

Practical No. 1

Aim: Software Requirement Specification (Banking System)

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1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for developing an E-commerce website. The system will allow users to browse, search, and purchase products online, offering a secure and seamless shopping experience.

1.2 Scope

This project involves developing a platform where vendors can list products, and customers can browse, add to cart, and make purchases. Features will include user authentication, product search, payment integration, and an admin panel for managing products and orders.

1.3 Definitions, Acronyms, and Abbreviations

- **Admin:** A system user who manages products, orders, and users.
- **UI:** User Interface.
- **UX:** User Experience.

1.4 References

- Industry standards for web security.
 - Best practices in UX/UI design for E-commerce.
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2. Overall Description

2.1 Product Perspective

The E-commerce website will function as a standalone platform accessible via web browsers. It will integrate with third-party services for payments, inventory tracking, and email notifications.

2.2 Product Features

- User registration and login.
- Product browsing and filtering.
- Shopping cart and wishlist.
- Secure checkout with multiple payment options.
- Admin dashboard for managing products, users, and orders.

2.3 User Classes and Characteristics

- **Customers:** End-users who browse and purchase products.
- **Vendors:** Sellers who list and manage their products.
- **Admin:** Oversee platform operations.

2.4 Operating Environment

- **Web-based application** accessible on major browsers (Chrome, Firefox, Edge).
- **Responsive design** for desktops, tablets, and smartphones.

2.5 Assumptions and Dependencies

- The website will use a cloud database for storing product and user data.
 - Payment gateway integration (e.g., PayPal, Stripe).
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3. Specific Requirements

3.1 Functional Requirements

1. User Registration and Authentication:

- Users can register using email and password.
- Two-factor authentication for secure access.

2. Product Management:

- Vendors can add, update, and delete products.
- Products should include name, description, price, stock, and images.

3. Search and Filter:

- Users can search products by name or category.
- Filters for price range, ratings, and availability.

4. Shopping Cart and Wishlist:

- Add products to the cart or wishlist.
- Modify quantities or remove items.

5. Checkout Process:

- Enter shipping and billing details.
- Choose a payment method and confirm orders.

6. Order Management:

- Users can view order history and track shipment.

- Admin can update order statuses (e.g., "Processing," "Shipped").

7. Admin Dashboard:

- Manage users, vendors, products, and orders.
- View sales reports and analytics.

3.2 Non-Functional Requirements

- Performance: Pages should load within 2 seconds.
- Scalability: Handle up to 10,000 simultaneous users.
- Security: Data encryption for sensitive user data.

3.3 External Interface Requirements

- Payment Gateway: Integration with Stripe and PayPal.
- Email Service: Automated emails for order confirmations and password resets.

3.4 System Features

- Support for multilingual content.
- SEO-optimized URLs and meta tags.

4. Validation and Acceptance Criteria

- The system must pass usability tests with 95% satisfaction.
- Payment transactions should have a 100% success rate in test scenarios.
- Admin panel functionality must allow complete control over the system.

5. Appendices

- Glossary of Terms.
- Mockups of key pages (e.g., Homepage, Product Details, Cart).