E-Commerce Website

Software Requirements Specification

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5. GITHUB LINK = HTTPS://GITHUB.COM/KAPILLAMBA08/E-COMMERCE-WEBSITE

6. LIVE LINK = https://github.com/bishnoiansh/e-commerrece

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1. Introduction

Welcome to the Software Requirements Specification (SRS) for the development of an innovative E-Commerce website. In today's digital era, E-Commerce has become an integral part of everyday life, revolutionizing the way businesses operate and consumers shop. This document serves as a foundational blueprint that outlines the detailed requirements and functionalities of the proposed E-Commerce platform.

1.1 Purpose

The primary objective of this SRS is to define the scope, features, and technical specifications of the E-Commerce website project. It aims to establish a clear understanding among stakeholders, including clients, developers, designers, and testers, regarding the desired outcome of the development process. By documenting the requirements comprehensively, this SRS ensures alignment between the client's vision and the final product delivered by the development team.

1.2 Scope

The scope of this project encompasses the creation of a dynamic and user-centric E-Commerce website that offers a seamless shopping experience for customers and efficient management tools for administrators. The website will feature a wide range of products, secure payment gateways, personalized user accounts, order management systems, and responsive design to cater to the needs of modern online shoppers. Additionally, the platform will support scalability and customization to accommodate future enhancements and expansions.

1.3 Definitions, Acronyms, and Abbreviations

1. ***E-Commerce: Electronic Commerce, the buying and selling of goods or services over the internet.***
2. ***SRS: Software Requirements Specification, a document that describes the software system's requirements and functionalities.***
3. ***UI: User Interface, the visual elements and layout of a software application that users interact with.***
4. ***UX: User Experience, the overall experience and satisfaction a user has when interacting with a product or service.***
5. ***API: Application Programming Interface, a set of rules and protocols for building and interacting with software applications.***
6. ***SSL: Secure Sockets Layer, a protocol that ensures secure communication over a computer network, commonly used for encrypting data in online transactions.***
7. ***CMS: Content Management System, a software application used to create, manage, and modify digital content.***
8. ***SKU: Stock Keeping Unit, a unique identifier assigned to each distinct product in a company's inventory.***
9. ***CRM: Customer Relationship Management, a strategy for managing a company's interactions with current and potential customers.***
10. ***PCI DSS: Payment Card Industry Data Security Standard, a set of security standards designed to ensure that all companies that accept, process, store, or transmit credit card information maintain a secure environment.***
11. ***URL: Uniform Resource Locator, a web address that specifies the location of a resource on the internet.***
12. ***HTTP: Hypertext Transfer Protocol, the protocol used for transmitting data on the World Wide Web.***
13. ***HTTPS: Hypertext Transfer Protocol Secure, an extension of HTTP that provides secure communication over a computer network.***

1.4 References

Certainly! Here's a section for "References" following the guidelines you've provided:

1.4 References

1. ***Market Research Report on E-Commerce Trends***
    - ***Title: "E-Commerce Trends: Insights and Analysis"***
    - ***Date: March 11, 2024***
    - ***Publishing Organization: Market Research Institute***
    - ***Source: Available upon request from the Market Research Institute website.***
2. ***Client Requirements Document***
    - ***Title: "ClientX E-Commerce Project Requirements"***
    - ***Date: March 15, 2024***
    - ***Publishing Organization: ClientX Inc.***
    - ***Source: Provided by ClientX Inc. upon request.***
3. ***Competitor Analysis Report***
    - ***Title: "E-Commerce Competitor Analysis: Industry Leaders and Strategies"***
    - ***Date: March 25, 2024***
    - ***Publishing Organization: Market Analysis Consultants***
    - ***Source: Available upon request from Market Analysis Consultants.***
4. ***Regulatory Compliance Standards***

- ***Title: "PCI DSS Compliance Standards"***
- ***Date: April 1, 2023***
- ***Publishing Organization: Payment Card Industry Security Standards Council***
- ***Source: Accessible on the Payment Card Industry Security Standards Council website: www.pcisecuritystandards.org***

