

# Software Requirements Specification (SRS)

## E-Commerce Website Introduction

### 1.1 Purpose

The purpose of this document is to outline the functional and non-functional requirements for an e-commerce website that allows users to browse, search, and purchase products securely.

### 1.2 Scope

The e-commerce platform will provide a seamless shopping experience with a user-friendly interface, secure payment options, and order tracking functionalities. The system will support multiple categories of products and enable sellers to list their items.

### 1.3 Definitions

Acronyms, and Abbreviations

**Admin:** Website administrator who manages users, orders, and products.

**Seller:** A user who lists products for sale.

**Buyer:** A user who purchases products.

**SKU:** Stock Keeping Unit.

**SSL:** Secure Sockets Layer.

**Functional Requirements** The system's functional requirements are described in User Story format.

### 2.1 User Registration and Authentication

**User Story:** As a user, I want to create an account so that I can access the platform.

**Confirmation:** Users should be able to register using an email and password or third-party authentication (Google, Facebook, etc.).

### 2.2 Product Browsing and Search

**User Story:** As a buyer, I want to search for products by category, name, and price range so that I can find the products I need.

**Confirmation:** The system should display search results based on keywords, categories, and filters.

## 2.3 Product Details

**User Story:** As a buyer, I want to view product details so that I can make an informed purchase decision.

**Confirmation:** Each product should display its name, description, price, images, reviews, and availability.

## 2.4 Shopping Cart

**User Story:** As a buyer, I want to add products to my cart so that I can purchase multiple items at once.

**Confirmation:** Users should be able to add/remove items from their cart and view the total price before checkout.

## 2.5 Secure Payment Processing

**User Story:** As a buyer, I want to make payments securely so that my financial information is protected.

**Confirmation:** The system should support multiple payment methods, including credit/debit cards, PayPal, and digital wallets.

## 2.6 Order Management

**User Story:** As a buyer, I want to track my orders so that I can know their status. **Confirmation:** Users should be able to view order status updates (e.g., Pending, Shipped, Delivered).

## 2.7 Seller Dashboard

**User Story:** As a seller, I want to list my products and track sales so that I can manage my store effectively.

**Confirmation:** The system should allow sellers to add/edit products, view orders, and manage inventory.

## 2.8 Customer Reviews and Ratings

**User Story:** As a buyer, I want to leave reviews and ratings for products so that I can share my experience with others.

**Confirmation:** Users should be able to rate products and leave text-based reviews.

## 2.9 Admin Panel

**User Story:** As an admin, I want to manage users, orders, and products so that the platform runs smoothly.

**Confirmation:** Admins should be able to approve/disapprove sellers, monitor transactions, and handle customer complaints.

## 2.10 Secure and Convenient Login

**User Story:** As a registered user, I want to log in to my account securely and easily, so that I can access my saved preferences, order history, and personalized recommendations.

**Confirmation:** Users can log in using their registered email and password. Users receive an error message if they enter incorrect credentials. Users can reset their password via a "Forgot Password?" link. Users can log in using third-party authentication (Google, Facebook, etc.). Users remain logged in unless they choose to log out. Users see a "Remember Me" option to stay logged in on their device. The system locks the account temporarily after multiple failed login attempts for security.

## 2.11 Proceed to Checkout

**User Story:** As a registered or guest user, I want to review my cart and complete my purchase by providing shipping and payment details, so that I can successfully place an order on the e-commerce website.

**Confirmation:** Users must provide shipping details (address, contact information). Users must choose a shipping method with estimated delivery time and cost. Users must select a payment method (credit/debit card, PayPal, etc.). Users can review order details before finalizing the purchase. A breakdown of costs, including taxes and shipping fees, is displayed. Users enter payment details securely. System validates the payment and confirms the transaction. Users receive a confirmation message with order details. An order confirmation email is sent to the user.

## 2.12 Order Confirmation

**User Story:** As a user who has completed a purchase, I want to receive an order confirmation with all necessary details, so that I can verify my order and track its status. **Confirmation:** Users are redirected to an order confirmation page after successful payment. The page displays the order number, item details, total cost, shipping address, and estimated delivery date. Users receive an email with a summary of their order, tracking number, and support details.

## 2.13 Display High-Quality Product Images

**User Story:** As a user browsing an e-commerce website, I want to view high-definition images of products so that I can see clear details and make an informed purchase decision.

**Confirmation:**

Each product page features high-resolution images (e.g., 1080p or higher). Users can zoom in on images without losing clarity. Products have multiple images showing various angles. Some products offer a 360° rotating view and short HD videos. Images load quickly and maintain quality across devices.

Non-Functional Requirements

## 3.1 Performance

The system should handle at least 10,000 concurrent users. Page load time should be less than 2 seconds.

## 3.2 Security

The platform must use SSL encryption for secure data transmission. User passwords should be hashed and stored securely. Implement role-based access control (RBAC) for different user types.

## 3.3 Quality

The system should be responsive and accessible on both desktop and mobile devices. Regular automated testing should ensure minimal bugs.

## 3.4 Availability

The platform should have 99.9% uptime. Implement automatic failover mechanisms to ensure availability.

## 3.5 Maintainability

The system should be modular to allow for easy updates and feature additions. Use well-documented APIs for third-party integrations.

## **Constraints**

The system should be developed within 2 months. The platform should support multiple languages and currencies. The database should store transactional data for at least 1 year.

**Assumptions and Dependencies** Users will have a stable internet connection. Payment gateway providers will handle financial transactions securely. Third-party services will be available and reliable. Appendix API documentation will be provided separately. UI/UX design guidelines will be maintained in a separate document.