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# **Software Requirement Specifications**

## **For**

# **BuyWise E-Commerce Platform**

**Version 1.0**

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**Date: 13 Mar 2025**

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# 1. Introduction

## 1.1 Purpose

The purpose of this document is to provide a detailed description of the software requirements for the BuyWise E-Commerce Platform. It covers functional and non-functional requirements, external interfaces, and system constraints.

## 1.2 Scope

BuyWise is an e-commerce platform that allows users to browse, search, and purchase products online. Core functionalities include user authentication, product catalog management, shopping cart, order processing, payment integration, and customer support. The system ensures secure and efficient transactions while providing a seamless shopping experience.

## 1.3 Definitions, Acronyms, and Abbreviations

- **UI:** User Interface
- **DBMS:** Database Management System
- **SSL/TLS:** Secure Socket Layer / Transport Layer Security
- **API:** Application Programming Interface
- **OTP:** One-Time Password

## 1.4 References

- IEEE 830 Standard for Software Requirements Specification
- PCI DSS (Payment Card Industry Data Security Standard)
- ISO/IEC 27001 Information Security Management Standards

## 1.5 Overview

This SRS document describes the functionality and requirements of the BuyWise E-Commerce Platform, covering product browsing, purchasing, order tracking, and secure payment integration.

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## 2. General Description

### 2.1 Product Perspective

BuyWise serves as an online marketplace for vendors and consumers, integrating with payment gateways, inventory management systems, and customer support services.

### 2.2 Product Functions

- User authentication and profile management
- Product catalog and search functionality
- Shopping cart and checkout system
- Order management and tracking
- Secure payment processing
- Customer support and feedback system

### 2.3 User Characteristics

- **Customers:** Browse products, add items to the cart, place orders, and track deliveries.
- **Vendors:** Manage product listings, track sales, and handle customer inquiries.
- **Administrators:** Oversee platform operations, monitor transactions, and enforce policies.

### 2.4 Constraints

- Must comply with data protection laws and PCI DSS standards.
- Requires a stable internet connection for transactions.
- Supports multiple device compatibility (desktop, tablet, mobile).

### 2.5 Assumptions and Dependencies

- The system depends on third-party payment gateways.
  - Users must have valid credentials for authentication.
  - Secure data storage and encryption methods will be used.
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### 3. System Features

#### 3.1 User Authentication

- **Description:** Secure login and registration via email, social media, or OTP.
- **Inputs:** Username, password, or OTP.
- **Process:** Authentication via database verification.
- **Outputs:** Access granted or denied.

#### 3.2 Product Catalog

- **Description:** Users can browse and search for products.
- **Inputs:** Search keywords, filters, and categories.
- **Process:** Retrieve product listings from the database.
- **Outputs:** Display relevant product information.

#### 3.3 Shopping Cart and Checkout

- **Description:** Users can add/remove products and proceed to checkout.
- **Inputs:** Product selection and quantity.
- **Process:** Update cart, apply discounts, and calculate total price.
- **Outputs:** Order summary and payment options.

#### 3.4 Payment Processing

- **Description:** Secure payment gateway integration.
- **Inputs:** Credit/debit card details, digital wallet info.
- **Process:** Payment authorization and transaction processing.
- **Outputs:** Payment confirmation and order receipt.

#### 3.5 Order Management and Tracking

- **Description:** Users can view order history and track shipments.
- **Inputs:** Order ID, user authentication.
- **Process:** Retrieve order details and shipment status.
- **Outputs:** Real-time tracking updates.

### 3.6 Customer Support

- **Description:** Users can contact support via chat, email, or phone.
  - **Inputs:** User inquiries and support tickets.
  - **Process:** Route issues to support representatives.
  - **Outputs:** Response and resolution updates.
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## 4. External Interface Requirements

### 4.1 User Interfaces

- Web and mobile-friendly UI with intuitive navigation.
- Support for product browsing, purchasing, and account management.

### 4.2 Software Interfaces

- **Payment Gateway:** Integration with PayPal, Stripe, etc.
- **Shipping API:** Real-time tracking with delivery services.
- **Customer Support:** Live chat and email integration.

### 4.3 Communication Interfaces

- **Internet Connection:** Required for transactions and data retrieval.
- **SSL/TLS Encryption:** Secure communication between users and servers.

### 4.4 Hardware Interfaces

- **Device Compatibility:** Support for desktops, tablets, and mobile devices.
  - **Backup Power:** Server redundancy to ensure uptime.
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## **5. Non-Functional Requirements**

### **5.1 Security**

- Encrypt all sensitive user information.
- Implement multi-factor authentication (MFA).

### **5.2 Performance**

- Load pages within 2-3 seconds.
- Handle up to 10,000 concurrent users.

### **5.3 Reliability**

- Ensure 99.9% uptime.
- Backup user and transaction data daily.

### **5.4 Availability**

- 24/7 availability with minimal downtime for maintenance.

### **5.5 Usability**

- Intuitive UI with clear navigation.
  - Multi-language support for diverse user base.
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## **6. Other Requirements**

### **6.1 Logging and Monitoring**

- Log all user transactions and activities for security audits.

### **6.2 Maintenance and Updates**

- Regular software updates and security patches.

## 6.3 Legal and Regulatory Compliance

- Comply with GDPR and PCI DSS.
  - Adhere to local e-commerce regulations.
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## 7. Appendix

### 7.1 Glossary

- **MFA:** Multi-Factor Authentication
- **GDPR:** General Data Protection Regulation
- **PCI DSS:** Payment Card Industry Data Security Standard
- **API:** Application Programming Interface