

Online Ecommerce

Software Requirements Specification

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1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for the development of an online shopping platform, providing a detailed description of the system's functionalities, features, and constraints.

1.2 Scope

The online shopping system will enable users to browse, search, and purchase products online. The system will include user registration, product management, shopping cart functionality, secure payment processing, and order management.

1.3 Definitions, Acronyms, and Abbreviations

User: Any individual accessing or interacting with the online shopping website, including guests, registered customers, and administrators.

Guest User: An unregistered visitor who can browse the product catalog but has limited access to certain features.

Registered Customer: A user who has created an account on the online shopping website, allowing them to make purchases, track orders, and manage their profile.

Administrator: A user with elevated privileges responsible for managing the backend, including product listings, user accounts, and system configurations.

Product Catalog: The digital representation of all available products on the online shopping website, organized by categories and with detailed information for each item.

Shopping Cart: A virtual container that holds selected items for purchase by a user during a browsing session.

Checkout: The process by which a user completes a purchase, providing shipping information, selecting a payment method, and confirming the order.

Order Confirmation: A notification sent to the user confirming the successful completion of a purchase, including details such as order number and estimated delivery date.

Order History: A record of a registered customer's past orders, providing information on purchased items, order status, and tracking details.

Acronyms and Abbreviations:

SRS: Software Requirements Specification

UI: User Interface

GDPR: General Data Protection Regulation

PCI DSS: Payment Card Industry Data Security Standard

API: Application Programming Interface

1.4 References

1. Ecommerce Website (Daraz)

<https://www.daraz.com.bd/>

2. Ecommerce Website (eBay)

<https://www.ebay.com>

3. Ecommerce Website (Amazon)

<https://www.amazon.com/>

1.5 Overview

The SRS is structured to present a detailed exploration of the online shopping website's features, functionalities, and technical specifications

The SRS is organized in a logical and sequential manner to facilitate easy navigation and comprehension. It begins with an Introduction that provides an overview of the purpose, scope, and objectives of the online shopping website. Following the Introduction, the document is divided into several key sections, each focusing on a distinct aspect of the system

2. General Description

2.1 Product Perspective

The purpose of the online shopping website is to create a user-friendly and secure e-commerce platform that allows customers to browse, search, and purchase products online, like other ecommerce website such as Daraz, Amazon, eBay, Walmart, Alibaba.

2.2 Product Functions

The online shopping website will include the following features to enhance user experience:

Responsive Design: Ensure the website is accessible and user-friendly across various devices and screen sizes.

Personalization: Provide personalized recommendations and product suggestions based on user preferences and browsing history.

2.3 User Characteristics

Individual that will be accessing or interacting with the online shopping website are guests, registered customers, and administrators.

2.4 General Constraints

The development of the online shopping website is subject to the following constraints:

Regulatory Compliance: Adhere to data protection laws (e.g., GDPR) and industry standards for online transactions (e.g., PCI DSS).

Security Requirements: Implement robust security measures to protect user data and payment information.

2.5 Assumptions and Dependencies

The successful development and operation of the online shopping website depend on the following assumptions and dependencies:

Internet Connectivity: Users must have a stable internet connection to access and use the platform.

Third-Party Services: Integration with external services such as payment gateways and shipping providers is assumed to be available and reliable.

3. Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

The home page shall feature a clean and intuitive design. It shall include prominently displayed sections for featured products, promotions, and

A search bar and login/registration links shall be easily accessible.

3.1.2 Hardware Interfaces

The system shall be hosted on a reliable server .The server hardware shall be capable of handling anticipated traffic.

A stable and high-speed internet connection shall be maintained.

3.1.3 Software Interfaces

The system shall use a relational database (e.g., MySQL) to store product information, user data, and order details.

3.1.4 Communications Interfaces

The frontend shall communicate with the backend through HTTP/HTTPS protocols.

The system shall send confirmation emails for user registration and order placement. Users shall receive notifications and updates via email.

3.2 Functional Requirements

3.2.1 User Registration

The system shall allow new users to create an account by providing a valid email address and creating a password.

3.2.2 Login and Authentication

Registered users shall be able to log in securely using their email and password.

3.2.3 Product Catalog

Products shall be dynamically categorized based on attributes such as type, brand, and price.

3.2.4 Search Functionality

Users shall be able to search for products using keywords.

3.2.5 Shopping Cart

Users shall be able to add and remove items from their shopping carts.

3.2.6 Checkout and Ordering

The system shall implement a secure and user-friendly checkout process

3.2.7 Payment Options

The system shall support multiple payment options, including credit cards and digital wallets

3.5 Non-Functional Requirements

3.5.1 Performance

Critical pages shall load in less than 3 seconds.

3.5.2 Security

User passwords and sensitive data shall be encrypted during transmission using HTTPS.

3.5.3 User Authentication

User authentication shall be secure, and failed login attempts shall trigger temporary account lockouts.

4. Software Requirement:

4.1 Frontend :

Web Technologies: HTML5, CSS3, JavaScript

Frontend Framework: frontend framework such as React.

Browser Compatibility: Ensure compatibility with popular web browsers: Chrome, Firefox, Safari, Edge.

4.2 Backend :

Database: database (e.g., MySQL) or a NoSQL database (e.g., MongoDB) based on the system's requirements.

Server-Side Scripting: Specify server-side scripting languages (e.g., Python, Node.js) for handling server logic.

5. Hardware Requirements:

5.1 Server:

Hosting Service: A reliable hosting service (e.g., AWS, Azure, Google Cloud) based on scalability requirements.

5.2 Network:

Internet Connection: Ensure a stable and high-speed internet connection for the server to handle user requests efficiently.

5.3 Client Devices:

Minimum System Requirements: The minimum hardware and software requirements for client devices to access the website effectively.