

E-Commerce Platform Project

Project Planning & Management:

1. Project Proposal

1.1 Overview:

Our E-Commerce platform is designed to provide a seamless online shopping experience for customers, specializing in [Type of Clothing, e.g., casual wear, formal attire, etc.]. The platform will enable users to browse products, make purchases, and manage their orders efficiently.

1.2 Objectives:

- Develop a user-friendly e-commerce website with secure payment processing.
- Implement a responsive design for mobile and desktop users.
- Ensure scalability to handle increasing product listings and user traffic.
- Integrate analytics to track sales, customer behavior, and performance.
- Provide admin dashboards for inventory and order management.

1.3 Scope:

- User registration, login, and profile management.
- Product catalog with search & filtering.
- Shopping cart & checkout (payment gateway integration).
- Order tracking & history.
- Admin panel for managing products, orders, and users.
- Basic analytics (sales reports, user activity).

2. Project Plan

2.1 Timeline:

[illegible]

2.2 Deliverables:

- Functional e-commerce website (frontend + backend).
- User and developer documentation.
- Test cases.

2.3 Resource Allocation:

- Frontend Development: React.js
- Backend Development: ASP.Net
- Database: SQL
- UI/UX Design: Figma
- QA Tester: Manual & Automated Testing

3. Task assignment & Rules

Role	Member	Description
Project Management	Mai	Manages timelines, Risk management, stakeholder communication
Frontend	Mai, Sara	Implement UI, Integrate API
Backend	Hadeer,Tasnim,Mai,Sara	Implement, maintain, test, and debug the backend
Database	Tasnim, Hadeer	Database design
UI/UX Design	Mai, Tasnim	Wireframing, prototyping
Testing	Hadeer, Sara	Test functionality

4. Risk Assessment & Mitigation Plan

Risk	Likelihood	Impact	Mitigation
Payment gateway failure	Medium	High	Integrate backup payment options
Slow load time	High	Medium	Optimizing images, caching

Security breaches	Medium	High	Implement HTTPS, Regular security checkups
Scope creep	High	Medium	Strict sprint planning
Low user adoption	Low	High	Marketing campaigns, Regular User feedback

5. Key Performance Indicators (KPIs)

KPI	Target	Measurement Method
System uptime	99.9%	Server monitoring
Page load time	< 2 seconds	Google pagespeed
Conversion rate	≥ 3%	Google analytics
User adoption rate	1000 sign-ups in 1st month	Dtabase metrics
Bug resolution time	< 24 hours	Jira tracking

Requirements Gathering

1. Stakeholder Analysis:

Stakeholder	Role	Key needs
Customer	End user	Easy navigation, secure payment, product variety
Admin (seller)	Business owners, products managers	Inventory management, sales analytics, order processing
Developers	Tech team	Clear requirements, scalable architecture
Marketing Team	Promoters	Customer engagement tools,

		promo code integration
Payment Provider	External(Paypal)	Seamless integration, fraud prevention
Hosting Provider	Cloud service	High uptime, fast loading

2. User Stories & Use Cases:

2.1 Customer Stories

1. Browse Products
 - As a customer, I want to be able to view products by category so that I can find what I need quickly
 - Use case: Customer can search by category
2. Add to cart
 - As a customer, I want to be able to add or remove products to/from my cart freely
 - Use case: Customer can add/remove products to/from cart
3. Checkout
 - As a customer, I want to be able to check out securely and purchase products
 - Use case: Customer can checkout securely
4. Track orders
 - As a customer, I want to be able to track my order status so that I know when it will arrive
 - Use case: Customer can track order status

2.2 Admin (seller) Stories

1. Manage inventory
 - As an admin, I want to be able to add/edit/remove products so the inventory is updated
 - Use case: Admin can manage inventory
2. Process orders
 - As an admin, I want to be able to see/update the order status for customers
 - Use case: Admin can update order status
3. Generate sales reports
 - As an admin, I want to view sales analytics
 - Use case: Admin can view sales analytics

