Requirements Specification Document

QuickCart - Online Grocery Website

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1. Project Summary

1.1 Project Overview

QuickCart is a browser-based online grocery shopping platform designed to simulate a complete e-commerce experience. The application allows users to explore a wide range of grocery items such as vegetables, fruits, pulses, dairy products, spices, and household items.

The website offers an intuitive user interface with category sliders, dynamic cart functionality, and modal-based login and profile features. It mimics real-world shopping behavior and provides key functionalities such as browsing, quantity management in cart, order placement with UPI/COD payment options, order history tracking, and order cancellation.

It is built using **HTML, CSS, and JavaScript**, and leverages **localStorage** to manage user data like cart contents, user login status, and order history. The system operates entirely on the

client-side without a backend, making it an efficient front-end prototype for demonstrating the essentials of an online grocery system.

1.2 Project Scope

This project covers the development of a static, client-side web application for online grocery shopping. The scope includes:

- A responsive and visually appealing user interface.

- Product listings grouped by categories (e.g., vegetables, fruits, frozen foods).

- Features like "Add to Cart", "View Cart", and "Order History".

- User authentication (login/signup) using modal forms and localStorage.

- Profile view with the ability to see past orders and clear history.

- Basic navigation and slider functionality for browsing large inventories.

- Payment page for confirming order and selecting payment method (UPI or Cash on Delivery).

- Thank You page that shows order summary and estimated delivery time.

- Quantity adjustment and item removal in cart.

- Order cancellation functionality in order history.

- UPI ID input validation during payment (for UPI mode).

- Order status tracking (Confirmed/Cancelled) in history.

2. General Description

2.1 Product function overview

The QuickCart online shopping website provides the following major functionalities:

- **Home Page and Navigation**

  Users are presented with a homepage featuring a navigation bar that includes links to Home, Products, Cart, Orders, Login/Logout, and Profile

- **Product Categories and Listings**

  Products are organized under different categories such as Vegetables, Fruits, Pulses, Spices, Household Items, Frozen Foods, and Dry Fruits.

  Each product displays an image, name, price, and an "Add to Cart" button.

- **Slider Control**

  Product lists within each category are displayed in horizontally scrollable sliders, improving the browsing experience across desktop and mobile devices.

- **Add to Cart Functionality**

  Users can add products to their shopping cart. The items are stored in the browser's localStorage, allowing persistence even after refreshing the page.

- **Cart Management**

  Users can view cart contents, **adjust item quantities**, **remove individual items**, and proceed to payment.

- **User Authentication**

  A modal-based Login/Signup system is provided where users can register or log in with a username and password (simulated using localStorage, without backend validation).

- **Profile and Order History**

  Logged-in users can view their profile, check order history (stored locally), and clear past orders.

  Orders include payment details and can be cancelled by the user.

- **Secure Payment Interface**

  Allows users to review their cart, select payment method (UPI or Cash on Delivery),

and place the order.

UPI ID is required and validated for UPI-based payments.

- **Order Confirmation Page**

  Displays order summary after successful placement, including **order time, payment** method, and an estimated delivery time (2 hours).

- **Order Status Tracking**

  Each order in history shows current status as "Confirmed" or "Cancelled", allowing transparency in tracking past purchases.

2.2 User Characteristics

The intended users of QuickCart can be divided into two main categories, each with specific needs and behaviors:

1. **Guest Users**

   - **Description:** Users who visit the website without creating an account or logging in.
   - **Capabilities:**
     - Browse product categories.
     - View product details (image, price, description).
     - **Access general homepage and promotional content.**
   - **Limitations:**
     - Cannot add products to the cart.
     - Cannot place or track orders.
     - Cannot view or manage a profile.
   - **Needs:**
     - Easy navigation across categories.
     - Quick access to product information.
     - Clear call-to-action to sign up or log in for full access.