5. ***Technical Specifications from External API Documentation***

- ***Title: "E-Commerce API Documentation"***
- ***Date: Updated quarterly***
- ***Publishing Organization: E-Commerce API Provider***
- ***Source: Accessible to registered users on the E-Commerce API Provider's developer portal.***

6. ***Design Mockups and Wireframes***

- ***Title: "E-Commerce Website Design Mockups"***
- ***Date: April 05, 2024***
- ***Publishing Organization: Design Agency LLC***
- ***Source: Provided by Design Agency LLC in digital format.***

1.5 Overview

This subsection provides a brief overview of the contents of the Software Requirements Specification (SRS) and explains how the document is organized.

1. ***Contents of the SRS:***

- ***The SRS contains a detailed description of the requirements and functionalities for the development of the E-Commerce website project. It outlines the scope, features, and***

technical specifications necessary for the successful implementation of the platform.

- ***Additionally, the document includes information on the system's functional requirements, non-functional requirements, user interfaces, data management, security considerations, and testing procedures.***

2. Organization of the SRS:

- ***The SRS is organized into several sections, each focusing on a specific aspect of the E-Commerce website project.***
- ***The document begins with an introduction, providing background information, objectives, and stakeholders involved in the project.***
- ***Following the introduction, the SRS includes sections such as "Scope," "Requirements," "User Interfaces," "Data Management," "Security Considerations," "Testing Procedures," and "Appendices."***
- ***Each section is further divided into subsections to provide a structured and comprehensive overview of the requirements and functionalities.***
- ***Additionally, references to external documents, standards, and guidelines are listed in a dedicated "References" section for further clarification and context.***

2. General Description

The E-Commerce website operates within the context of a dynamic and competitive online marketplace. It serves as a digital storefront for vendors to showcase their products and reach a global audience of potential customers. Additionally, the platform interfaces with various

external systems and services, including payment processors, shipping carriers, and third-party APIs, to facilitate seamless transactions and enhance functionality.

2.1 Product Perspective

The E-Commerce website interfaces with several external systems to facilitate its functionality:

- ***Payment Gateways: Integration with payment gateways such as PayPal, Stripe, or Square enables secure processing of online transactions, supporting various payment methods and currencies.***
- ***Shipping and Logistics Providers: Integration with shipping carriers like UPS, FedEx, or DHL enables real-time calculation of shipping costs, tracking of orders, and streamlined fulfillment processes.***
- ***Inventory Management Systems: Integration with inventory management systems allows for accurate tracking of product availability, stock levels, and automated updates across multiple sales channels.***
- ***Customer Relationship Management (CRM) Systems: Integration with CRM systems like Salesforce or HubSpot enables centralized management of customer data, communication tracking, and personalized marketing initiatives.***

2.2 Product Functions

This section of the SRS outlines the core functions and features that the E-Commerce website will perform to meet the needs of its users. These functions serve as the primary capabilities of the software and form the basis for its design, development, and testing.

1. ***User Account Management:***
    - ***Allow users to create and manage their accounts.***
    - ***Enable users to update personal information, including shipping addresses and payment methods.***
    - ***Provide options for password reset and account recovery.***
2. ***Product Browsing and Search:***
    - ***Display a catalog of products with images, descriptions, and pricing.***
    - ***Implement search functionality to allow users to find products by keyword, category, or filter criteria.***
    - ***Enable sorting and sorting options for refining search results.***
3. ***Shopping Cart and Checkout:***

- ***Allow users to add products to their shopping cart.***
- ***Enable users to view and edit the contents of their cart.***
- ***Provide a secure checkout process with multiple payment options.***
- ***Calculate shipping costs and taxes based on user location and selected items.***
- ***Generate order confirmation and provide tracking information for shipped orders.***

