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ONLINE SHOPPING SYSTEM

Problem Statement:

The online shopping system is a software system that allows customers to browse and purchase products online from the comfort of their own homes. This helps in eliminating the need for customers that have a busy schedule to be in store for purchasing and hence eliminating a scenario where customer does not get a particular product.

Software Requirement Specification(SRS) of CREDIT CARD PROCESSING

1. **Introduction**:

   Software requirement specification of an Online Shopping System having the following sub topics introduction, purpose of this document, scope of this document, overview and general description. This Software Requirement Specification (SRS) document outlines the requirements for the development of an Online Shopping System. This system will provide a centralized platform for customers to order and view products from the store thus eliminating the need of visiting the store.

2. **Purpose of this Document:**

   An SRS forms the basis of an organization's entire project. It sets out the framework that all the development teams will follow. It provides critical information to all the teams, including development, operations, quality assurance (QA) and maintenance, ensuring the teams are in agreement. The purpose of this document is to provide a detailed outline of the requirements for the Online Shopping System. This document will serve as a guide for the development team, ensuring that the final product meets the needs of both the business and the end-users. An SRS forms the basis of an organization's entire project. It sets out the framework that all the development teams will follow. It provides critical information to all the teams, including development, operations, quality assurance (QA) and maintenance, ensuring the teams are in agreement.

3. **Scope of this Document:**

   This document covers the functional and non-functional requirements for the Online Shopping System. It outlines the features, constraints, and limitations of the system. The system is mainly for easy management of all the processes and operations regarding banking and transactions. The system will consist of an online framework like customer sign in, otp generation, product viewing, automation of bill payments, customer service and live delivery tracking. Some of the other important features of the system are review system, feedback system , enquiry and help features, security and record maintenance.

4. **General Description:**

   The online shopping system is a web-based software application that enables customers to browse and purchase products online from various vendors. The system provides a convenient and user-friendly shopping experience for customers while enabling vendors to manage their product offerings, inventory, and orders efficiently.

5. **Overview:**

   An online shopping system is a platform that enables consumers to purchase products or services through the internet. It typically involves a website or mobile application that displays product information, pricing, and allows customers to place orders and make payments online. The system also includes backend processes such as inventory management, order processing, and shipping logistics. Customers can track their orders and receive updates on the status of their purchases. Online shopping systems provide convenience and accessibility for consumers to shop from anywhere at any time, while also offering businesses a cost-effective way to reach a broader audience and increase sales.

Functional Requirements of Online Shopping System:

The system should allow users to create accounts and register their personal details, including name, email address, and delivery address.

- **Product Catalog**: The system should provide a comprehensive catalog of products with relevant details, such as product name, description, images, price, and availability.
- **Search and Filtering**: The system should allow users to search for products using relevant keywords and filter the results based on various criteria such as price, category, brand, etc
- **Shopping Cart:** The system should provide a shopping cart functionality that enables users to add multiple products to the cart and adjust quantities as required.
- **Checkout:** The system should provide a secure checkout process that allows users to select payment methods and enter their payment details.

- **Order Tracking:** The system should enable users to track the status of their orders and receive notifications about the order progress.
- **Vendor Management:** The system should enable vendors to manage their products, prices, and inventory and view order details.
- **Shipping and Delivery Management:** The system should integrate with shipping and delivery providers to manage the shipping and delivery process.
- **Payment Gateway Integration**: The system should integrate with payment gateways to process payment transactions securely.
- **Reports and Analytics:** The system should provide vendors with reports and analytics about sales, revenue, and customer behavior to help them make informed decisions about product offerings and prici**ng.**
- **Customer Support**: The system should provide customer support functionalities such as chat, email, and phone support to address customer queries and issues. Overall, the online shopping system should provide a comprehensive set of features and functionalities that enable users to shop easily and vendors to manage their businesses effectively.

Non-Functional Attributes:

Security: The system should be secure and protect customer information and payment details.

