

# Software Requirements Specification (SRS) for E-commerce Project

## 1. INTRODUCTION:

- Purpose

The purpose of this SRS document is to provide a detailed outline of the functionalities, features, system constraints, and user interface of the “ShopSmart” e-commerce platform. “ShopSmart” is designed to enable customers very comfortable buying experience and accessible online shopping experience to a wide range of customers.

## 2. OVERALL DESCRIPTION:

- Product Perspective
- Product Features
- User Classes and Characteristics

## 3. System Features

### Account

- The application should allow users to create a new account using basic information, email(all emails are unique), and password...
- The application should disabled all newly created accounts unit verified.
- The application should send an email with a link to comfirm new user account.

- Only after verifying a new account should a user be able to log into the application.

### Reset Password

- The application should allow users to reset their password.
- The application should send a link to user's email to reset their password (link to be invalid after being clicked on).
- The application should present a screen with a form to reset password when the link is clicked.
- If a password is reset successfully, user should be able to log in using the new password.
- The application should allow users to reset their password as many times as they need.

### Category

- The application should allow the admin to add categories as many as he wants.
- The application should allow the admin to update any category.
- The application should allow the admin to delete any category.
- The application should allow only the admin to deal with the category.
- The application should allow the admin to view all the categories in one page.

### Product

- The application should allow the admin to add any number of products for just one category.
- The application should allow the admin to delete any product.
- The application should allow the admin to update any product.
- The application should allow the admin to view all products in one category.
- The application should allow the customer to show a product in a category.
- The application should make sure that the only one deals with the product is the admin.

## 4. External Interface Requirements

### User Interfaces (Front-end) Requirements

#### 1. Nice Front End:

- The front end of the E-commerce application must have an aesthetically pleasing design.
- Use a clean and modern layout with attention to typography, color schemes, and visual consistency.

- Ensure that the UI elements (buttons, forms, navigation bars) are visually appealing and aligned with the overall theme.

## 2. User-Friendly Widgets:

- The widgets (components) used in the UI should enhance the user experience and make interactions intuitive.
- Consider the following user-friendly widgets:
  - **Navigation Menu:**
    - Clear and organized navigation menu with categories, search, and user account links.
  - **Product Listings:**
    - Display products in a grid or list format.
    - Include product images, names, prices, and brief descriptions.
  - **Search Bar:**
    - An easily accessible search bar for users to find products quickly.
  - **Shopping Cart Widget:**
    - Show the number of items in the cart.
    - Provide a link to view the full cart.
  - **Product Details Page:**
    - Detailed information about a selected product.
    - Include product images, specifications, and customer reviews.
  - **User Authentication Forms:**
    - User-friendly login and registration forms.
  - **Order Summary Widget:**
    - Display order details (items, quantities, total amount) during checkout.
  - **Responsive Design:**
    - Ensure the UI adapts well to different screen sizes (desktop, tablet, mobile).

## 3. Accessibility:

- Design the UI with accessibility in mind:
  - Use semantic HTML tags.
  - Provide alt text for images.
  - Ensure proper keyboard navigation.
  - Maintain sufficient color contrast for readability.