4. ***User Reviews and Ratings:***
    - ***Allow users to leave reviews and ratings for products.***
    - ***Display average ratings and aggregate reviews on product pages.***
    - ***Implement moderation features to manage and moderate user-generated content.***
5. ***Vendor Dashboard:***
    - ***Provide vendors with a dashboard interface to manage their product listings.***
    - ***Allow vendors to add, edit, and remove products from their inventory.***
    - ***Enable vendors to view order details, manage shipments, and communicate with customers.***
6. ***Administrative Tools:***
    - ***Provide administrators with tools for managing users, vendors, and products.***
    - ***Allow administrators to view sales reports, track inventory levels, and analyze website traffic.***
    - ***Implement content management capabilities for updating website content, banners, and promotions.***
7. ***Order Management:***
    - ***Enable administrators to view and process orders, including order status updates and order fulfillment.***
    - ***Implement notifications and alerts for new orders, low stock levels, and order status changes.***
8. ***Customer Support:***

- ***Provide users with access to customer support options, including FAQs, live chat, and email support.***
- ***Implement a ticketing system for tracking and resolving customer inquiries and issues.***

9. ***Security and Compliance:***
    - ***Implement security measures to protect user data, including encryption, secure authentication, and regular security audits.***
    - ***Ensure compliance with relevant regulations and standards, such as PCI DSS for payment processing and GDPR for data protection.***
10. ***Analytics and Reporting:***
    - ***Integrate analytics tools to track website performance, user behavior, and sales metrics.***
    - ***Provide reporting capabilities for generating custom reports and insights for stakeholders.***

2.3 User Characteristics

This section of the SRS describes the general characteristics of the eventual users of the E-Commerce website. Understanding the demographics, preferences, and behaviors of users helps to shape the specific requirements and design decisions of the product.

1. ***Shoppers:***
    - ***Demographics: Shoppers can vary widely in demographics, including age, gender, location, and socioeconomic status. The website should cater to a diverse audience to accommodate different preferences and needs.***
    - ***Preferences: Shoppers may have varying preferences when it comes to product categories, brands, pricing, and shipping options. The website should offer a wide selection of products and customizable features to meet different preferences.***
    - ***Behaviors: Shoppers exhibit different behaviors, such as browsing, searching, comparing products, and making purchases. The website should provide intuitive navigation, search functionality, and personalized recommendations to enhance the shopping experience and encourage conversion.***
2. ***Vendors:***
    - ***Business Types: Vendors may include individuals, small businesses, or larger enterprises selling products through the platform. The website should***

accommodate different business types and provide tools for managing product listings, orders, and customer interactions.

- ***Technical Skills: Vendors may have varying levels of technical skills and familiarity with E-Commerce platforms. The website should offer user-friendly interfaces and comprehensive documentation to support vendors in managing their accounts and listings.***

- ***Sales Goals: Vendors have different sales goals and strategies, such as maximizing revenue, expanding market reach, or liquidating inventory. The website should provide analytics and reporting tools to help vendors track sales performance and optimize their strategies.***

3. ***Administrators:***

    - ***Roles and Responsibilities: Administrators oversee the overall operation of the E-Commerce website, including managing users, vendors, products, and orders. The website should provide administrative tools and permissions to support various roles and responsibilities within the organization.***

    - ***Technical Expertise: Administrators may have technical expertise in website management, database administration, or E-Commerce operations. The website should offer advanced features and customization options to accommodate the needs of experienced administrators.***

    - ***Decision-Making: Administrators make strategic decisions regarding website design, marketing initiatives, pricing strategies, and inventory management. The website should provide data-driven insights and reporting capabilities to support informed decision-making.***

4. ***Customer Support Representatives:***

    - ***Communication Skills: Customer support representatives interact directly with users to address inquiries, resolve issues, and provide assistance. The website should offer communication channels such as live chat, email support, and phone support to facilitate effective communication.***

    - ***Product Knowledge: Customer support representatives should have a thorough understanding of the products, policies, and procedures of the E-Commerce***

website. The website should provide comprehensive documentation and training materials to support ongoing learning and development.

2.4 General Constraints

This section of the SRS outlines general constraints that will limit the developer's options for designing the E-Commerce website system. These constraints encompass various factors that may impact the development process and influence design decisions.

