**LAB 2 - ONLINE SHOPPING SYSTEM**

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**AIM -** To write the Problem Statement and Software Requirements Specification (SRS) for Online Shopping System.

# **Problem Statement:**

**Software Requirement Specification(SRS)**

To design an effective and efficient Online Shopping System that meets the requirements of customers, it is necessary to ensure that the system has strong security measures, is easy to use and navigate, is highly reliable, has excellent performance, and is scalable to accommodate future growth and increased demand. The system should be developed within the allocated budget and schedule and should address any additional costs or changes to the project scope in a timely and effective manner.

**1 Introduction**

**1.1 Purpose of this Document**

The purpose of this document is to provide a detailed description of the requirements for the Online Shopping System. It outlines the goals and objectives of the system, the scope of the project, and the key features and functionality that the system will provide.

**1.2 Scope of this Document**

This document will serve as the basis for the development of the Online Shopping System. It will guide the development team and serve as a reference point throughout the development process.

**1.3 Overview**

The Online Shopping System is an e-commerce platform that allows users to browse and purchase products online. It will provide a user-friendly interface that allows customers to easily find and purchase products, as well as manage their accounts and track their orders.

**2 General Description**

**2.1 Product Perspective:**

The Online Shopping System will be an independent system that will interface with various payment gateways and shipping providers. It will also provide integration with social media platforms to enable customers to share their shopping experiences with their friends and followers.

**2.2 Product Functions:**

The system will allow users to browse products by category, search for specific products, add items to a shopping cart, and complete a checkout process. Customers will be able to manage their accounts, view their order history, and track their orders.

**2.3 User Characteristics:**

The Online Shopping System will be designed for a wide range of users, including individuals, small businesses, and large corporations. Users will require basic computer literacy skills to use the system.

**2.4 Constraints:**

The system must comply with all relevant laws and regulations related to e-commerce, including data privacy and security regulations.

**3 Functional Requirements**

**3.1 Product Features:**

* User Registration: Customers can create an account to save their personal information and order history.
* Product Search: Customers can search for products by name, category, or brand.
* Product Catalog: Customers can browse products by category and view product details, including images and pricing.
* Shopping Cart: Customers can add products to their cart and manage the quantities of each item.
* Checkout Process: Customers can complete the checkout process by entering their shipping and payment information.
* Order Tracking: Customers can track the status of their orders and view order history.

**4 Interface Requirements**

**4.1 User Interface:**

The user interface will be designed to be user-friendly and intuitive, with clear navigation and prominent calls to action.

**4.2 Hardware Interfaces:**

The system will require a computer or mobile device with an internet connection.

**4.3 Software Interfaces:**

The system will interface with various payment gateways and shipping providers to process payments and manage shipping.

**5 Performance Requirements**

**5.1 Response Time:**

The system should respond to user actions quickly, with a maximum response time of 2 seconds.

**5.2 Concurrent Users:**

The system should be able to handle a large number of concurrent users, with a minimum of 1000 users at any given time.

**5.3 Availability:**

The system should be available 24/7, with a maximum downtime of 1 hour per month.

**6 Design Constraints**

**6.1 Hardware Limitations:**

The system should be designed to run on standard hardware and should not require any specialized equipment.

**6.2 Security:**

The system must be designed to be secure, with measures in place to protect user data and prevent unauthorized access.

**6.3 Scalability:**

The system should be designed to be scalable, with the ability to handle increased traffic and user demand.

**7 Non-Functional Attributes**

**7.1 Security:**

The Online Shopping System should have strong security measures to protect customer data and prevent unauthorized access. The system should use encryption and secure protocols for all data transmission and storage.

**7.2 Usability:**

The Online Shopping System should be easy to use and navigate, with an intuitive user interface. The system should also provide clear and concise product descriptions and pricing information to help users make informed decisions.

**7.3 Reliability:**

The Online Shopping System should be highly reliable, with minimal downtime and maximum availability. The system should have backup and recovery mechanisms in place to ensure that data is not lost in case of a system failure.

**7.4 Performance:**

The Online Shopping System should be designed to handle a large number of users and transactions simultaneously. The system should also have fast response times and provide real-time updates on order status and inventory levels.

**7.5 Scalability:**

The Online Shopping System should be scalable to accommodate future growth and increased demand. The system should be able to handle a growing number of users and transactions without compromising performance or functionality.

**8 Preliminary schedule and budget:**

* Project duration: 6 months
* Team size: 5 developers
* Budget: $200,000 (Development costs: $150,000, Hardware expenses: $20,000, Software expenses: $30,000)
* Phases: Requirements gathering and analysis (2 weeks), Design and architecture (4 weeks), Development and testing (12 weeks), Deployment and maintenance (8 weeks)
* Additional costs or changes to the project scope will be communicated to stakeholders and addressed accordingly.