**Software Requirements Specification (SRS) for E-Commerce Platform**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to define the requirements for the development of the e-commerce platform.

**1.2 Scope**

The e-commerce platform will provide an online marketplace for users to browse, search, and purchase products. It will include features such as user registration, product catalog, shopping cart, payment processing, order management, and user account management.

**2. Functional Requirements**

**2.1 User Module**

2.1.1 User Registration

* The system shall allow users to create an account by providing necessary information.
* Users should be able to log in using their credentials.

2.1.2 User Profile

* Users shall be able to edit their profiles.
* The system should store user preferences and purchase history.

2.1.3 Authentication and Authorization

* Only authenticated users should have access to certain functionalities (e.g., placing orders, managing account settings).

**2.2 Product Module**

2.2.1 Product Catalog

* The system shall maintain a comprehensive catalog of products.
* Products should be categorized for easy navigation.

2.2.2 Product Search

* Users shall be able to search for products based on various criteria (e.g., name, category, price range).

2.2.3 Product Details

* Each product should have detailed information, including images, description, price, and availability.

**2.3 Shopping Cart Module**

2.3.1 Add to Cart

* Users shall be able to add products to their shopping cart.

2.3.2 View and Modify Cart

* Users should be able to view the contents of their shopping cart and modify quantities.

2.3.3 Remove from Cart

* Users shall have the option to remove products from their cart.

**2.4 Order Module**

2.4.1 Place Order

* Authenticated users shall be able to place orders.
* Users should receive an order confirmation with details.

2.4.2 Order History

* Users shall have access to their order history.

2.4.3 Order Status

* Users should be able to track the status of their orders.

**2.5 Payment Module**

2.5.1 Payment Gateway Integration

* The platform shall integrate with a secure and reliable payment gateway.
* Users should have multiple payment options (credit card, PayPal, etc.).

**2.6 Admin Module**

2.6.1 Product Management

* Admins shall be able to add, edit, or remove products from the catalog.

2.6.2 User Management

* Admins should have the ability to manage user accounts, including account suspension and deletion.

**3. Non-Functional Requirements**

**3.1 Performance**

* The system should support a minimum of 1000 concurrent users.
* Response time for critical operations should be under 3 seconds.

**3.2 Security**

* User passwords should be securely stored using encryption.
* Secure Sockets Layer (SSL) should be implemented for data transmission.

**3.3 Reliability**

* The platform should have a backup and recovery system to prevent data loss.
* The system should have high availability, with a target uptime of 99.9%.

**3.4 Usability**

* The user interface should be intuitive and user-friendly.
* Accessibility standards should be followed for users with disabilities.

**3.5 Scalability**

* The system architecture should be scalable to accommodate future growth in users and products.

**4. Constraints**

**4.1 Technology Constraints**

* The platform shall be developed using [specified technologies and frameworks].
* Compatibility with major web browsers (Chrome, Firefox, Safari, Edge) should be ensured.

**4.2 Legal and Compliance**

* The system should comply with relevant data protection and privacy laws.
* Payment processing must adhere to industry standards for security.

**5. Assumptions and Dependencies**

**5.1 Assumptions**

* Users have a reliable internet connection.
* Users will provide accurate information during registration.

**5.2 Dependencies**

* The project is dependent on third-party payment gateway APIs.
* The platform relies on external services for email notifications.

**6. Glossary**

* **SRS**: Software Requirements Specification
* **API**: Application Programming Interface
* **SSL**: Secure Sockets Layer