

Department of Software Engineering

**FAST- National University of Computer and Emerging
Sciences**



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1. INTRODUCTION

1.1: Purpose:

This document aims to gather and assess the requirements and desires of stakeholders and users for the development of an online shopping system. It serves to define the system's high-level requirements, focusing on user needs and stakeholder demands. Additionally, it elucidates the significance of addressing these needs and why they are pivotal for the success of the system. Detailed stakeholder needs and system features will be outlined, along with position statement, business case, and stakeholders description.

1.2: Scope:

This vision document pertains to the development of an Online Shopping System (OSS). The system will utilize a Client-Server Architecture to interface with the Management database, facilitating tasks such as product browsing, ordering, and payment processing. Customers will have the ability to browse products, select items for purchase, and complete transactions using various payment methods, including credit/debit cards, digital wallets, and online banking. Additionally, the system will allow customers to cancel orders in case of emergencies and seek assistance when needed. Users will be provided with a user-friendly environment to enhance their shopping experience, with access to local payment methods for seamless and efficient transactions worldwide.

1.3 Definition, Acronyms, Abbreviations:

- OSS: Online Shopping System
- API: Application Programming Interface
- SSL: Secure Sockets Layer

1.4 References:

Amazon.com

eBay.com

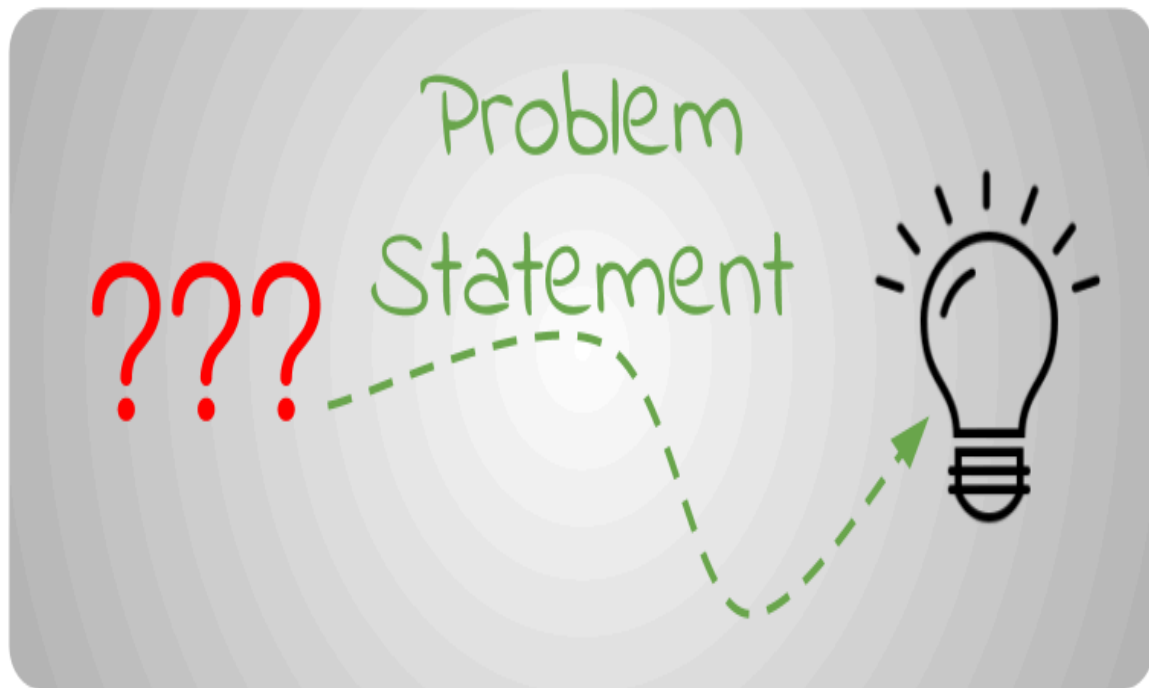
Shopify.com

2. POSITIONING

2.1: Business Opportunities:

The increasing importance of digitalization, particularly in light of challenges posed by COVID-19, underscores the need to streamline processes and enhance user experience. By implementing an Online Shopping System, opportunities arise to minimize human errors in tasks such as product selection, ordering, and payment processing. This system offers customers the convenience of browsing and purchasing products from the comfort of their homes, eliminating the need to visit physical stores.

2.2: Problem Statement:



The problem of: In the online shopping system, the process of browsing products, placing orders, and completing transactions is often time-consuming and inefficient, leading to user frustration.

Affects: This problem impacts various stakeholders, including the company operating the online shopping system, users of the platform, and agencies that provide financial support for the system's operation.

The result of which: Stakeholders, particularly users, experience frustration due to difficulties in accessing and utilizing the online shopping system for their needs. This diminishes user trust and confidence in the platform, leading to potential loss of revenue and interest from financial backers.

Benefits of:

1. The solution addresses issues related to product browsing, ordering, payment processing, and order management, enhancing overall system efficiency.

2. It offers a user-friendly interface that simplifies the shopping experience for users, improving satisfaction and usability.
3. The system's ability to receive constant updates ensures it remains relevant and competitive in the market.
4. Users benefit from the convenience of shopping from home, saving time and effort compared to traditional brick-and-mortar stores.
5. The system represents an upgraded and modernized version of existing online shopping platforms, offering improved features and functionality.

