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Chapter 1

Introduction

Creating a user-friendly e-commerce platform dedicated to premium dry fruits, our project aims to provide a convenient, diverse, and reliable shopping experience for health-conscious consumers world wide. In this section, a brief overview of the software such as the scope of the product, intended audience, acronyms and an overall document overview is mentioned in detail.

1.1 Document Purpose

The introduction of the software Requirement Specification (SRS) provide an overview of entire SRS.A software requirements specification (SRS) is a document that describes what the software will do and how it will be expected to perform. The aim of this document is to gather and analyze and give in dept insight of the complete srur dry fruit website. The detail requirement of the srur dry fruit website is provided in this document.

1.2 Product Scope

The software to be developed is a dynamic online platform specifically designed to facilitate the purchase of various types of dry fruits. This platform aims to offer customers an intuitive and secure browsing and shopping experience for a wide range of high-quality dry fruits. The primary goal is to enable users to effortlessly explore, select, and purchase dry fruits while providing benefits such as convenience, access to premium products, and a seamless transaction process.

1.3 Intended Audience and Document Overview

The intended audience for this SRS includes client and the professor. This report is plan for maru dry fruit website in which we portray large depiction of product

in which we depict the product point of view, its usefulness, users, and its limitation. It contains important features presented with detailed description, and requirement. Functional requirement are also provided in this report, it also specifies the non-functional requirement. We also have additionally depicted the particular prerequisite for our product.

1. Chapter 1 is just an introduction and discussion about purpose, scope, intended audience, definition, acronyms and abbreviations.

2. Chapter 2 provides an overview description of the software. It gives the proficiency level to be expected of the user, some general constraints, assumptions and dependencies that are presumed while making the software. It gives a basis to establish the technical requirements in the next chapter.

3. Chapter 3 contains most important features presented with detailed description, and requirements. It gives specific requirements which the software is expected to deliver. Functional requirements are given in this section along with the External Interface Requirements. A Use case Diagram is also illustrated to give a clear idea of the software to be developed.

4. Chapter 4 specifies the Non-Functional requirements. Performance, safety and security requirements are mentioned over here. In addition, Software Quality Attributes have been discussed in detail.

1.4 Definitions, Acronyms and Abbreviations

- **Bootstrap:** Bootstrap is a framework to help you design websites faster and easier.
- **CSS:** Cascading Style Sheets describes how HTML elements are to be displayed on screen.
- **HTML:** Hypertext Markup Language is the code that is used to structure a web page and its content.
- **JavaScript:** JavaScript, often abbreviated as JS, is a high-level, interpreted scripting language.
- **jQuery:** jQuery is a lightweight, "write less, do more", JavaScript library.The purpose of jQuery is to make it much easier to use JavaScript on your website.
- **Latex:** A document formatting tool to prepare documents.
- **MySQL:** MySQL is a relational database management system based on SQL – Structured Query Language.
- **UI:** User interface

- **VSCode:** Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control.
- **Xampp:** XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages.

1.5 Document Conventions

The SRS has been prepared using the Latex software which is a document preparation system. LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. When writing, the writer uses plain text as opposed to the formatted text found in "What You See Is What You Get" word processors like Microsoft Word, LibreOffice Writer and Apple Pages.

1.6 References and Acknowledgments

- IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.
- https://www.w3schools.com/howto/default.asp=[i]
- https://getbootstrap.com/docs/5.0/getting-started/introduction/=[j]

Chapter 2

Overall Description

2.1 Overall Description

2.1.1 Product Perspective

The Online Dry Fruit Store is designed as a standalone e-commerce platform that operates independently. However, it may integrate with third-party payment gateways to enhance secure transactions.

2.1.2 Product Functionality

Core Functionalities

1. **Product catalog management:** Display a variety of dry fruits and nuts with details such as name, image, price, and description. Implement search and filter options for easy navigation.
2. **User registration and authentication:** Allow users to register with a valid email address and provide secure login with authentication.
3. **Shopping cart functionalities:** Enable users to add and remove items from the cart. Display the total price and quantity in the cart.
4. **Secure checkout processes:** Implement a secure payment gateway for transactions. Send confirmation emails with order details for successful purchases.
5. **Nutritional information and recipes presentation:** Display nutritional details for each product. Provide a section with healthy recipes to encourage a healthier lifestyle.
6. **User account management:** Allow users to view their order history. Provide options for account settings and preferences.