1. ***Technological Constraints:***
    - ***Technology Stack: The website must be developed using specific programming languages, frameworks, and libraries chosen by the development team or dictated by organizational standards.***
    - ***Compatibility: The website must be compatible with a range of web browsers, operating systems, and devices to ensure optimal performance and accessibility for users.***
    - ***Integration Requirements: The website must integrate with third-party systems, APIs, or services for functionalities such as payment processing, shipping, and analytics tracking.***
2. ***Regulatory and Compliance Constraints:***
    - ***Legal Requirements: The website must comply with relevant laws and regulations, including data protection laws (e.g., GDPR), consumer protection laws, and industry-specific regulations (e.g., PCI DSS for payment processing).***
    - ***Accessibility Standards: The website must adhere to accessibility standards (e.g., WCAG) to ensure equal access and usability for users with disabilities.***
    - ***Security Standards: The website must implement security measures to protect user data, including encryption, secure authentication, and regular security audits.***
3. ***Resource Constraints:***
    - ***Budget: The development of the website must adhere to budgetary constraints defined by the client or project stakeholders.***
    - ***Timeline: The project must be completed within a specified timeframe, taking into account deadlines, milestones, and project dependencies.***
    - ***Human Resources: The development team may have limitations in terms of size, expertise, and availability, which may impact the implementation and delivery of the website.***

4. ***Operational Constraints:***

    - ***Scalability: The website must be designed to handle increasing user traffic and data volume over time, ensuring scalability and performance under load.***

    - ***Maintenance and Support: The website must be maintainable and supportable over its lifecycle, with provisions for updates, bug fixes, and ongoing technical support.***

    - ***Availability and Reliability: The website must be available and reliable, with minimal downtime and robust error handling mechanisms to ensure uninterrupted service for users.***

5. ***User Experience Constraints:***

    - ***Usability: The website must provide a seamless and intuitive user experience, with clear navigation, responsive design, and optimized performance.***

    - ***Localization: The website may need to support multiple languages, currencies, and cultural preferences to cater to a global audience effectively.***

    - ***Brand Guidelines: The website design and branding must align with the client's brand guidelines and visual identity standards.***

2.5 Assumptions and Dependencies

1. ***Assumptions:***

    - ***Availability of Resources: It is assumed that adequate resources, including hardware, software, and human resources, will be available throughout the***

development lifecycle to support the implementation of the E-Commerce website.

- ***Stakeholder Involvement: It is assumed that key stakeholders, including clients, development teams, vendors, and end-users, will actively participate in the requirements gathering, design, and testing phases of the project.***
- ***Regulatory Compliance: It is assumed that the E-Commerce website will comply with relevant laws and regulations, including data protection, consumer protection, and security standards, as outlined in applicable jurisdictions.***
- ***Third-Party Integrations: It is assumed that third-party systems, APIs, or services required for the functionality of the E-Commerce website will be available and accessible for integration as planned.***
- ***Scalability Requirements: It is assumed that the E-Commerce website will be designed with scalability in mind to accommodate future growth and increasing user demand.***

2. Dependencies:

- ***External Systems and Services: The functionality of the E-Commerce website depends on the availability and reliability of external systems and services, such as payment gateways, shipping carriers, and inventory management systems.***
- ***Technological Platforms: The choice of technological platforms, including programming languages, frameworks, and hosting environments, may impact the implementation and performance of the E-Commerce website.***
- ***Client Preferences and Feedback: The requirements and design decisions for the E-Commerce website may be influenced by client preferences, feedback, and changes in project scope throughout the development process.***
- ***Market Trends and Competition: Changes in market trends, consumer behavior, and competitive landscape may necessitate adjustments to the***

features, functionalities, and marketing strategies of the E-Commerce website to remain competitive and relevant.

3. Specific Requirements

3.1 User Account Management

3.1.1 Requirement ID: 3.1.1

Description: The system shall allow users to register for a new account by providing their email address, username, and password.

