ONLINE SHOPPING SYSTEM

PROBLEM STATEMENT :

In today's digital era, online shopping has become a popular trend among consumers. Consumers prefer the convenience of shopping from anywhere, anytime, and accessing a wide range of products at their fingertips. However, many online shopping systems face several challenges in meeting the user expectations and providing a seamless shopping experience. Some of the common problems include a confusing and cluttered user interface, slow response times, inadequate product information, unreliable delivery, and poor customer support. These issues often lead to a frustrating user experience, which results in reduced user satisfaction, decreased sales, and lost business opportunities.

The current online shopping systems have several challenges that affect the user experience and business growth. The existing systems may have a confusing and cluttered user interface, leading to difficulties in finding products and navigating through the website. Inadequate product information, such as incomplete or inaccurate product descriptions, images, or pricing, can also contribute to user confusion and mistrust. Furthermore, the lack of real-time inventory updates can result in product unavailability, delayed delivery, or order cancellation.

The online shopping system may also suffer from unreliable delivery and poor customer support, which can lead to a lack of transparency and trust. The system may fail to provide accurate delivery dates, tracking information, or order status updates, causing frustration and dissatisfaction among users. These issues can result in abandoned shopping carts, reduced user satisfaction, and lost business opportunities.

Therefore, there is a need for an online shopping system that addresses these challenges and provides a user-friendly and efficient shopping experience that meets the user expectations and drives business growth. The system should have a clear and responsive user interface, accurate and comprehensive product information, real-time inventory updates, reliable delivery, and excellent customer support. By addressing these challenges, the system can provide a seamless and enjoyable shopping experience for users, resulting in increased user satisfaction, higher sales, and improved business performance

Software Requirement Specification(SRS)

1 Introduction :

1.1 **Purpose of this Document :** The purpose of this document is to define the requirements of the Online Shopping System. This document is intended for developers, testers, and project managers who will be involved in the development of the system.

1.2 **Scope of this document :** The Online Shopping System is a web-based platform that will allow customers to browse, purchase, and track products and services from various vendors online.

1.3 **Overview :** A software requirements specification (SRS) is a document that describes what the software will do and how it will be expected to perform. It also provides a comprehensive outline of the requirements for an Online Shopping System, and it serves as a guide for developers and stakeholders to ensure that the system meets the needs of its users.

2 General description :

The online shopping system is a web-based platform designed to allow customers to browse, purchase, and track products and services from various vendors online. The system requires users to register for an account, which they can use to log in and browse products by category or search by keyword. Users can view product details, including product description, price, and availability, and add products to their shopping cart. The system allows users to proceed to checkout to complete their purchase, and make payments using credit card, PayPal, or other accepted methods.

The system also allows users to track the status of their orders, including order confirmation, processing, shipping, and delivery, and view their order history, including past purchases and invoices. Vendors can manage their products, including adding, editing, and removing products from their inventory, and receive sales reports, including sales volume, revenue, and customer data.

3 Functional Requirements :

- **User Registration :** The system shall allow users to register for an account by providing their name, email address, and password.
- **Login :** The system shall allow users to log in to their account using their email address and password.
- **Browse Products :** The system shall allow users to browse products by category or search by keyword.
- **View Product Details :** The system shall allow users to view product details, including product description, price, and availability.
- **Add to Cart :** The system shall allow users to add products to their shopping cart.

- **Remove from Cart :** The system shall allow users to remove products from their shopping cart.
- **Checkout :** The system shall allow users to proceed to checkout to complete their purchase.
- **Payment :** The system shall allow users to make payments using credit card, PayPal, or other accepted methods.
- **Order Tracking :** The system shall allow users to track the status of their orders, including order confirmation, processing, shipping, and delivery.
- **Order History :** The system shall allow users to view their order history, including past purchases and invoices.
- **Vendor Management :** The system shall allow vendors to manage their products, including adding, editing, and removing products from their inventory.
- **Sales Reporting :** The system shall provide vendors with sales reports, including sales volume, revenue, and customer data.

4 Interface Requirements :

- **User Registration and Login Interface :** The system shall provide a user registration interface that allows users to create an account by providing their personal information, such as name, email, and address. The system shall also provide a login interface that allows users to log in using their email and password.
- **Product Browsing Interface :** The system shall provide a product browsing interface that allows users to browse products by category or search by keyword. The interface shall display product images, names, descriptions, prices, and availability.
- **Product Detail Interface :** The system shall provide a product detail interface that displays detailed information about a selected product, including images, description, features, price, and reviews.
- **Shopping Cart Interface :** The system shall provide a shopping cart interface that displays the items added to the cart, including quantity, price, and total. The interface shall also allow users to update, remove, or save items for later.
- **Checkout Interface :** The system shall provide a checkout interface that allows users to confirm their order, enter their shipping and billing information, and select a payment method. The interface shall also display the order summary, including itemized costs and taxes.
- **Order Tracking Interface :** The system shall provide an order tracking interface that allows users to track the status of their orders, including order confirmation, processing, shipping, and delivery. The interface shall also display the estimated delivery date and tracking information.
- **Vendor Management Interface :** The system shall provide a vendor management interface that allows vendors to manage their products, including adding, editing, and removing products from their inventory. The interface shall also display sales reports, including sales volume, revenue, and customer data.

