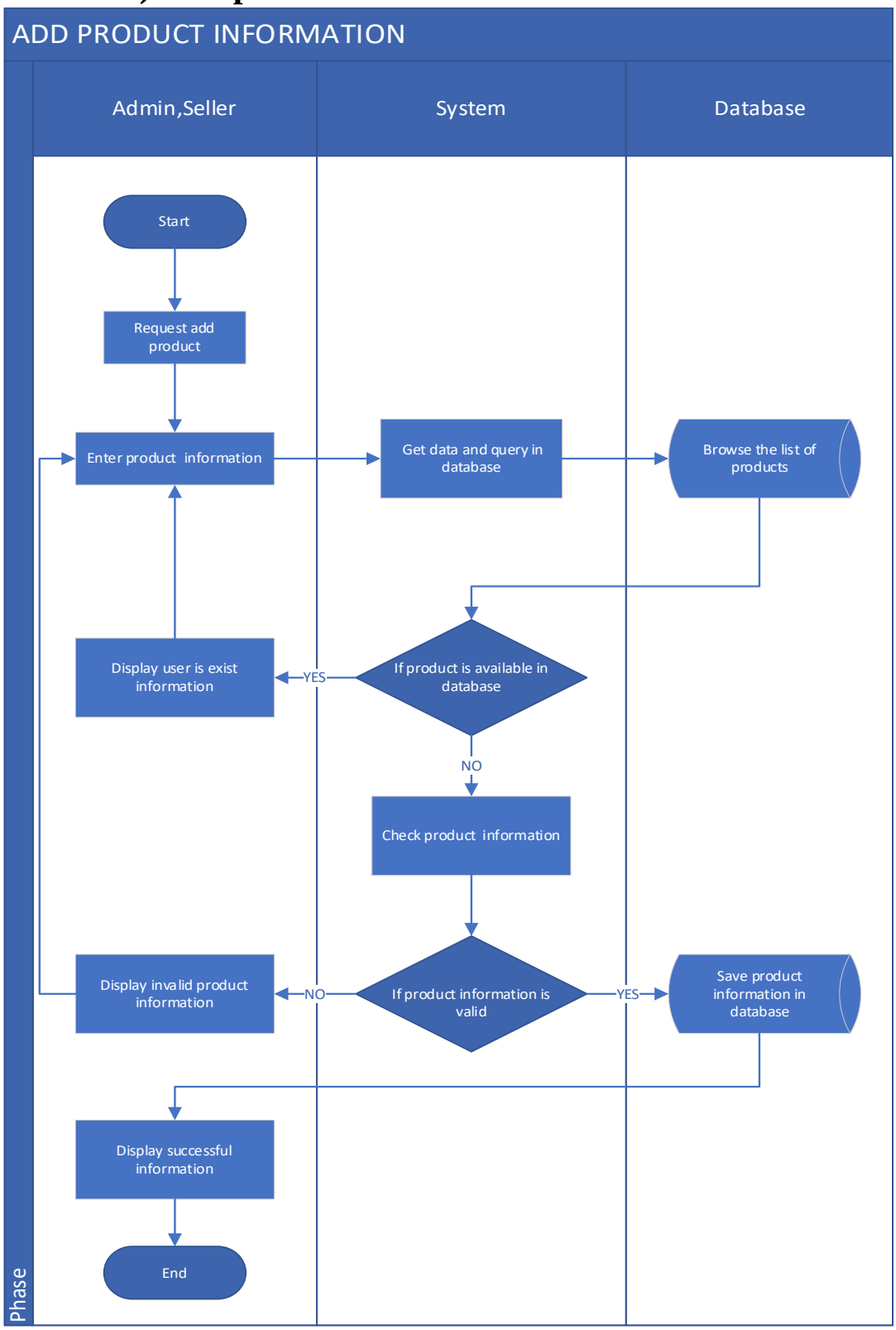
f) Order

Order
User (Customer)
System
Database
Start
Click “Cart”
Receive and process request
Retrieve cart in database
Show list orders in cart
Receive and process data
Click check box in each product
Select payment method and available discount
Click “Purchase”
Receive verification and process payment
Verify order In database
Show notification “Order placed successfully”
End
Phase