Priority: High

Verification: Verify that users can successfully register for a new account and receive a confirmation email.

3.1.2 Requirement ID: 3.1.2

Description: The system shall allow users to log in to their account using their email address and password.

Priority: High

Verification: Verify that users can successfully log in to their account and access their account dashboard.

3.2 Product Browsing and Search

3.2.1 Requirement ID: 3.2.1

Description: The system shall display a catalog of products with images, titles, descriptions, and prices.

Priority: High

Verification: Verify that the product catalog is displayed correctly with all relevant information.

3.2.2 Requirement ID: 3.2.2

Description: The system shall provide a search functionality that allows users to search for products by keyword, category, or filter criteria.

Priority: High

Verification: Verify that users can search for products using various search criteria and receive accurate search results.

3.3 Shopping Cart and Checkout

3.3.1 Requirement ID: 3.3.1

Description: The system shall allow users to add products to their shopping cart.

Priority: High

Verification: Verify that users can add products to their shopping cart and view the updated cart contents.

3.3.2 Requirement ID: 3.3.2

Description: The system shall provide a secure checkout process with multiple payment options, including credit/debit card, PayPal, and Apple Pay.

Priority: High

Verification: Verify that users can complete the checkout process successfully using different payment methods.

3.4 User Reviews and Ratings

3.4.1 Requirement ID: 3.4.1

Description: The system shall allow users to leave reviews and ratings for products.

Priority: Medium

Verification: Verify that users can submit reviews and ratings for products and that they are displayed correctly on product pages.

3.4.2 Requirement ID: 3.4.2

Description: The system shall provide moderation tools for administrators to manage and approve user-generated reviews.

Priority: Medium

Verification: Verify that administrators can moderate user reviews and approve them for display on product pages.

3.1 External Interface Requirements

3.1.1 User Interfaces

The user interfaces define how users interact with the E-Commerce website. They include both front-end interfaces visible to users and back-end interfaces used by administrators and vendors.

3.1.2 Hardware Interfaces

The hardware interfaces specify the hardware devices that the E-Commerce website interacts with, such as servers, databases, and networking equipment.

3.1.3 Software Interfaces

The software interfaces outline the software systems and components that the E-Commerce website integrates with, such as payment gateways, content management systems, and analytics tools.

3.1.4 Communications Interfaces

The communications interfaces describe the protocols and communication methods used by the E-Commerce website to interact with external systems and services, such as HTTP, HTTPS, and RESTful APIs.

3.2 Functional Requirements

This section of the SRS outlines the functional requirements that define the specific behaviors and functionalities of the E-Commerce website.

3.5 Non-Functional Requirements

Non-functional requirements specify the quality attributes and constraints that the E-Commerce website must meet. These requirements focus on system-wide attributes rather than specific functionalities.

3.5.1 Performance

- ***The system shall process search queries and display results to users within 2 seconds.***
- ***The website shall support a minimum of 1000 concurrent users without significant degradation in performance.***
- ***Page load times for product pages shall not exceed 3 seconds.***

3.5.2 Reliability

- ***The system shall have a mean time between failures (MTBF) of at least 30 days.***

- ***The website shall maintain data integrity and ensure accurate order processing with an error rate of less than 0.01%.***

3.5.3 Availability

- ***The website shall have a minimum uptime of 99.9% per month, allowing for no more than 43.2 minutes of downtime.***
- ***Maintenance downtime shall be scheduled during off-peak hours and communicated to users in advance.***

3.5.4 Security

- ***User passwords shall be stored securely using industry-standard encryption algorithms (e.g., bcrypt) to prevent unauthorized access.***
- ***The website shall implement HTTPS encryption for all data transmissions to ensure the confidentiality and integrity of user information.***
- ***Access to administrative functions shall be restricted to authorized users with role-based access control (RBAC).***

3.5.5 Maintainability

- ***The website shall adhere to coding standards and best practices to facilitate code maintainability and readability.***
- ***Documentation shall be provided for system architecture, codebase, APIs, and database schema to support ongoing maintenance and future development efforts.***
- ***The system shall be designed with modularity and extensibility to allow for easy integration of new features and updates.***

3.5.6 Portability

- ***The website shall be compatible with major web browsers, including Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.***
- ***The system shall be designed using responsive web design principles to ensure optimal user experience across various devices and screen sizes, including desktops, tablets, and smartphones.***

3.7 Design Constraints

Design constraints are limitations or requirements imposed by external factors that must be considered during the development of the E-Commerce website. These constraints may be dictated by industry standards, company policies, hardware limitations, or other factors.

