**Software Requirements Specification Document**

**E-Commerce Website**

### Date: 25 February 2024

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**1. Introduction**

1.1 Purpose

The e-commerce website for shopping aims to provide a convenient and secure online platform for users to browse, purchase, and sell products . It enables users to explore a wide range of products from various categories and make purchases conveniently from the comfort of their homes or any location with internet access.

1.2 Scope

The e-commerce website aims to provide a platform for users to browse, purchase, and sell products online. It includes functionalities for user registration, product catalog , shopping cart, checkout, order management, and administrative capabilities.

1.3 Definitions, Acronyms, and Abbreviations

- \*\*SRS\*\*: Software Requirements Specification

- \*\*UI\*\*: User Interface

- \*\*UX\*\*: User Experience

- \*\*API\*\*: Application Programming Interface

1.4 References

**2. Overall Description**

2.1 Product Perspective

The e-commerce website is designed as a standalone system, comprising frontend and backend components, hosted on web servers and accessible through standard web browsers. It utilizes modern web technologies and frameworks to ensure compatibility, responsiveness, and performance across different devices and platforms.

The website integrates with external systems and services to support core functionalities such as payment processing, order fulfilment, and customer support. This includes integration with third-party payment gateways (e.g., PayPal, Stripe), shipping carriers (e.g., UPS, FedEx), and customer relationship management (CRM) tools.

The website relies on a robust database management system (DBMS) to store and retrieve various types of data, including user profiles, product catalogs, inventory levels, transaction records, and analytical insights. The DBMS ensures data integrity, scalability, and performance, supporting efficient operations and decision-making.

2.2 Product Functions

The main functions of the e-commerce website include:

- User registration and authentication

- Browse and search products

- Product categorization

- Add to cart and wish list

- Secure checkout process

- Order tracking

- Seller dashboard for product management

2.3 User Classes and Characteristics

User classes include:

- Visitors: Unregistered users browsing the website.

- Customers: Registered users making purchases.

- Sellers: Users managing their product listings and sales.

2.4 Operating Environment

The e-commerce website will run on modern web browsers (Chrome, Firefox, Safari) and support mobile responsiveness.

2.5 Design and Implementation Constraints

The system will be developed using HTML, CSS, JavaScript for the frontend, and a backend framework like Django or Node.js. It will adhere to web development best practices and security standards.

2.6 User Documentation

User documentation will include a user manual detailing how to navigate the website, make purchases, and manage accounts.

2.7 Assumptions and Dependencies

- Assumption: Users have basic internet browsing skills.

- Dependencies: Integration with third-party payment gateways and shipping APIs.

**3. Specific Requirements**

3.1 External Interface Requirements

- User Interfaces: Intuitive UI/UX design for seamless user interaction.

- APIs: Integration with payment gateways (e.g., PayPal, Stripe) and shipping services (e.g., UPS, FedEx).

- Database: Database management system (e.g., MongoDB) for storing user data, product information, and order details.

3.2 Functional Requirements

1. User Registration

- Users can create accounts by providing necessary details.

- Email verification for account activation.

2. Product Catalog

- Browse products by category, price, and popularity.

- Search functionality with filters.

3. Shopping Cart

- Add/remove products to/from cart.

- Update quantity and view total price.

4. Checkout

- Secure checkout process with shipping and billing information.

- Multiple payment options.

5. Order Management

- Order history and tracking for customers.

- Order processing and status updates for administrators.

6. Seller Dashboard

- Manage product listings, inventory, and orders.

- Sales analytics and reporting.

3.3 Non-functional Requirements

- Performance: Response time should be under 2 seconds for most actions.

- Scalability: The system should handle increasing user loads without significant performance degradation.

- Security: Implement secure authentication, data encryption, and protection against common web vulnerabilities (SQL injection, XSS).

- Reliability: Ensure system availability of at least 99.9% uptime.

- Usability: Intuitive UI/UX design for easy navigation and seamless shopping experience.

4. Appendices

4.1 Glossary

4.2 Use Case Diagrams