7. **Responsive Design:** Ensure the website is accessible and functional on various devices.

2.1.3 Users and Characteristics

Primary Users

- **Customers:** Individuals interested in purchasing premium quality dry fruits and nuts online. Characteristics may vary in age, technological proficiency, and dietary preferences.
- **Administrators:** Staff responsible for managing product listings, orders, and website content.

User Characteristics

- Customers may vary in age, technological proficiency, and dietary preferences.
- Administrators require access to an admin panel for site management.

2.1.4 Operating Environment

The Online Dry Fruit Store operates in a web-based environment. Key components include:

- **Web Server:** Hosting the e-commerce application.
- **Database Server:** Storing product information, user data, and order details.
- **Payment Gateway:** Facilitating secure online transactions.
- **Client Devices:** Various devices (desktops, laptops, smartphones) accessing the platform.

2.1.5 Design and Implementation Constraints

- The platform should be designed for compatibility with major web browsers (Chrome, Firefox, Safari, Edge).
- Adherence to data protection laws and regulations governing online transactions.
- Integration with reliable and secure payment gateways.

2.1.6 User Documentation

Comprehensive user documentation will be provided, covering:

- User Registration
- Product Navigation
- Checkout Process
- Account Management
- Nutritional Information and Recipes

2.1.7 Assumptions and Dependencies

Assumptions

- Users have basic internet connectivity for accessing the platform.
- The website operates within a secure and reliable hosting environment.
- Users can make online payments through common payment methods.

Dependencies

- Integration with third-party payment gateways for transaction processing.
- Availability of secure and stable internet connections for users.

Chapter 3

Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

Account Creation

- Users can create accounts with valid email addresses.
- Password requirements should be implemented for security.
- Include additional security measures like two-factor authentication.
- Provide a user-friendly interface for account creation with step-by-step guidance.

Product Browsing

- Display a variety of premium quality dry fruits and nuts, categorized logically.
- Allow users to browse products by category, price range, or nutritional content.
- Implement a search functionality for users to find specific products easily.
- Provide sorting options based on popularity, price, and other relevant criteria.

3.1.2 Hardware Interfaces

Device Compatibility

- Ensure the website is compatible with various devices, including desktops, tablets, and mobiles.

- Optimize the user interface for different screen sizes.
- Implement responsive design to adapt to various device orientations.
- Ensure compatibility with common web browsers such as Chrome, Firefox, and Safari.

3.1.3 Software Interfaces

Product Information

- Provide detailed information on each product, including origin, nutritional facts, and potential allergens.
- Display high-quality images with zoom-in features for a closer look.
- Include customer reviews and ratings for each product.
- Integrate a product comparison feature for users to evaluate different items.

Checkout Process

- Implement a secure and user-friendly checkout process with multiple payment options.
- Allow users to review and edit the cart before finalizing the purchase.
- Provide a guest checkout option for users who do not wish to create accounts.
- Integrate an order summary page with a breakdown of costs and delivery details.

3.1.4 Communications Interfaces

Cart Management

- Users can add premium quality dry fruits and nuts to their shopping cart with a quantity selection.
- Real-time updates on the cart total and individual product costs.
- Implement push notifications to remind users of pending items in their cart.
- Provide email alerts for abandoned carts, encouraging users to complete their purchase.

Customer Support

- Provide a chat or email support system for user queries.
- Display a comprehensive FAQ section addressing common issues.
- Implement a ticketing system for tracking and resolving customer support requests.
- Integrate a community forum for users to share experiences and solutions.