3. Functional Requirements

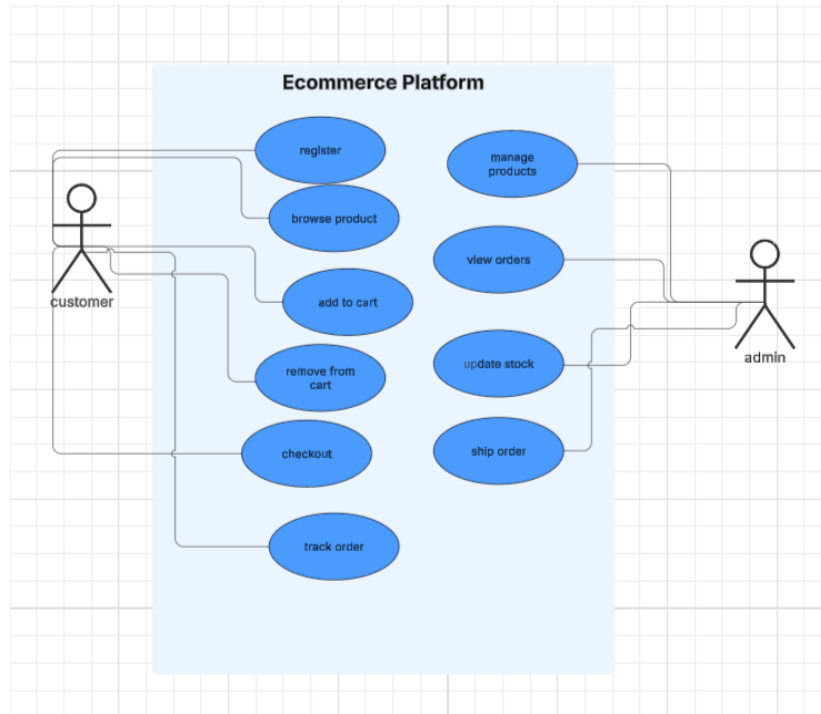
ID	Requirement	Description
FR-01	Home Page	Displays featured categories for easy navigation.
FR-02	Shop Page	Lists all products available on the website.
FR-03	Sale Page	Displays only discounted products.
FR-04	Category Pages	Each category has a separate page showing related products.
FR-05	Product Details Page	Shows images, descriptions, prices, and stock availability.
FR-06	Add to Cart	Customers can add/remove items from their shopping cart.
FR-07	Checkout & Payment	Customers do not need an account to place an order.
FR-08	Payment Method	The only payment option is Cash on Delivery (COD).
FR-09	Contact & Shipping	Customers must provide contact & shipping details at checkout.
FR-10	Order Placement	Customers can place an order without registering.
FR-11	Admin – Manage	Categories Admin can add, update, or delete product categories.
FR-12	Admin – Manage Products	Admin can add, update, or remove products.
FR-13	Admin – Manage Orders	Admin can approve or reject orders.
FR-14	Order Processing	Admin updates order status (e.g., Processing, Shipped, &Delivered).

4. Non-Functional Requirements

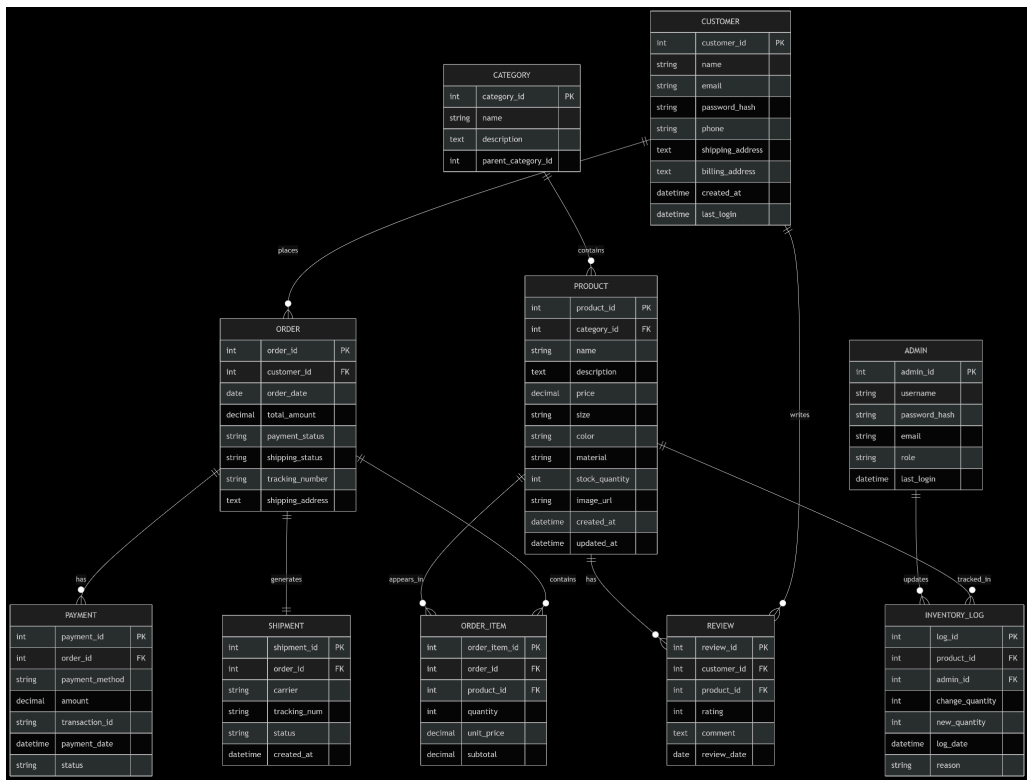
ID	Requirement	Description
NFR-01	Performance	The website should load within 2 seconds for optimal user experience.
NFR-02	Security	Users' contact & shipping information must be encrypted.
NFR-03	Admin Security	The admin panel should have restricted access with authentication.
NFR-04	Mobile-Friendliness	The website should be responsive on mobile, tablet, and desktop.
NFR-05	Usability	Navigation should be simple and user-friendly.
NFR-06	Availability	The system should have 99.9% uptime, except for maintenance.
NFR-07	Data Recovery	Users should be able to recover their session after an interruption.
NFR-08	Maintainability The system	Maintainability The system should allow easy addition of new categories & products.