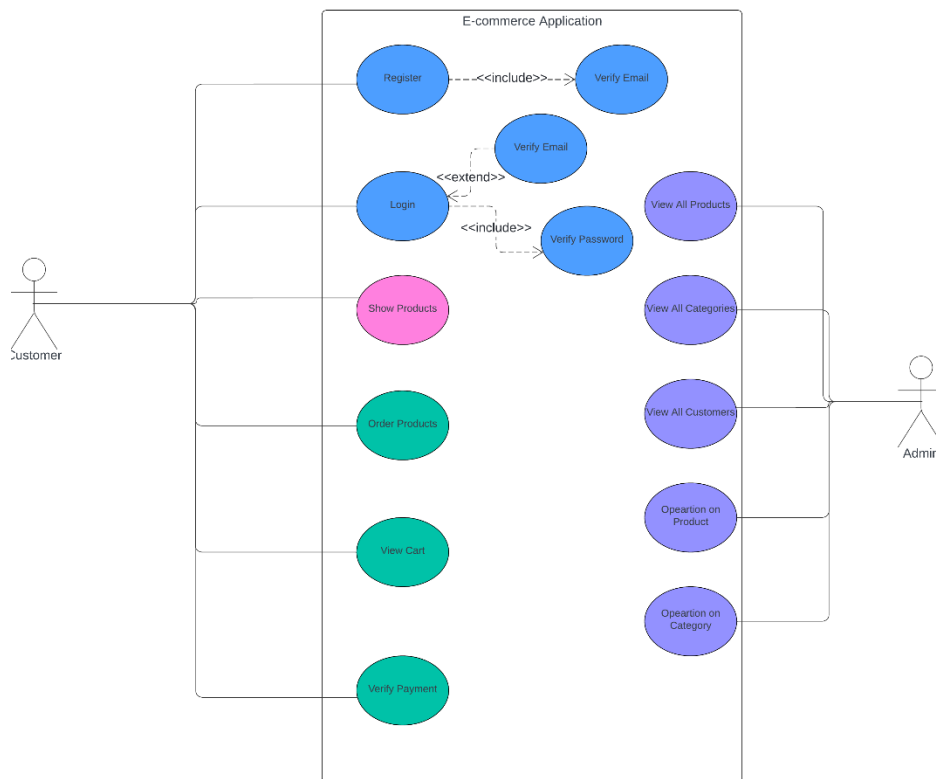
## 4. Consistent Design Patterns:

- Maintain consistency across pages:
  - Use the same fonts, colors, and button styles.
  - Keep the layout consistent (e.g., header, footer, content area).
  - Apply consistent spacing and alignment.