- **System Administration Interface :** The system shall provide a system administration interface that allows system administrators to manage user accounts, configure system settings, and monitor system performance.

5 Performance Requirements :

- **Response Time:** The system should have a fast response time to ensure users can perform tasks quickly. The system should respond to user requests within a reasonable time frame, typically less than 3 seconds.
- **System Availability:** The system should be available to users at all times. The system should have a high uptime percentage, typically greater than 99%, to ensure users can access the system when needed.
- **Scalability:** The system should be scalable, allowing it to handle an increasing number of users and data without performance degradation. The system should be able to handle peak loads during high demand periods such as holidays and events.
- **Concurrent User Capacity:** The system should be able to handle a high number of concurrent users without performance degradation. The system should be able to handle at least 100 users simultaneously without affecting response time.
- **Data Processing Speed:** The system should have fast data processing speed to ensure users can perform tasks quickly. The system should be able to handle large data volumes without affecting response time.
- **Security:** The system should be secure to ensure data confidentiality, integrity, and availability. The system should use encryption to protect sensitive data, have access control mechanisms to restrict unauthorized access, and have a backup and recovery plan in case of data loss.
- **Integration**: The system should be able to integrate with other systems, such as payment gateways, property management systems, and customer relationship management systems. Integration ensures seamless data exchange and reduces manual data entry, leading to better system performance.

6 Design Constraints :

- **Legal and Regulatory Requirements:** The system must comply with all relevant legal and regulatory requirements related to passport issuance and management.
- **Security:** The system must be designed with strong security features to ensure that personal information and other sensitive data are protected against unauthorized access, theft, or misuse.

- **Scalability:** The system must be designed to accommodate future growth and expansion of the passport office, and should be able to handle a large volume of users and data.
- **User Interface:** The system must have an intuitive and easy-to-use interface that can be used by a wide range of users, including those with limited computer skills.
- **Performance:** The system must be able to perform quickly and efficiently to minimize waiting times for users.
- **Reliability:** The system must be designed with a high level of reliability, to ensure that it is available and functioning properly at all times.
- **Compatibility:** The system must be compatible with a wide range of hardware and software systems, including the operating system used by the passport office.
- **Maintainability:** The system must be designed with easy maintenance and support in mind, to minimize downtime and repair costs.
- **Accessibility:** The system must be designed to be accessible to all users, including those with disabilities.
- **Data Integrity:** The system must ensure the accuracy and integrity of data, and must be able to detect and prevent errors and inconsistencies.

7 Non-Functional Attributes :

- **Performance:** The system must be able to handle a large volume of transactions efficiently, with minimal delay or waiting times for users.
- **Reliability:** The system must be highly reliable, with a high level of availability and minimal downtime.
- **Security:** The system must be designed with strong security features to protect sensitive information and prevent unauthorized access.
- **Usability:** The system must be user-friendly and easy to navigate, with clear instructions and guidance for users.
- **Compatibility:** The system must be compatible with a wide range of hardware and software systems, and must be able to integrate with other systems as necessary.
- **Scalability:** The system must be able to handle future growth and expansion of the passport office, with the ability to add new features and functionality as needed.
- **Maintainability:** The system must be easy to maintain and support, with clear documentation and tools for troubleshooting and problem resolution.
- **Accessibility:** The system must be designed to be accessible to all users, including those with disabilities or special needs.
- **Performance under load:** The system must be able to handle a high volume of users and transactions without slowing down or crashing.
- **Data privacy:** The system must comply with all relevant data privacy regulations and protect personal information from unauthorized access or disclosure.

8 Preliminary Schedule and Budget :

Preliminary Schedule:

- Requirements Gathering: 2 weeks
- System Design: 4 weeks
- Development: 12 weeks
- Testing and Quality Assurance: 4 weeks
- Deployment: 2 weeks
- User Training and Documentation: 1 week
- Total Time: 25 weeks

Preliminary Budget:

- Salaries and Wages: ₹5,00,000
- Hardware and Software: ₹50,000
- Testing and Quality Assurance: ₹25,000
- User Training and Documentation: ₹10,000
- Contingency (10% of total budget): ₹58,500
- Total Budget: ₹6,43,500