1. ***Industry Standards:***
    - ***The website design must comply with industry standards such as WCAG (Web Content Accessibility Guidelines) to ensure accessibility for users with disabilities.***
    - ***Payment processing must adhere to PCI DSS (Payment Card Industry Data Security Standard) requirements to protect sensitive payment information.***
2. ***Company Policies:***
    - ***The website design and content must align with the company's branding guidelines and visual identity standards.***
    - ***Data privacy policies must be followed to ensure the protection of user data and compliance with applicable regulations (e.g., GDPR).***
3. ***Hardware Limitations:***
    - ***The website must be optimized for performance on various devices with different screen sizes, resolutions, and processing capabilities.***
    - ***Compatibility with older hardware and software versions may be required to accommodate a wider range of users.***
4. ***Technological Stack:***
    - ***The choice of programming languages, frameworks, and libraries may be constrained by existing infrastructure, development expertise, or compatibility requirements.***
    - ***Integration with third-party APIs and services may be limited by their availability, compatibility, and usage restrictions.***
5. ***Scalability Requirements:***
    - ***The website architecture must be designed to scale horizontally and vertically to accommodate increasing user traffic and data volume over time.***
    - ***Database design and query optimization must consider scalability and performance implications to ensure efficient data retrieval and storage.***
6. ***Security Considerations:***

- ***The website must implement security measures such as encryption, secure authentication, and access control to protect against unauthorized access and data breaches.***
- ***Vulnerability assessments and penetration testing may be required to identify and mitigate security risks.***

7. ***Regulatory Compliance:***
    - ***The website must comply with applicable laws and regulations governing data protection, consumer rights, and electronic commerce in the jurisdictions where it operates.***
    - ***Compliance with regulations such as GDPR, CCPA (California Consumer Privacy Act), and COPPA (Children's Online Privacy Protection Act) may impose additional design constraints.***
8. ***User Experience Considerations:***
    - ***The website design must prioritize usability, intuitiveness, and user engagement to enhance the overall user experience and satisfaction.***
    - ***Cross-browser compatibility and responsive design principles must be followed to ensure consistent performance across different devices and browsers.***

3.9 Other Requirements

This section serves as a catchall for any additional requirements that do not fit into the previously defined categories but are essential for the successful implementation and operation of the E-Commerce website.

1. ***Performance Monitoring and Optimization:***
    - ***The system shall include performance monitoring tools to track website performance metrics, identify bottlenecks, and optimize system resources as needed.***
2. ***Error Handling and Logging:***
    - ***The system shall implement robust error handling mechanisms to gracefully handle unexpected errors, provide informative error messages to users, and log error details for troubleshooting purposes.***
3. ***Backup and Disaster Recovery:***
    - ***The system shall regularly backup critical data, including user information, product listings, and order history, to prevent data loss and facilitate disaster recovery in case of system failures or data breaches.***

4. ***User Training and Support Documentation:***

    - ***The system shall provide user training materials and support documentation to help users navigate the website, understand its features and functionalities, and troubleshoot common issues independently.***

5. ***Legal and Compliance Notices:***

    - ***The system shall display legal notices, terms of service, privacy policies, and other relevant legal documents in accessible locations on the website to inform users of their rights and responsibilities.***

6. ***Performance Testing and Tuning:***

    - ***The system shall undergo comprehensive performance testing to ensure that it meets performance requirements under varying load conditions, and performance tuning shall be performed as needed to optimize system performance.***

7. ***User Feedback and Improvement Mechanisms:***

    - ***The system shall incorporate mechanisms for collecting user feedback, suggestions, and complaints to continuously improve the user experience and address user concerns promptly.***

4. Analysis Models

Analysis models provide a structured approach to understanding and defining system requirements. In the development of the E-Commerce website, several analysis models were used to elucidate specific requirements outlined in the SRS. Each model is introduced below, followed by a narrative description and its traceability to the SRS requirements.