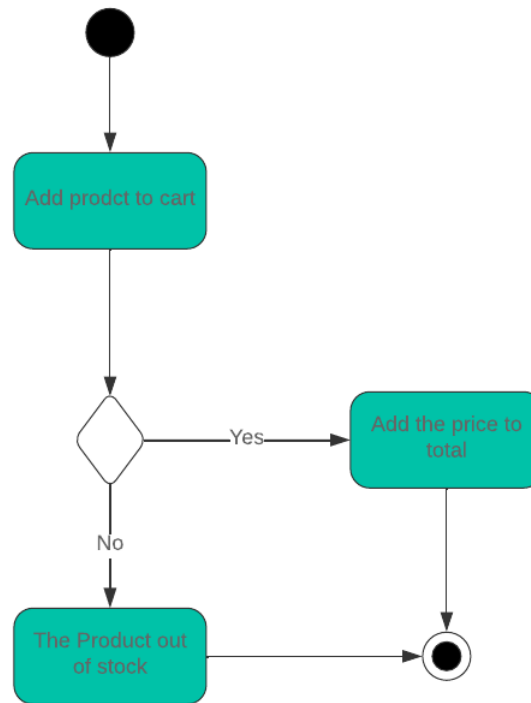
## 5. Nonfunctional Requirements

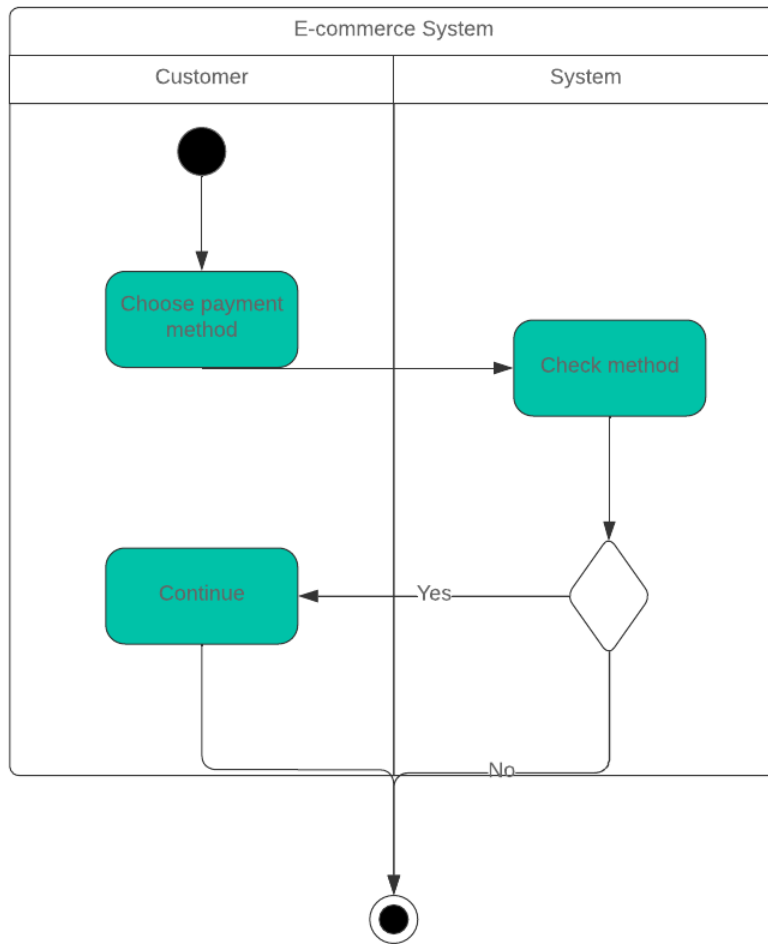
- Performance Requirements
  - The application should show the all categories to admin and the user in order of seconds.
  - The application should be able to make the users register in the system in order of 1second.
  - The application should be able to make the customers login in the system in order of 1second.
  - The application should be able to make the customers make the payment in order of seconds.
  - The application should be able to make the customers view the product in just milliseconds.
- Safety Requirements
  - All user data collected by the application must be handled safely, ensuring that accidental data leaks do not occur. Implement measures to secure data at rest and in transit.
  - The system must handle operational errors smoothly without causing system crashes or data loss. Proper error handling mechanisms must be in place to ensure stability.
  - The system should be robust against faults and continue to operate under predefined failure conditions. Implement redundancy for critical components to maintain system availability.
- Security Requirements
  - All sensitive data, including user credentials and payment information, must be encrypted using strong encryption protocols both at rest and in transit.
  - Implement strong, multi-factor authentication mechanisms for users, especially for accessing sensitive features like account settings and payment information.
  - Define and enforce strict user roles and permissions to ensure users can only access data and perform actions appropriate to their roles.
  - Ensure secure session management by implementing timeouts and re-authentication for sensitive actions.

