# E-Commerce Website Documentation

## Overview

This document outlines the design, functionality, and requirements for an e-commerce website specializing in casual clothing for men and women. The website aims to address customer trust issues, improve order management, and provide a seamless user experience for both clients and administrators.

## Objectives

1. Build Trust: Establish a professional website to reduce customer fear of scams.  
2. Improve Product Presentation: Provide detailed product views, including photos, descriptions, price, and stock status.  
3. Simplify Order Process: Enable easy order placement and provide cash-on-arrival payment options.  
4. Enhance Admin Management: Centralize order management and enable CRUD operations for orders and products.  
5. Client Features:  
 - Product filtering and categorization.  
 - Shopping cart functionality, including local storage for unauthorized users.

## Functional Requirements

### Client-Side Features

1. Homepage  
 - Hero section with banner images.  
 - Navigation bar: Home, Products, Cart, Login/Register.  
 - Featured products with grid layout.  
 - Categories: Men, Women, New Arrivals.  
  
2. Product Details Page  
 - Product images.  
 - Product description.  
 - Price.  
 - Stock status (In stock / Out of stock).  
 - Add to cart functionality.  
  
3. Cart Page  
 - Display added products.  
 - Quantity control.  
 - Total price calculation.  
 - Checkout button.  
  
4. Order Details Page  
 - List of placed orders with status.  
  
5. Register and Login Pages  
 - User authentication.  
 - Redirect unauthorized users to login before checkout.  
 - LocalStorage to save cart items for unauthorized users.  
 - Cart items transferred to user account after login.

6. Filters and Categories

- Product filtering based on categories (Men, Women, etc.).

- Additional filters: Price range, stock availability.

### Admin-Side Features

1. Admin Dashboard  
 - Centralized control panel.  
 - Navigation to manage products, orders, and categories.  
  
2. Order Management  
 - View all orders.  
 - Update order statuses (Pending, Shipped, Delivered).  
  
3. Product Management  
 - CRUD operations:  
 - Create new products.  
 - Update existing product details.  
 - Delete products.  
 - View product listings.  
 - Stock management.  
  
4. Category Management  
 - Add, update, or remove product categories.

## UI/UX Design

Color Palette:  
- Primary Colors: Light Gray, White, and Blue accents.  
- Typography: Modern and clear fonts (e.g., Montserrat, Roboto).  
  
User Interface Design:  
1. Client-Side UI:  
 - Clean and modern layout.  
 - Grid-based product listings.  
 - Responsive design for all devices.  
 - Hero section with call-to-action ("Shop Now").  
  
2. Admin-Side UI:  
 - Dashboard layout with easy navigation.  
 - Clear action buttons for CRUD operations.  
 - Table-based order and product listings.

Generated Design Sections:  
 - Homepage: Hero section, categories grid, and featured products.

- Product Details: Image gallery, description, price, and stock status.

- Cart Page: Product list, quantity controls, and checkout.

- Admin Dashboard: Control panel for orders, products, and categories.

**Technical Specifications**

Frontend:  
- Framework: Angular.  
- Languages: HTML, CSS, TypeScript.  
- Responsive Design: Ensures compatibility across devices.  
  
Backend:  
- Framework: Node.js with Express.  
- Database: MongoDB.  
- API: RESTful API for client and admin functionalities.  
- Authentication: JWT-based login system.  
  
Storage:  
- Cart: LocalStorage for unauthorized users.  
- Persistent Data: MongoDB for authorized users.

## User Flow

Client:  
1. Register/Login → Homepage.  
2. Browse Products → Filter/Categorize Products.  
3. View Product Details → Add to Cart.  
4. Unauthorized User: Cart saved to LocalStorage.  
5. Login → Cart transferred to user account.  
6. Place Order → Payment on Delivery.  
7. View Orders and Track Status.  
  
Admin:  
1. Login → Admin Dashboard.  
2. Manage Products (CRUD).  
3. Manage Categories (CRUD).  
4. Manage Orders:  
 - View all orders.  
 - Update order status.

## Key Components

Client Components:  
- HomepageComponent.  
- ProductDetailsComponent.  
- CartComponent.  
- OrderDetailsComponent.  
- RegisterComponent.  
- LoginComponent.  
  
Admin Components:  
- AdminDashboardComponent.  
- OrderManagementComponent.  
- ProductManagementComponent.  
- CategoryManagementComponent.

## Future Improvements

1. Payment Integration:  
 - Add payment gateways (e.g., Stripe, PayPal).  
2. User Reviews:  
 - Allow clients to rate and review products.  
3. Notifications:  
 - Send email or SMS updates for order statuses.  
4. Wishlist Feature:  
 - Allow users to save products for later.

## Conclusion

This documentation covers the core features, design guidelines, and technical specifications for the e-commerce website. The platform will provide an improved user experience for clients, build trust through professional design, and streamline order management for administrators.