2. **Registered Users**

- **Description:** Users who have signed up or logged into the system using the modal interface.
- **Capabilities:**
  - ➤ Browse products across all categories.
  - ➤ Add items to the cart.
  - ➤ **Increase or decrease item quantities in the cart.**
  - ➤ **Remove items from the cart.**
  - ➤ View cart contents and proceed to payment.
  - ➤ Choose between UPI and COD payment methods.
  - ➤ **Enter and validate UPI ID if applicable.**
  - ➤ View and manage profile.
  - ➤ View order history with details like order time, payment method, and item breakdown.
  - ➤ **Cancel previously placed orders.**
  - ➤ **View order statuses (Confirmed / Cancelled).**
  - ➤ Log out securely.
- Needs:
  - ➤ Smooth login/logout process.
  - ➤ Immediate feedback on cart actions (e.g., "Item added to cart").
  - ➤ Clear payment and order confirmation process.
  - ➤ **Control over past orders including cancellation.**
  - ➤ Mobile-friendly and accessible user interface.

3. Specific Requirements

3.1 Functional Requirements

- F**R1**: The system shall allow users to browse products by categories (e.g., Vegetables, Fruits, Spices).
- **FR2**: The system shall display products with name, price, image, and "Add to Cart" button.
- **FR3**: The system shall allow users to add items to their shopping cart.

- **FR4**: The system shall show cart contents on a separate cart page.
- **FR5**: The system shall allow user login/logout using modal interface.
- **FR6**: The system shall store and display user order history.
- **FR7**: The system shall support UPI and Cash on Delivery as payment methods.
- **FR8**: The system shall display an order confirmation message and summary (thankyou.html).
- **FR9**: The system shall allow users to increase or decrease item quantities in the cart.
- **FR10**: The system shall allow users to remove items from the cart.
- **FR11**: The system shall store user payment method and UPI ID (if applicable) along with the order.
- **FR12**: The system shall allow users to cancel a placed order.
- **FR13**: The system shall display order status as "Confirmed" or "Cancelled" in order history.
- **FR14**: The system shall show estimated delivery time after placing an order.

3.2 Non - Functional Requirements

- **NFR1**: The system shall be responsive and mobile-friendly.
- **NFR2**: The system shall have user-friendly navigation and UI design.
- **NFR3**: All operations shall be completed within 2 seconds of user action.
- **NFR4**: The system shall work without a backend, using browser localStorage.
- **NFR5**: The system shall validate UPI ID before allowing order placement (if UPI is selected).

3.3 System Interfaces

Frontend Only (HTML/CSS/JS)

QuickCart operates as a fully static, client-side application with no server-side backend. The system interfaces include:

1. HTML: Used for structuring the pages, including:
   - Product listings.

- Cart page.
- Login/Signup modals.
- Order history.
- Profile page.
- Payment page.
- Confirmation page.

2. CSS: Provides the styling for all pages, ensuring a responsive layout and ensuring that the interface is mobile-friendly. The CSS is used for:

   - Consistent design across all pages (e.g., colors, buttons, typography).
   - Responsiveness for different screen sizes (mobile, tablet, desktop).
   - Modal styling for login/signup, profile, and order history.

3. JavaScript: Implements the functionality of the system, including:

   - Product Browsing: Adding and displaying products dynamically.
   - Cart Management: Adding, removing, and adjusting product quantities within the cart, with updates reflected in localStorage.
   - User Authentication: User login/signup via modal forms, storing credentials in localStorage.
   - Order History and Status: Storing, displaying, and updating user orders, including order cancellation and status tracking (Confirmed/Cancelled).
   - Order Placement: Validation of UPI IDs and management of order total, payment methods (UPI/COD).
   - Payment Processing: Simulating order payment and providing feedback (Thank You page).

4. localStorage: The system uses the browser's localStorage for persistent data storage:

   - Cart Data: Stores the list of products added to the cart.
   - User Authentication: Simulates login status and stores username.
   - Order History: Stores past order details including items, payment methods, and order status (Confirmed/Cancelled).
   - Order Management: Stores the status of each order (Confirmed/Cancelled) and associated user data.