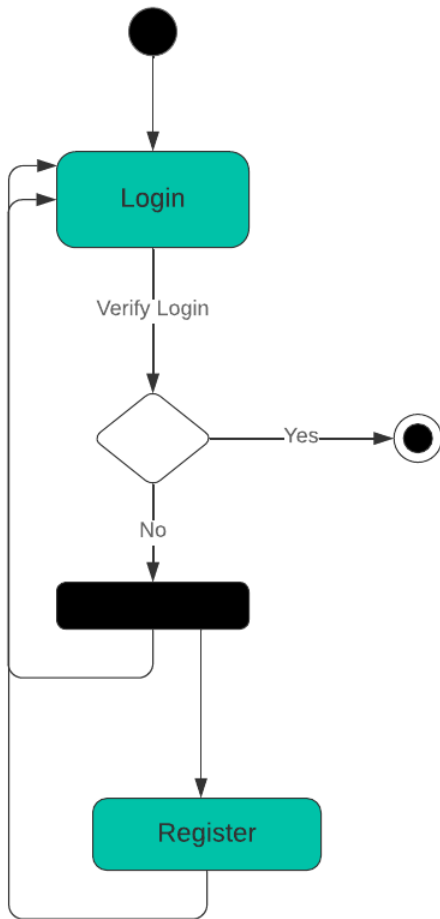
## Use Case Diagrams



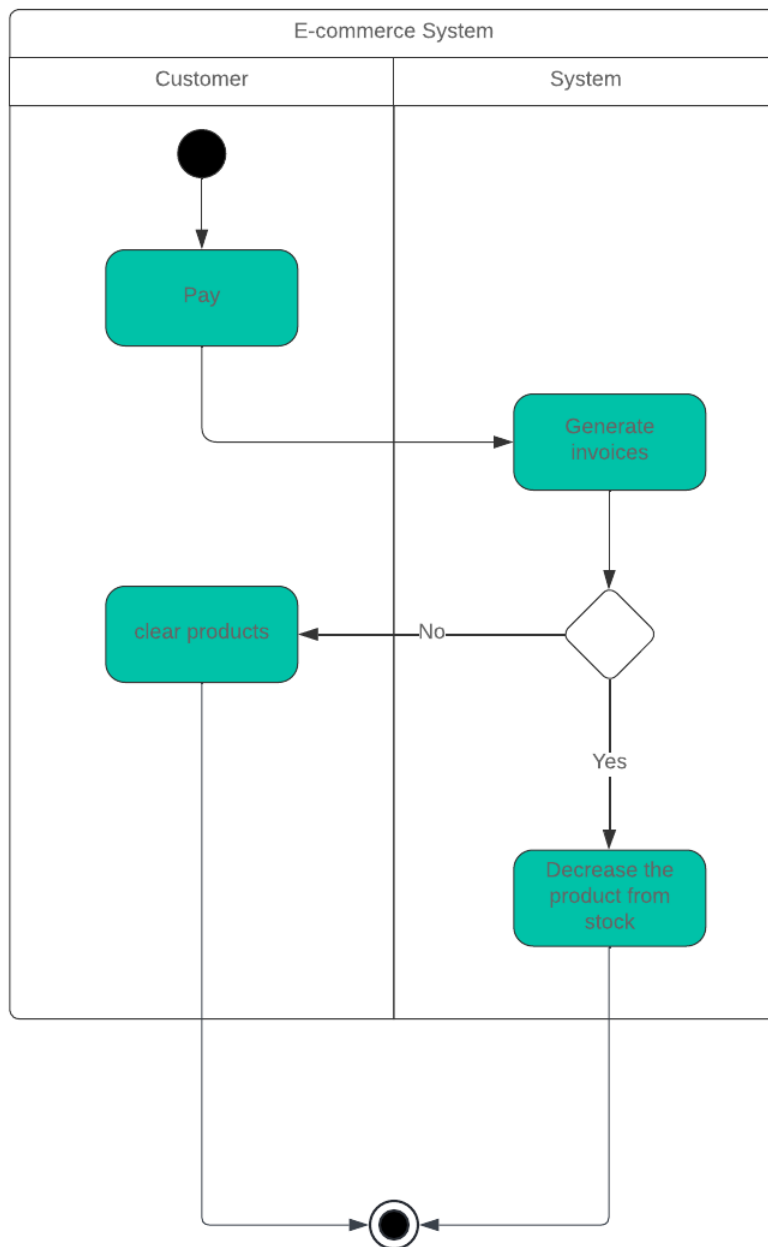
## Activity Diagrams