Scalability: The system should be scalable to accommodate a large number of customers or users.

Reliability: The system should be reliable and available 24/7.

Usability: The system should be user-friendly and easy to use for applicants.

Performance: The system should perform well and respond quickly to user requests.

Interface Requirements of a Credit Card Processing System:

The following are some interface requirements of an online shopping system:

- **User Interface**: The system should have a user-friendly interface that enables users to browse products, search for items, add products to their cart, and complete purchases easily.
- **Responsive Design**: The system should have a responsive design that enables users to access the system using different devices such as desktops, laptops, tablets, and smartphones

- **Navigation and Menus:** The system should have clear and intuitive navigation and menus that enable users to find products and access different sections of the system easily.
- **Product Display**: The system should display products with high-quality images and detailed descriptions, including product name, price, availability, and reviews.
- **Shopping Cart and Checkout:** The system should provide a shopping cart that displays the list of products added by users, including product images, descriptions, and prices. The checkout process should be simple and secure, with clear instructions and payment options.
- **User Account Management**: The system should provide users with an easy way to create and manage their accounts, view their order history, and update their personal details.
- **Vendor Dashboard:** The system should provide vendors with a dashboard that displays their product offerings, inventory levels, and order details, with easy-to-use interfaces for managing products, prices, and inventory.
- **Reports and Analytics**: The system should provide vendors with reports and analytics about sales, revenue, and customer behavior, with clear visualizations and easy-to-use interfaces.
- **Help and Support:** The system should provide users with easy access to help and support functionalities such as FAQs, chat, email, and phone support.

Overall, the interface of the online shopping system should be designed with user experience and usability in mind, with clear and intuitive navigation, high-quality product displays, and simple and secure checkout processes. The system should provide easy-to-use interfaces for managing user accounts, vendors, and reports, and help and support functionalities that enable users to resolve any issues they encounter.

Performance Requirements of a Credit Card Processing System

The performance requirements for an online shopping system may vary depending on the specific needs and goals of the business, but some common performance requirements include

- **Response time**: The system should be able to respond quickly to user requests, with minimal delays or downtime. Users expect a fast and seamless shopping experience, so response time is a critical performance requirement.

- **Scalability:** The system should be able to handle a growing number of users and transactions without sacrificing performance. As the business grows, the system should be able to handle increased traffic and demand.
- **Reliability:** The system should be reliable and available 24/7, with minimal downtime or errors. This is important for ensuring a positive user experience and avoiding lost sales or customer frustration.
- **Security:** The system should be secure and protect sensitive user information, including payment details, personal information, and login credentials.
- **Usability:** The system should be easy to use and navigate, with clear and intuitive interfaces that allow users to quickly find what they are looking for and complete purchases with ease.
- **Compatibility:** The system should be compatible with a wide range of devices and browsers, to ensure that users can access the system from any device or platform.
- **Load testing:** The system should be tested under heavy loads to ensure that it can handle high levels of traffic and transactions without slowing down or crashing. Load testing can help identify performance bottlenecks and optimize the system for maximum performance.

Overall, the performance requirements for an online shopping system should prioritize speed, reliability, security, and usability to ensure a positive user experience and maximize sales and revenue for the business.

Design Constraints:

- Programming language to be used is python/java
- Storage of the data will be done on sql/firebase/mongodb.
- Internet availability is a must.
- Minimum Processor 1 GHz, 512 MB RAM and 850 MB free HDD for 32-bit or 2 GB for 64-bit.
- Windows 10 and above, Windows server 2003, Windows server 2008, Windows server 2012, Windows server 2016.
- Internet connection of 4 MBPS or higher.

Preliminary Schedule and Budget:

The project is scheduled to be completed within six months of the start date. The budget is allotted for the man-hours and the different softwares and databases being used.

- Gathering requirements : $10000
- Database system - $40000
- Authentication Requirements : $50000
- Software testing and development - $70000