3.1.5 Use Case View

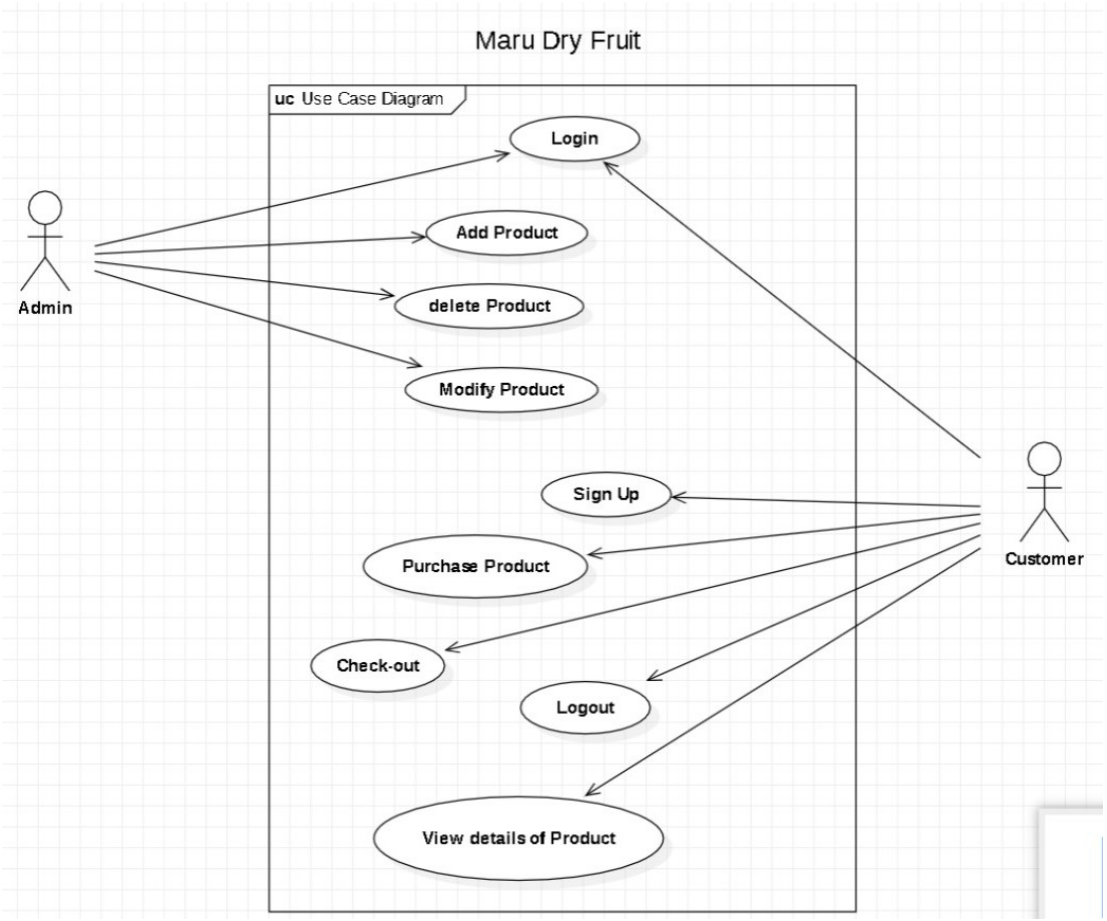

Figure 3.1: Use Case Diagram for the Online Dry Fruit Store

Chapter 4

Other Non-Functional Requirements

4.1 Performance Requirements

Since "Online Dry Fruits" is an interactive website, therefore major performance requirement is low response time

4.1.1 Response Time

- The **homepage** should load within 3 seconds under normal server load conditions.
- **Individual product pages** should load within 2 seconds to ensure a seamless browsing experience.

4.1.2 Concurrent User Handling

- The system should handle a minimum of 1000 concurrent users during peak hours without a significant decrease in performance.
- The checkout process should remain responsive, even during high-traffic periods.

4.1.3 Image Loading Optimization

- Images should be optimized for quick loading without compromising quality.
- Implement lazy loading for images to enhance initial page load times.

4.1.4 Database Performance

- Database queries should have an average response time of less than 200 milliseconds.
- Ensure proper indexing of databases for efficient data retrieval.

4.1.5 Load Testing

- Conduct load testing to simulate different user scenarios, ensuring system stability and identifying potential bottlenecks.
- Evaluate the system's scalability by increasing the load gradually and measuring performance.

4.1.6 Mobile Responsiveness

- Ensure that the website maintains optimal load times on mobile devices, with a focus on responsiveness.
- Verify that all features and functionalities are accessible and user-friendly on various mobile devices.