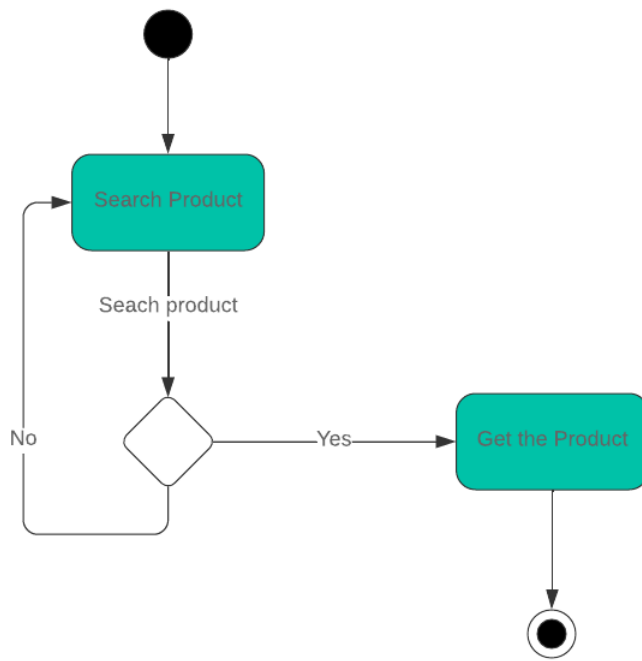






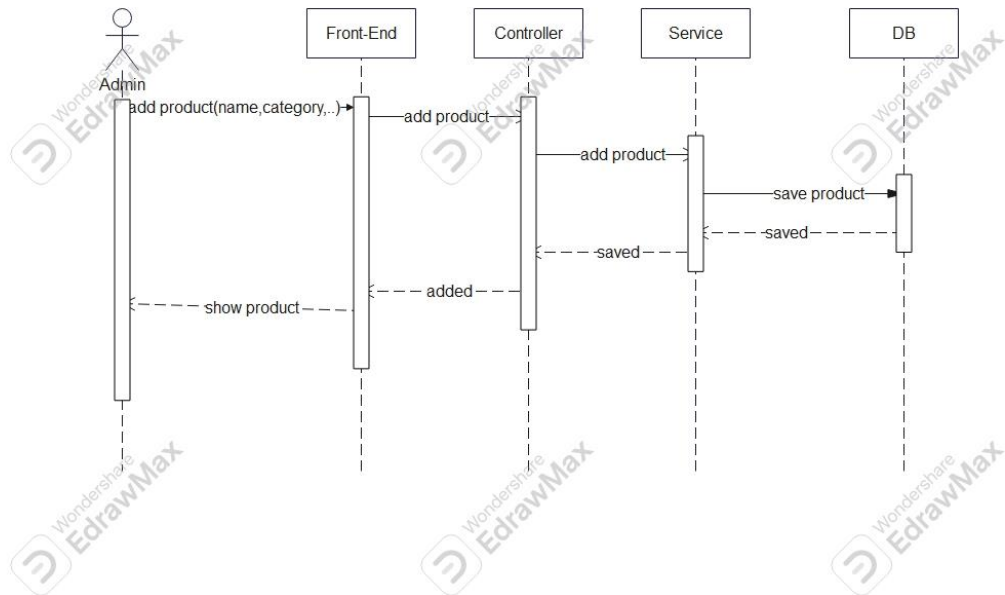




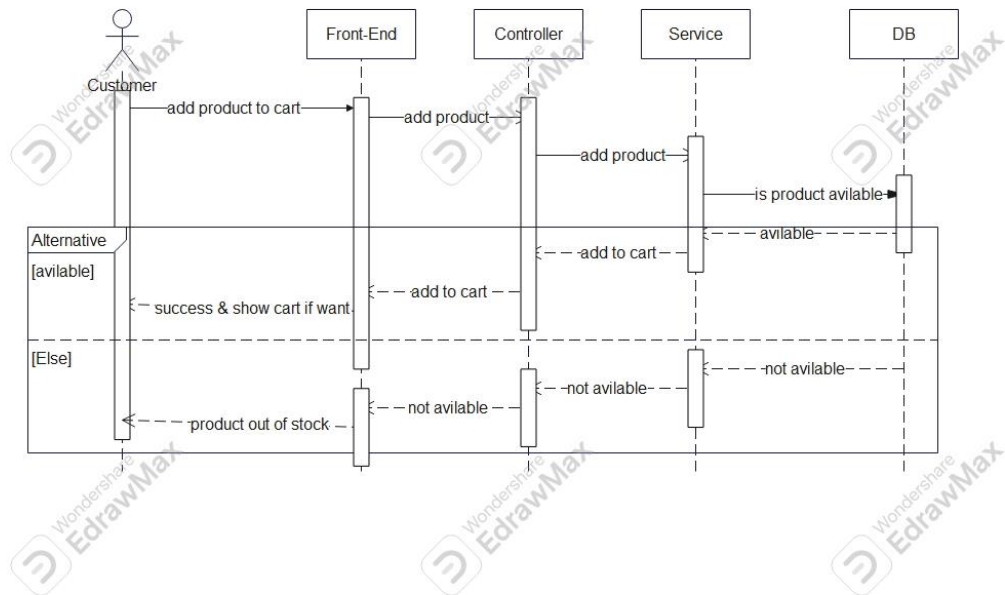