3- PRODUCT FEATURES

3.1: Start Software:

1. The online shopping system will operate 24/7, with an automated refresh scheduled every morning at 6 AM.
2. During the refresh, the system will generate and send a report of total sales and profits to the admin domain.

3.2: Manage Software:

1. The system will efficiently manage data files and the database, ensuring seamless performance.
2. Automated data reports and profit sales summaries will be generated and sent to the admin domain every morning, enhancing managerial oversight and decision-making.

3.3: View Status:

1. Administrators and system heads will have access to real-time status updates of the online shopping system.
2. They can monitor system performance, including customer load and any potential issues, and take immediate action to address ambiguities or concerns.

The following features are related to the ADMIN for the online shopping system:

3.4: ADMIN

- 3.4.1:** Add a new product category
- 3.4.2:** Add a new product to inventory
- 3.4.3:** Remove a product category
- 3.4.4:** Remove a product from inventory
- 3.4.5:** Add a customer to the blacklist for an offense
- 3.4.6:** Add a customer to the database
- 3.4.7:** Modify the price of products in different categories
- 3.4.8:** Add a new brand of products
- 3.4.9:** Add special offers on specific events like Black Friday
- 3.4.10:** Check the inventory levels of each product
- 3.4.11:** Change the supplier of a product

- 3.4.12:** Check the delivery schedule of each courier
 - 3.4.13:** Assign a different courier for delivery
 - 3.4.14:** Check the status of customer support agents
 - 3.4.15:** Add a new customer support agent for handling inquiries
 - 3.4.16:** Check the total sales anytime
 - 3.4.17:** Check the availability of a specific product
 - 3.4.18:** Add the product back to inventory after cancellation
 - 3.4.19:** Confirm the order by calling the customer 15 minutes prior to delivery
 - 3.4.20:** Replace the product with a different variant
 - 3.4.21:** Check the profit margin anytime
 - 3.4.22:** Cancel order (if the customer does not respond)
 - 3.4.23:** Track the delivery status of orders
 - 3.4.24:** Check the quality report of products for customer satisfaction
 - 3.4.25:** Communicate with different suppliers for clarifications and details.
-

3.5: CUSTOMER:

- 3.5.1:** Can view the updated products available for purchase.
- 3.5.2:** Can sign in to access previous order history.
- 3.5.3:** Can request to sign up for faster checkout in the future.

3.5.4: Can view the pickup points for delivery.

3.5.5: Can view the types of products available (Standard, Premium, Exclusive, etc.).

3.5.6: Can view the 3D layout of available products in the respective category.

3.5.7: Can pre-order products for future delivery.

3.5.8: Can check previously booked orders.

3.5.9: Can make urgent payments by scanning the QR code of a local payment API.

3.5.10: Can contact customer support for order confirmation.

3.5.11: Can reserve special delivery services for specific orders.

3.5.12: Can make online payments using local bank and other easy payment methods.

3.5.13: Can receive a confirmation message upon successful reservation.

3.5.14: Can create shortcuts for frequently purchased items.

3.5.15: Can pay the bill at the terminal before receiving the products.

3.5.16: Can cancel orders in case of emergencies.

3.5.17: Can review orders and delivery experiences.

4.1: Product Overview:

The online shopping system is designed to provide convenience to users tired of traditional shopping methods. With this system, users can browse and purchase

products from the comfort of their own home, eliminating the need to visit physical stores. The main users of the platform are administrators and customers. Administrators have the authority to manage product listings, process orders, and handle customer inquiries. Customers, on the other hand, can browse products, make purchases, and track their orders through the platform. This system aims to streamline the shopping experience, saving users time, energy, and effort.

4.2: Dependencies and Assumptions:

The online shopping system is developed using a component-based approach in Software Engineering. Initially, requirements are gathered, followed by the creation of project design using various UML diagrams to ensure clarity and alignment with the requirements. Once the design is finalized, implementation is carried out in Java for a Java EE application, utilizing appropriate data structures such as Linked Lists, ArrayLists, and trees for efficient data management. Subsequently, the project undergoes testing to ensure functionality meets the needs and expectations of stakeholders. Upon successful completion of software processes, the project concludes its lifecycle.

5- CONSTRAINS:

Security measures for the online shopping system include authentication, access control, data integrity, and data privacy. Authentication for customers and administrators is achieved through username and password verification. Administrators and system control units have access to monitor and manage all activities within the system. Reservation and cancellation processes must be

encrypted to ensure privacy. The system is designed to be user-friendly, particularly in terms of privacy and reservation functionalities. Additionally, the system aims to provide quick responses to user queries, with an expected response time of 2-3 seconds to effectively address user needs.

6- COST AND PRICING:

| <u>Items</u> | <u>No of Item</u> | <u>Cost</u> | <u>Total</u> |
|---------------------|--------------------------|--------------------|---------------------|
| Developer | 5 | 60,000 | 300,000 |
| Marketing | 3 | 24,000 | 72,000 |
| Other | 1 | 10,000 | 10,000 |

GRAND TOTAL COST: 382,000 APPROXIMATELY

7- LICENSING AND INSTALLATION:

Installation of the online shopping system should be performed by an expert due to the complexity of setup procedures and potential technical issues. Only certified and licensed individuals are authorized to install the system. Legal regulations

apply to the system in accordance with government rules and regulations. Any unauthorized attempt to access or manipulate system data, including hacking, is strictly prohibited and will be subject to legal consequences as per the applicable laws.