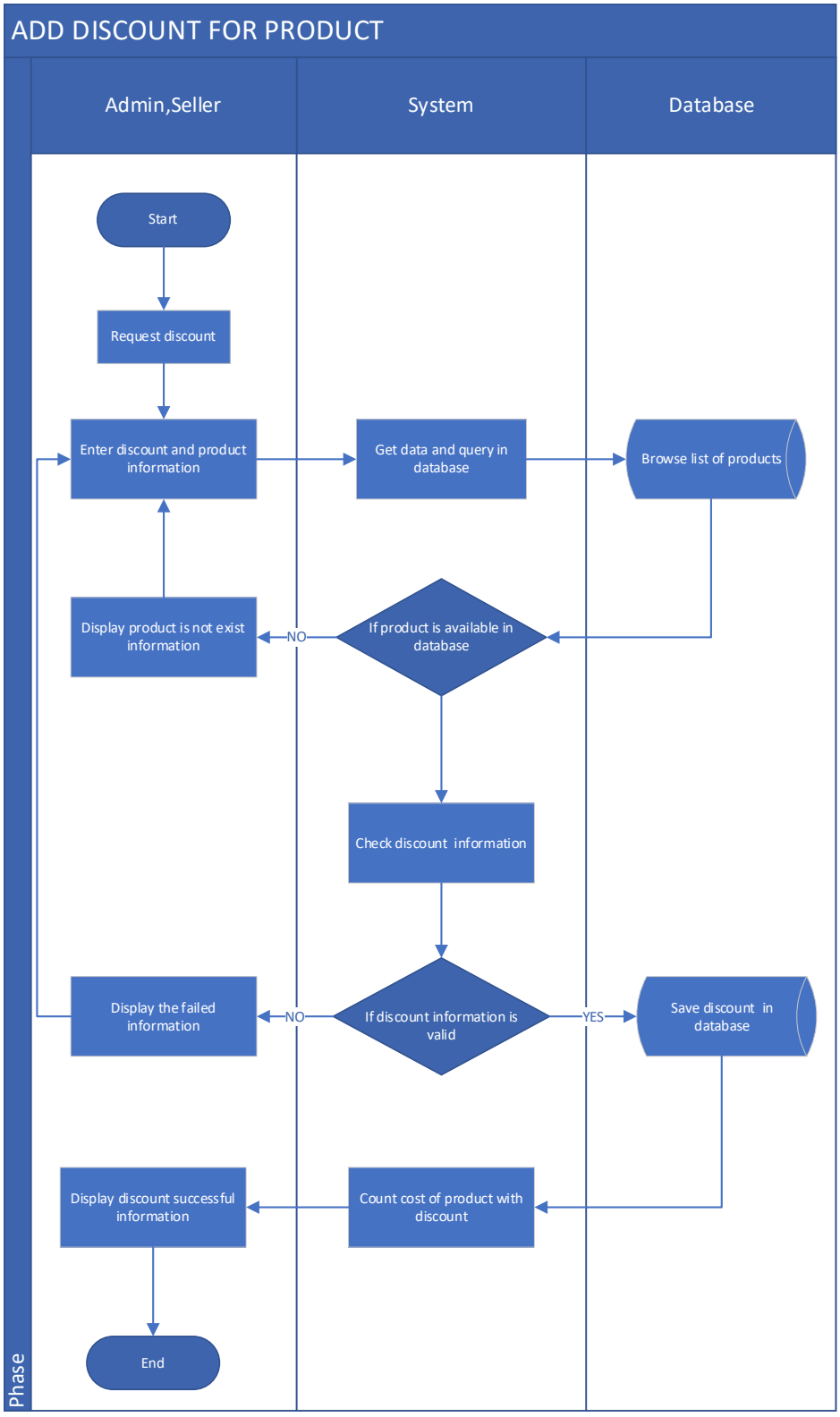
g) Add Product in Cart



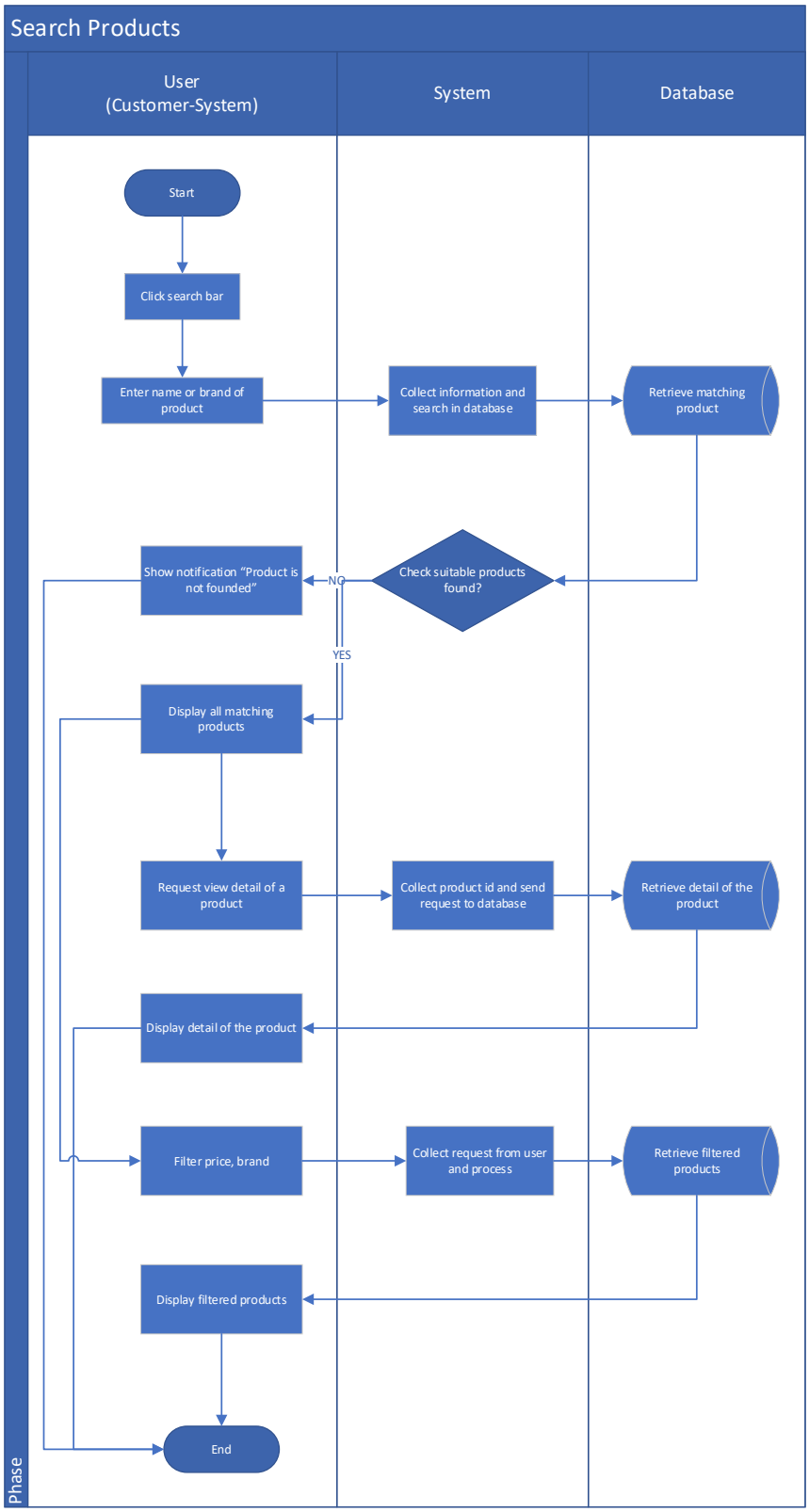
h) Add product information



i) Add Discount for Product



j) Search Product


Search Products
User (Customer-System)
System
Database
Start
Click search bar
Enter name or brand of product
Collect information and search in database
Retrieve matching product
Check suitable products found?
NO
Show notification "Product is not founded"
YES
Display all matching products
Request view detail of a product
Collect product id and send request to database
Retrieve detail of the product
Display detail of the product
Filter price, brand
Collect request from user and process
Retrieve filtered products
Display filtered products
End
Phase