## Sequence diagrams

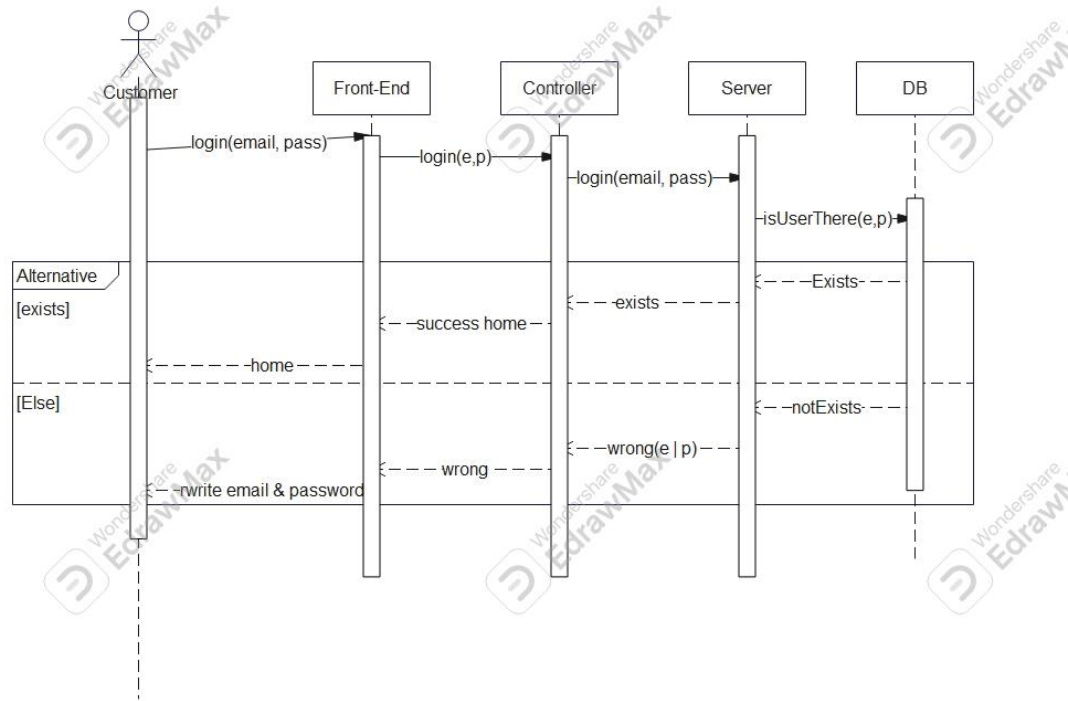
## add product sequence

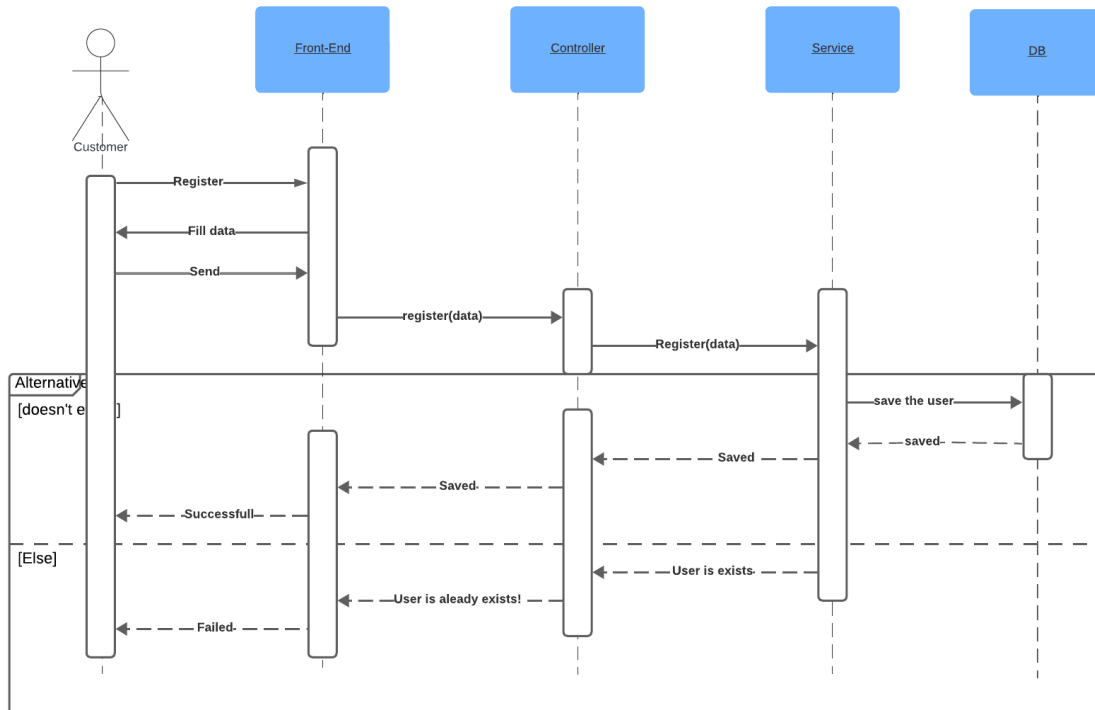


