

# System Design

E-Commerce Store MVP

**Version:** 1.0

**Product Name:** StoreForYou (E-Commerce Store)

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# CRC Cards

## 1. User Class

- Responsibilities:
  - Authenticate users (signup/login)
  - Maintain user profile (name, email, address)
  - View order history
- Collaborators:
  - Card
  - Order
  - Authentication

## 2. Authentication Class

- Responsibilities:
  - Authenticate users
  - Validate user credentials
- Collaborators:
  - User

## 3. Product Class

- Responsibilities:
  - Store product information
  - Provide search and filter functionality
- Collaborators:
  - Inventory

## 4. Cart Class

- Responsibilities:
  - Add/remove products
  - Calculate total price
  - Persist cart items for a user session
- Collaborators:
  - User
  - Product

## 5. Order Class

- Responsibilities:
  - Store order details
  - Track order status
- Collaborators:
  - User
  - Cart
  - Payment

## 6. Inventory Class

- Responsibilities:
  - Retrieve and filter product data
  - Handle inventory updates
- Collaborators:
  - Product

## 7. Payment Class

- Responsibilities:
  - Handle payment processing
- Collaborators:
  - Order
  - External Payment Gateway

# System Architecture Diagram