System Analysis & Design

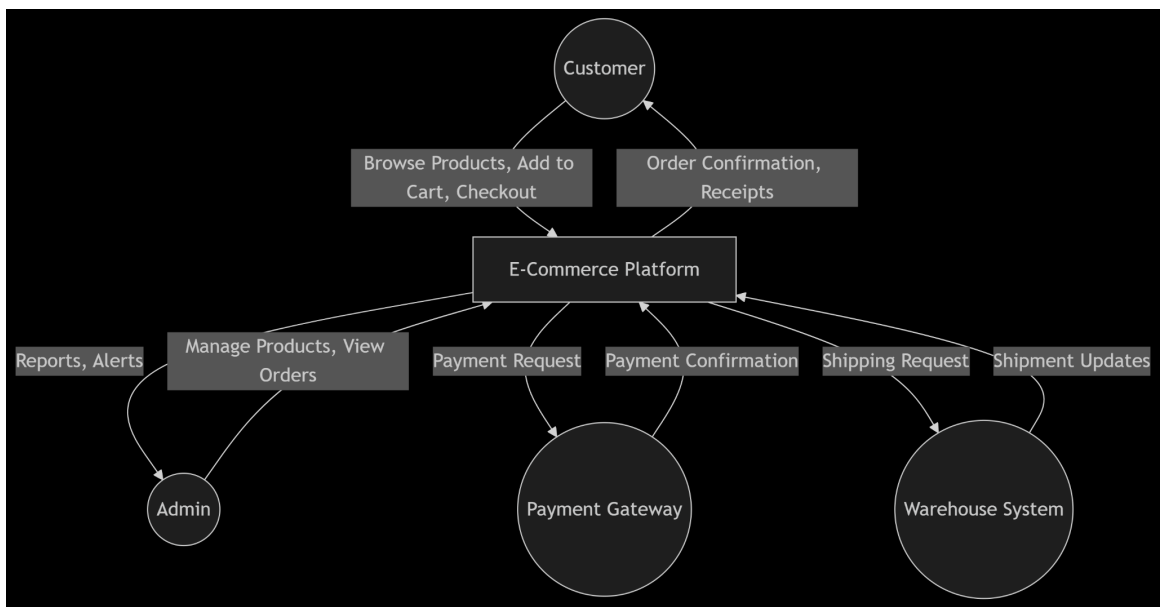
1. Use Case Diagram



2. ER Diagram

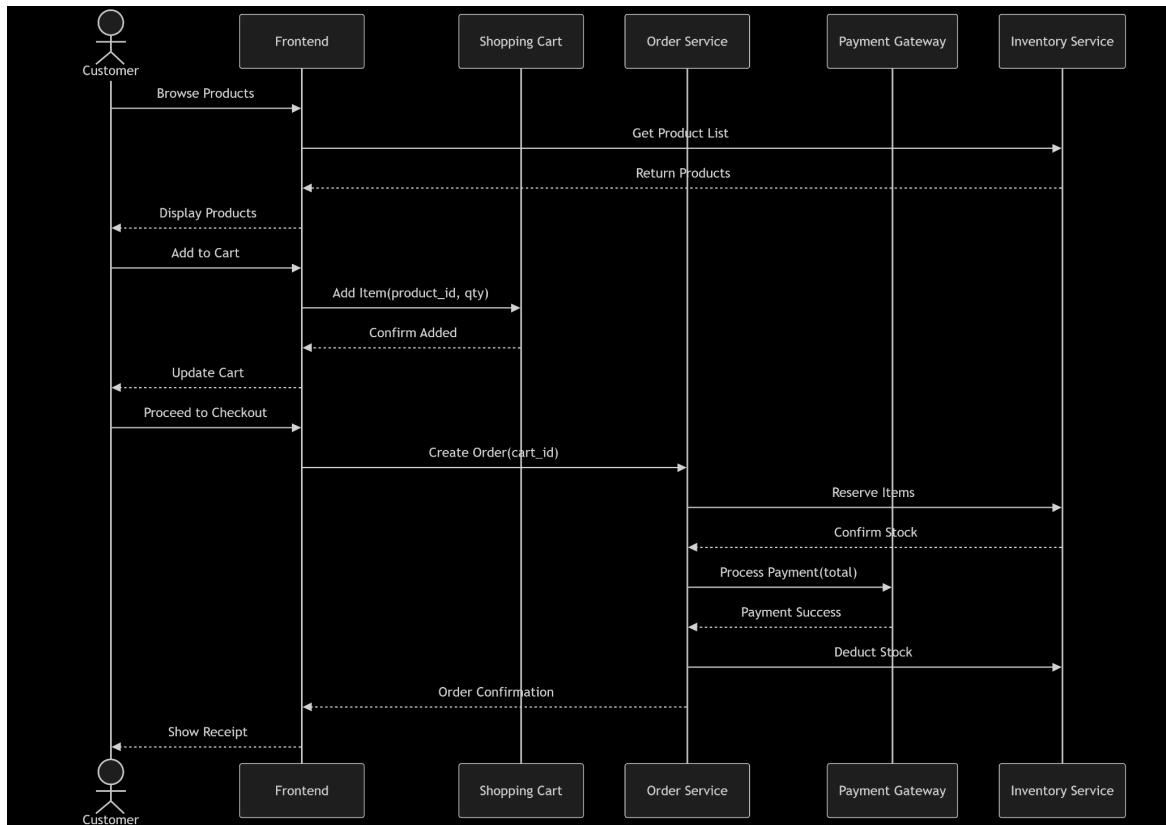