System Interfaces Overview:

- Modal Popups for:

- o Login/Signup
- o Profile management and order history
- Image Sliders: For browsing through product categories in a more dynamic and visually engaging way.
- Cart and Order Details are dynamically updated and stored in localStorage.
- Payment Page: For payment method selection (UPI or COD) and validation of UPI IDs (for UPI payments).
- Order Confirmation and Status Tracking: A dedicated page shows the status of orders, allowing users to track order progress and cancel them if necessary.

4. User Interface

The QuickCart Online Shopping Website features a clean, modern, and responsive user interface designed for an intuitive shopping experience. The key screens and interface elements include:

- **Home Page**
  - ➢ Hero banner displaying grocery-themed promotional imagery.
  - ➢ Clean navigation bar with links to Home, Products, Cart, Login/Logout, and Profile.
  - ➢ Delivery information strip.
- **Product Category Sections**
  - ➢ Horizontally scrollable sliders showcasing product cards within categories (e.g., Vegetables, Fruits, Frozen Foods).
  - ➢ Each product card includes:
    - o Product image
    - o Product name
    - o Price
    - o "Add to Cart" button
  - ➢ Slider controls (left/right) to navigate through large inventories.
- **Login / Signup Modal**
  - ➢ Modal popup form for login and registration.

- Input fields for username and password, including confirm password in signup mode.
- Toggle between login and signup views.
- Inline error messages for empty fields or mismatched passwords.
- Login state saved in `localStorage`, reflected across the UI.

- **Profile & Order History Modal**
  - Accesssible only to logged-in users.
  - Displays:
    - Username
    - List of past orders with item breakdown, time and payment method
    - "Cancel Order" button for eligible (non-cancelled) orders
    - "Clear History" button

- **Cart Page**
  - A dedicated cart.html page showing:
    - List of added items with:
      - Product image
      - Name
      - Price
      - Quantity
      - **"+" and "−" buttons to adjust quantity**
      - **"Remove" button to delete item from cart**

    - Auto-updating total price
    - "Proceed to Payment" button that redirects to payment page

- **Navigation Bar(Navbar)**
  - Positioned at the top, includes:
    - **Left:** Site logo and brand title ("QuickCart Grocery")
    - **Right:** Links for Home, Products, Cart, Login/Logout, and Profile
    - Fully responsive with hamburger menu support for mobile devices (to be implemented)

- **Payment Page**
  - ➢ Secure order confirmation interface with:
    - o List of ordered items and subtotal breakdown
    - o **Total cost summary**
    - o **Payment method options (UPI / Cash on Delivery)**
    - o **Dynamic UPI ID input field** that appears only when UPI is selected
    - o Validation for UPI ID before placing order
    - o "Place Order" button triggers order saving and redirects to confirmation page

- **Order Confirmation (Thank You Page)**
  - ➢ Confirms successful order placement
  - ➢ Displays:
    - o Placed time
    - o Total amount
    - o Payment method
    - o **Estimated delivery time (2 hours from current time)**
  - ➢ "Continue Shopping" link redirects to home

- **Orders Page**
  - ➢ Standalone page (`order.html`) that displays:
    - o All orders placed by the current user
    - o Item breakdown and total
    - o Payment method and UPI ID (if applicable)
    - o **Order status: "Confirmed" or "Cancelled"**
    - o **"Cancel Order" button** to change status to Cancelled

- Footer
  - ➢ Contains:
    - o Copyright
    - o Basic footer message

- **Mobile Responsiveness**
  - ➢ Product sliders are swipeable on touchscreens.

- ➢ Navigation bar collapses into a hamburger menu (to be implemented).
- ➢ All modals and components scale properly across mobile, tablet, and desktop screens.

Team Members and Their Contributions

Team Member	Contribution Area
ADITHYA ASHOK	Front-End Development, Product Page Design, Cart Features
RUGMINIDEVI S	UI/UX Design, Modal System (Login/Signup/Profile), Styling
C R ADHARSH	Content & Image Integration, Testing & Bug Fixing
ADIDEV M S	Documentation, Product Categorization, Slider Setup