**1. Functional Requirements**

· Users should be able to create an account with a valid email and password.

· Users should be able to log in with valid credentials and receive an error for incorrect login attempts.

· Users should be able to reset their password via email.

· Users should be able to log out securely.

· Users should have the option to stay logged in.

· Users should be able to browse a list of products with images, descriptions, and prices.

· Users should be able to search for products using keywords.

· Users should be able to filter products by category, brand, price range, etc.

· Users should be able to sort products by price (low to high, high to low), popularity, or newest arrivals.

· Users should be able to click on a product to view detailed information, including images, price, stock availability, and customer reviews.

· Users should be able to leave reviews and ratings for products.

· Users should be able to add products to the shopping cart from the product page.

· Users should be able to see all added products, their quantity, and the total price.

· Users should be able to increase/decrease the quantity or remove products from the cart.

· Users should be able to go to checkout and complete their purchase.

· Users should be able to apply promo codes for discounts.

· Users should be able to choose payment methods (e.g., credit card, PayPal, cash on delivery).

· Users should receive an email after placing an order.

· Users should be able to enter and save shipping details.

· Users should be able to update their personal details (name, email, password).

· Users should be able to view past purchases with order details.

· Users should be able to cancel or request a return for their orders

**2. Non-Functional Requirements**

· **Performance**

* The website should load within 2 seconds under normal conditions.
* The system should handle up to 10,000 concurrent users without slowdowns.

· **Usability**

* The interface should be intuitive and user-friendly.
* Navigation should be easy, with a clear product categorization.
* The website should provide tooltips and guidance for new users.

· **Scalability**

* The system should be able to accommodate an increasing number of users and products without performance degradation.
* The backend should support future expansion to new regions and additional services.

· **Security**

* User passwords should be encrypted using secure hashing algorithms.
* The system should enforce multi-factor authentication for admin accounts.
* The website should use HTTPS to encrypt all communications.
* The system should prevent unauthorized access through role-based access control.

· **Reliability & Availability**

* The website should have an uptime of at least 99.9%.
* The system should have a backup mechanism to recover data in case of failure.

· **Maintainability**

* The system code should follow best practices for clean architecture.
* Developers should be able to modify and update features without affecting core functionalities.

· **Accessibility**

* The website should comply with WCAG 2.1 accessibility guidelines.
* Users with disabilities should be able to navigate the website using assistive technologies.

· **Compatibility**

* The website should work across all major browsers (Chrome, Firefox, Safari, Edge).
* The system should be responsive and function properly on desktop, tablet, and mobile devices.

1. **User Stories & Use Cases**

****User Story 1:****

* **As a** new user, **I want to** create an account **so that** I can access member-only features.
  + **Use Case:** A visitor navigates to the registration page, fills in the required details, and submits the form to create a new account.

****User Story 2:****

* **As a** registered user, **I want to** log in to my account **so that** I can access my profile and saved preferences.
  + **Use Case:** A user enters their email and password, submits the form, and gets redirected to their dashboard upon successful authentication.

****User Story 3:****

* **As a** user, **I want to** reset my password **so that** I can regain access to my account if I forget my credentials.
  + **Use Case:** A user clicks on "Forgot Password," enters their email, receives a reset link, and updates their password.

****User Story 4:****

* **As a** user, **I want to** update my profile information **so that** my account details remain up to date.
  + **Use Case:** A user goes to their profile settings, updates their personal information, and saves the changes.

****User Story 5:****

* **As a** user, **I want to** browse different product categories **so that** I can explore available options before making a purchase.
  + **Use Case:** A user selects a category from the navigation menu and views a list of related products.

****User Story 6:****

* **As a** user, **I want to** search for products by name **so that** I can quickly find specific items.
  + **Use Case:** A user enters a keyword in the search bar and sees matching results.

****User Story 7:****

* **As a** user, **I want to** add products to my shopping cart **so that** I can buy them later.
  + **Use Case:** A user clicks the "Add to Cart" button on a product page, and the item is added to their cart.

****User Story 8:****

* **As a** user, **I want to** remove products from my cart **so that** I can modify my purchase list.
  + **Use Case:** A user views their cart, clicks the remove button next to an item, and updates the total price.

****User Story 9:****

* **As a** user, **I want to** select my preferred payment method **so that** I can complete the transaction conveniently.
  + **Use Case:** A user chooses between credit card, PayPal, or cash on delivery before confirming the order.