3. Context Level DFD

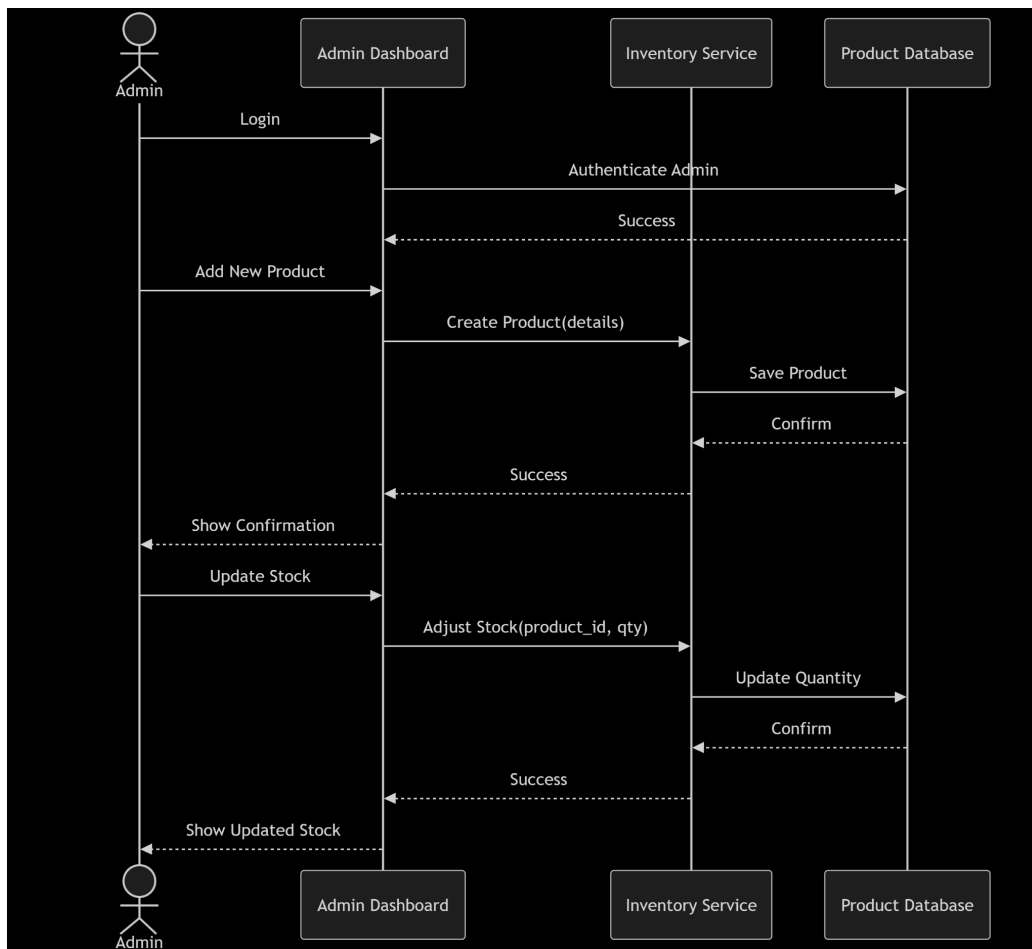


4. Sequence Diagrams

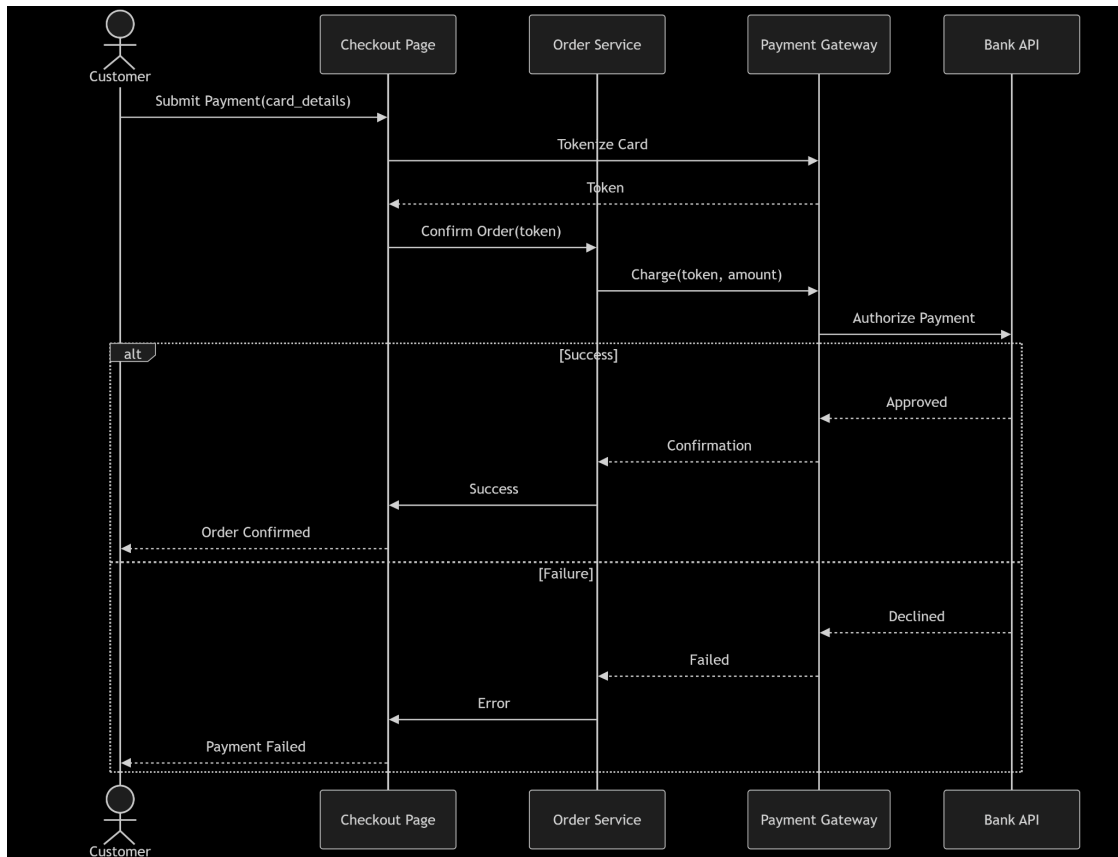