4.1 Use Case Diagrams

Introduction: Use case diagrams depict interactions between users (actors) and the system to accomplish specific goals. They illustrate the functionalities of the system from a user's perspective.

Description: Use case diagrams for the E-Commerce website illustrate various user interactions, such as browsing products, adding items to the cart, and checking out. Actors

include customers, vendors, and administrators. Each use case represents a specific functionality, such as "Search Products," "Add to Cart," and "Process Order."

Traceability: Use case diagrams are traced to functional requirements in the SRS, such as those related to user account management, product browsing, and checkout processes.

4.2 Sequence Diagrams

Introduction: Sequence diagrams visualize the sequence of interactions between objects or components in a system. They depict the flow of messages and interactions between actors and system components over time.

Description: Sequence diagrams for the E-Commerce website illustrate the sequence of steps involved in various user actions, such as logging in, searching for products, and completing a purchase. They depict the order in which messages are exchanged between actors and system components, including the user interface, application logic, and database.

Traceability: Sequence diagrams are traced to functional requirements in the SRS, showing the detailed interactions required to fulfill specific user actions and system functionalities.

4.3 Data Flow Diagrams (DFDs)

Introduction: Data flow diagrams illustrate the flow of data within a system and between external entities. They depict how data is processed, stored, and transmitted within the system.

Description: DFDs for the E-Commerce website illustrate the flow of data from external entities, such as users and third-party systems, to internal components, such as the application

logic and database. They show how data moves through various processes, including user registration, product browsing, and order processing.

Traceability: DFDs are traced to functional requirements in the SRS, demonstrating how data flows through the system to fulfill specific functionalities, such as user registration, product management, and order fulfillment.

4.1 Data Flow Diagrams (DFD)

A. Appendices

Appendices may contain additional information that supports or supplements the requirements outlined in the SRS. However, it should be explicitly stated whether the information within an appendix is considered part of the SRS's overall set of requirements.

Example appendices that could be included:

1. ***Initial Conceptual Documents: Documents outlining the initial concept, vision, and goals of the software project. This may include project proposals, concept notes, or vision statements.***

2. ***Marketing Materials: Marketing materials such as brochures, advertisements, or promotional videos that provide context about the product and its target audience.***

3. ***Meeting Minutes: Minutes of meetings with the customer(s), stakeholders, or development team. These may include discussions, decisions, action items, and agreements made during project planning, requirements gathering, and progress review meetings.***

4. ***Technical Documentation: Technical documentation such as system architecture diagrams, design documents, API specifications, or user manuals that provide detailed information about the system's implementation and usage.***

5. ***Regulatory Compliance Documents: Documents related to regulatory compliance, such as legal agreements, privacy policies, and certifications required for the software project.***

6. ***User Feedback and Requirements Analysis: Summaries of user feedback, surveys, interviews, or requirements analysis conducted during the project's discovery phase. This information may help provide context for the requirements and design decisions outlined in the SRS.***

It is essential to clarify whether the information contained within appendices is considered part of the SRS's overall set of requirements. If specific appendices are integral to

understanding and implementing the requirements, they should be referenced accordingly within the SRS document.

A.1 Appendix 1: This appendix may include initial conceptual documents for the software project, such as project proposals, concept notes, or vision statements. These documents provide context and background information about the project's goals, objectives, and scope.

A.2 Appendix 2: This appendix may contain marketing materials related to the software project, such as brochures, advertisements, or promotional videos. These materials help stakeholders understand the target audience, market positioning, and key selling points of the product.