4.1.7 API Performance

- Ensure timely responses from third-party APIs integrated into the platform.
- Optimize API calls to minimize response times and maximize efficiency.

4.2 Safety and Security Requirements

4.2.1 Safety

Product Freshness Assurance

- Implement a robust inventory management system to track product shelf life and expiration dates.
- Regularly conduct quality checks and inspections to ensure that only fresh products are listed on the platform.

Delivery Safety Measures

- Collaborate with reputable delivery services that follow safety protocols during transportation.
- Ensure that delivery personnel adhere to hygiene and safety standards when handling products.

Allergen Information

- Provide detailed information about allergens present in each product.
- Allow users to filter products based on allergen preferences and restrictions.

Storage Guidelines

- Offer guidelines on the proper storage of dry fruits and nuts to maintain freshness and prevent spoilage.
- Educate users on best practices for storing purchased items at home.

4.2.2 Security Requirements

User Authentication

- Enforce strong password requirements for user accounts, including a combination of uppercase and lowercase letters, numbers, and special characters.

Payment Security

- Ensure compliance with PCI DSS standards for handling payment information securely.
- Integrate reputable and secure payment gateways to process transactions securely.

Data Privacy

- Clearly communicate the platform's privacy policy, detailing how user data is collected, used, and protected.
- Obtain explicit consent from users before collecting and processing their personal information.

Security Updates

- Regularly update all software components, including the operating system and third-party libraries, to patch known vulnerabilities.
- Conduct vulnerability assessments to identify and address potential security weaknesses.

Incident Response

- Develop and document an incident response plan outlining procedures for identifying, reporting, and mitigating security incidents.
- Establish clear communication protocols to notify users of any security incidents and the actions being taken to address them.

4.3 Software Quality Attributes

4.3.1 Usability

- The user-friendly interface and intuitive navigation contribute to the overall usability of the platform.
- Providing nutritional information and recipes enhances the user experience and encourages user engagement.

4.3.2 Performance

- Response times for loading pages, especially the homepage and product pages, are crucial for a seamless shopping experience.
- The ability to handle concurrent users during peak hours and efficient image loading contribute to overall performance.

4.3.3 Reliability

- Ensuring accurate and timely order fulfillment contributes to the reliability of the platform.
- Meaningful error handling and notifications enhance the reliability of user interactions.

4.3.4 Security

- Data encryption for secure transmission and storage ensures the security of user information.
- Authentication measures, payment security, access controls, and regular security updates contribute to a secure online environment.

4.3.5 Scalability

- The website database is scalable enough to handle 1000 customers at a time.

4.3.6 Privacy

- Communicating the privacy policy and obtaining user consent contribute to privacy considerations.
- Implementing data-at-rest encryption and following privacy regulations ensure the protection of user data.

Chapter 5

Appendix A - Data Dictionary

Data Element	Description	Requirements
ProductID	Unique identifier for each product.	ID format, Uniqueness
ProductName	Name of the product.	Non-empty, Alphanumeric
ProductImage	Image representing the product.	Image format, Size limits
ProductPrice	Price of the product.	Numeric, Positive
ProductDescription	Detailed description.	Non-empty
UserID	Unique identifier for each user.	ID format, Uniqueness
UserName	User's name for account identification.	Non-empty, Alphanumeric
UserEmail	Email address associated with the user.	Valid email, Uniqueness
ShoppingCartID	Unique identifier for each shopping cart.	ID format, Uniqueness
CartItemID	Unique identifier for each item in the cart.	ID format, Uniqueness
CartItemQuantity	Quantity of a specific product in the cart.	Numeric, Non-negative
OrderID	Unique identifier for each order.	ID format, Uniqueness
OrderDate	Date and time when the order was placed.	Date format, Non-empty
OrderTotal	Total cost of the order.	Numeric, Positive
NutritionalInfoID	Unique identifier for nutritional info.	ID format, Uniqueness
NutritionalDetails	Information about nutritional content.	Non-empty
RecipeID	Unique identifier for a healthy recipe.	ID format, Uniqueness
RecipeName	Name of the healthy recipe.	Non-empty, Alphanumeric
RecipeDescription	Description and instructions.	Non-empty

Table 5.1: Data Dictionary for Online Store