- Customer places an order



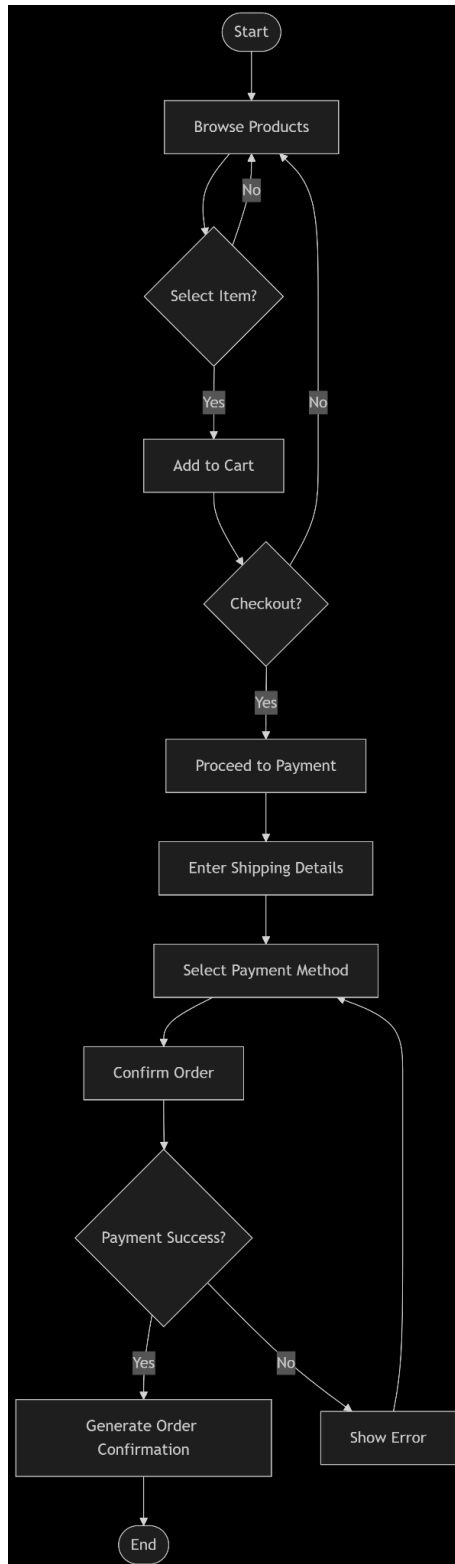
- Admin manages inventory



