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Software Requirements Specification (SRS)

**for**

Grocery Store Application

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**1. Introduction**

**1.1 Purpose**

The purpose of the Grocery Shop Management System is to streamline the shopping experience for both customers and store managers. The system will allow customers to browse products, add items to their cart, place orders, and make payments online. Store managers can track inventory.

**Key Features:**

* Online and in-store shopping options
* Secure payment processing
* Order tracking and delivery management
* Customer account and loyalty programs

**1.2 Document Conventions**

This document uses **bold text** for headings and key terms. Bullet points are used to list features, and all requirements are numbered for clarity.

**1.3 Intended Audience and Reading Suggestions**

* **Developers:** Understanding system architecture and implementation
* **Store Managers:** Managing product inventory, orders, and sales reports
* **Customers:** Navigating the online store and making purchases
* **Administrators:** Maintaining system security and user management

**1.4 Product Scope**

The Grocery Shop Management System provides an online and offline solution for grocery shopping. It offers a user-friendly interface, secure transactions, and real-time inventory updates.

**1.5 References**

This document refers to various resources, including user interface, system requirements specifications for frontend and backend integration, and use case documents outlining the grocery ordering and delivery process.. These references ensure consistency, security, and usability in the development of the grocery delivery system.

**2. Overall Description**

The Grocery Delivery Website allows users to browse stores, place orders, and receive doorstep deliveries. It features secure transactions, real-time order tracking, and a user-friendly interface for a seamless shopping experience.

**2.1 Product Perspective**

The Grocery Delivery Website is a standalone system. It can work independently and integrate with external services like payment gateways and mapping services for delivery tracking.

**2.2 Product Functions**

* Customer registration and login
* Product catalog browsing and search
* Shopping cart management
* Order placement and tracking
* Inventory management for store owners

**2.3 User Classes and Characteristics**

* Customers: Browse, shop, and track orders
* Store Managers: Manage stock, pricing, and sales
* Administrators: Maintain system security and performance

**2.4 Operating Environment**

* Web-based and mobile-friendly
* Compatible with Windows, macOS, Android, and iOS
* Requires an active internet connection

**2.5 Design and Implementation Constraints**

* The website must load quickly and work on various devices.
* It will be built using standard web technologies such as HTML, CSS, and JavaScript.
* Payment processing must be secure and meet regulatory standards.

**2.6 User Documentation**

* User manual and help guides and online FAQs and video tutorials

**2.7 Assumptions and Dependencies**

The Grocery Delivery Website assumes users will have a stable internet connection for browsing stores and placing orders. It depends on third-party APIs for payment processing, mapping services for delivery tracking, and secure authentication. The system requires compatibility with modern web browsers and mobile devices.

**3. External Interface Requirements**

**3.1 User Interfaces**

* Interactive homepage with search and filter options
* Product details and pricing display
* Shopping cart and checkout page
* Order tracking dashboard

**3.2 Hardware Interfaces**

The website will be compatible with:

* Desktop computers
* Laptops
* Tablets
* Smartphones

**3.3 Software Interfaces**

* Database support (MongoDB)
* Integration with payment gateways like RazorPay
* API support for third-party logistics services

**3.4 Communication Interfaces**

* Email and SMS notifications for orders
* Secure HTTPS connections

**4. System Features**

**4.1 Online Shopping**

**Description and Priority:** Customers can browse products and place orders online. High priority.

**Stimulus/Response Sequences:**

* A customer adds an item to the cart
* The system updates cart total and inventory
* The customer proceeds to checkout and makes payment
* Order confirmation is sent via email/SMS

**Functional Requirements:**

**REQ-1:** The system shall allow users to search and filter products

**REQ-2:** The system allow users to add/remove items from the cart

**REQ-3:** The system shall process secure payments

**REQ-4:** The system shall send order confirmations

**4.2 Inventory Management**

**Description and Priority:** Store managers can track and manage product stock. High priority.

**Functional Requirements:**

**REQ-1**: The system allows to update stock levels after each sale

**REQ-2:** The system shall notify managers of low stock

**5. Other Nonfunctional Requirements**

**5.1 Performance Requirements**

* The system shall handle up to 50 concurrent users
* Orders shall be processed within 5 seconds

**5.2 Safety Requirements**

* Backup and disaster recovery procedures
* Secure handling of user data

**5.3 Security Requirements**

* Data encryption for transactions
* Multi-factor authentication for admins

**5.4 Software Quality Attributes**

* Responsive design for multiple devices
* Scalable architecture

**5.5 Business Rules**

* Customers must register to place an order
* Discounts apply only to registered users

**6.Other Requirments**

* Support for multiple payment methods
* Customizable store branding

**Appendices**

**Appendix A:** **Glossary**

* **Cart**: A virtual basket for selected items
* **HTTP:** HyperText Transfer Protocol
* **API:** Application User Interface

**Appendix B: Analysis Models**

* **Payment Gateway Integration:** Ensures secure online transactions for grocery orders.
* **User Authentication:** Ensures secure login and account management
* **Database Management:** Efficiently stores user details

**Appendix C: To Be Determined List**

* Final choice of payment gateway.
* Additional features based on user feedback.