## add product to cart sequence

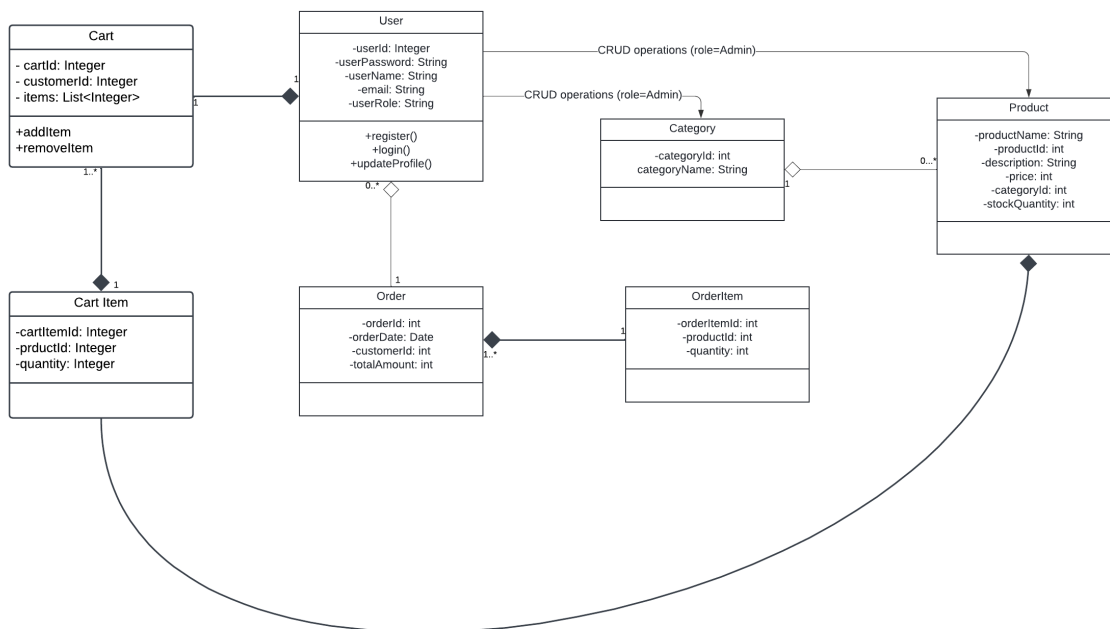


## login-sequence





## Class Diagram



## ERD diagram