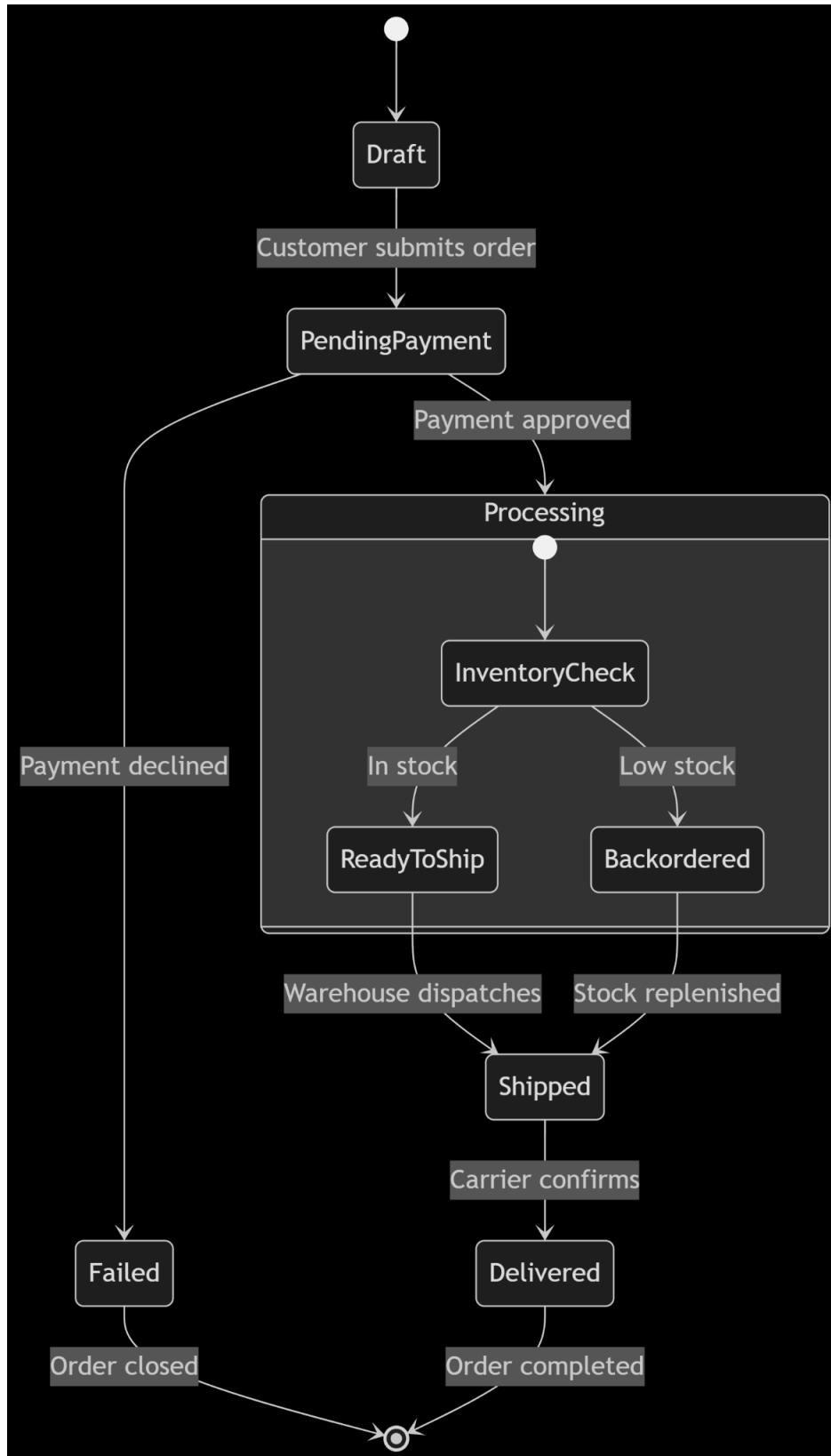
- Payment Processing



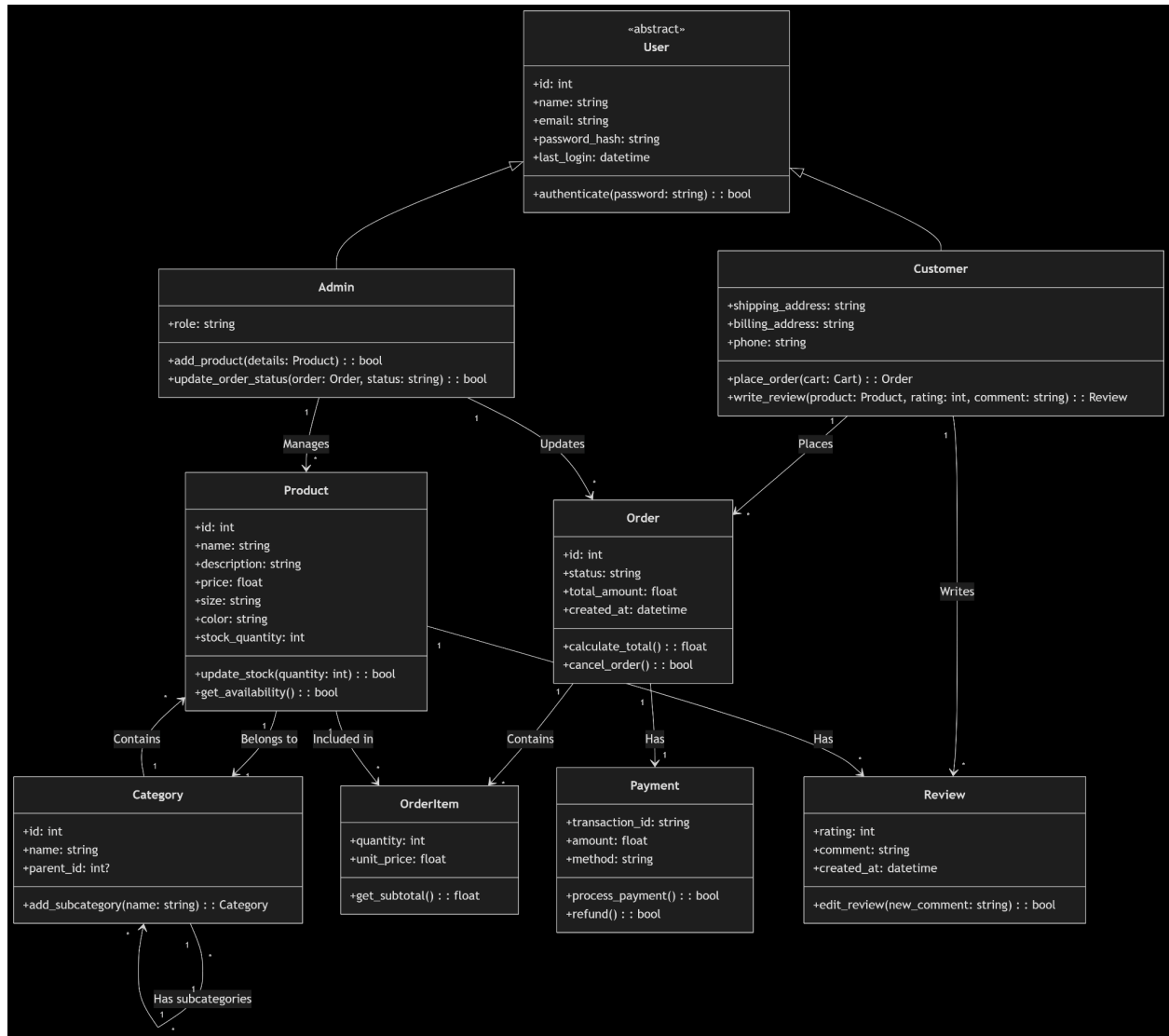
5. Activity Diagram



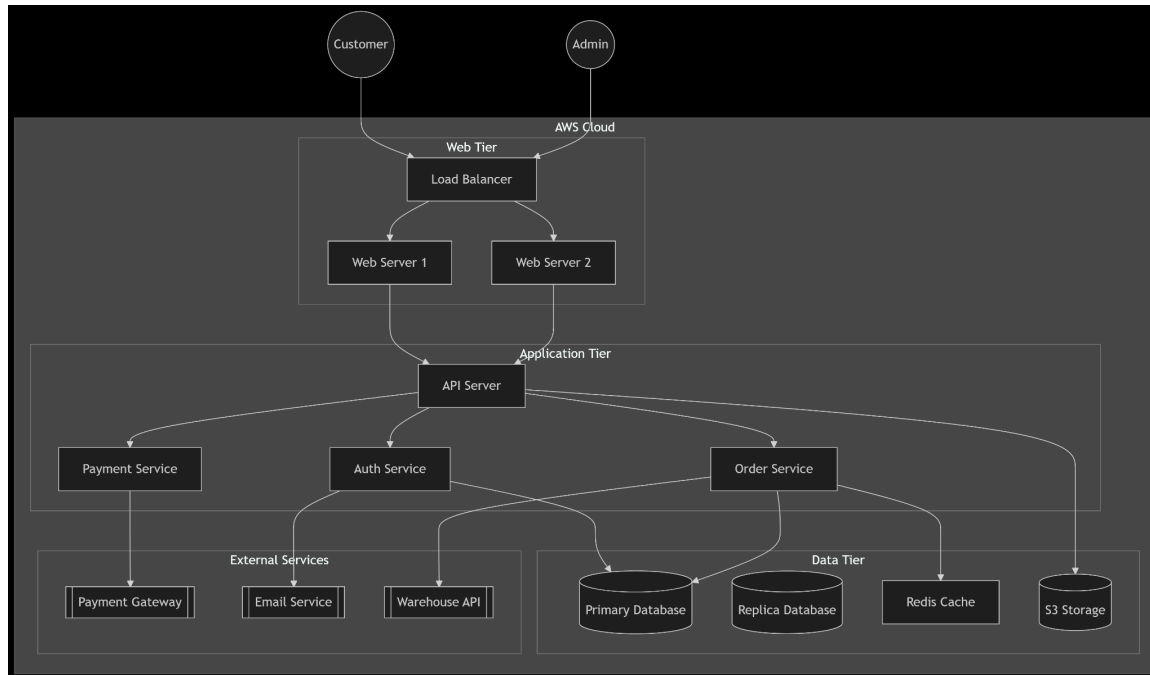
6. State Diagram



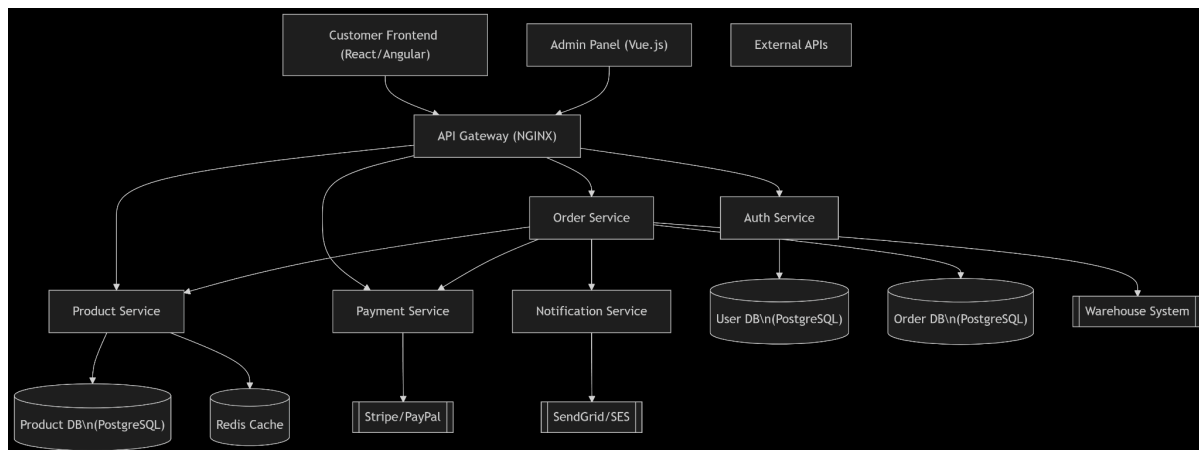
7. Class Diagram



8. Deployment Diagram



9. Component Diagram



10. Technology Stack

- **Frontend:** React.js + Bootstrap
- **Backend:** ASP.NET Core
- **Database:** SQL Server

