INTERACTIVE E-COMMERCE WEBSITE WITH DYNAMIC SIZE SELECTION AND CART MANAGEMENT

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Abstract— This paper presents an interactive e-commerce website designed to enhance the online shopping experience through dynamic size selection and efficient cart management. The system enables users to browse products, view available sizes dynamically, and add selected items to the cart. Once added, the product is marked as sold to prevent duplicate purchases. The system is developed using HTML, CSS, JavaScript, and backend technologies. It improves usability, ensures real-time updates, and demonstrates practical full-stack web development concepts.

Index Terms— E-commerce, Online Shopping, Dynamic Size Selection, Cart Management, Web Development, User Interface.

1. INTRODUCTION

The rapid growth of e-commerce platforms has transformed traditional shopping methods. Customers prefer online shopping due to convenience and accessibility. However, many systems lack interactive size selection and real-time availability updates.

2. Existing System

Most traditional e-commerce websites use static product displays. Size options are not dynamically linked to product images and availability updates are delayed, causing confusion and duplicate purchases.

3. Proposed System

The proposed system introduces an interactive e-commerce website with dynamic size selection and real-time cart management. When a user clicks on a product image, the available sizes are displayed dynamically. The selected item can be added to the cart instantly. Once the product is added, it is marked as sold, preventing multiple users from purchasing the same item. This improves system efficiency and enhances the overall shopping experience.

4. Methodology

Frontend is developed using HTML, CSS, and JavaScript. Backend manages product data, size availability, and cart operations to ensure accurate real-time updates.

4.1 Frontend Development

The user interface is developed using HTML, CSS, and JavaScript.

It displays product images, prices, and size options in an interactive manner.

4.2 Dynamic Size Selection

When a user clicks on a product image, the system dynamically displays the available sizes.

This improves usability and reduces confusion.

4.3 Cart Management

The selected product is added to the shopping cart.

The system updates the cart contents in real time.

4.4 Product Status Update

Once a product is added to the cart, its status is updated as sold.

This prevents the same product from being purchased again.

4.5 Backend Processing

Backend logic manages product data, size availability, and cart operations.

It ensures accurate and real-time updates.

5. System Modules

5.1 Product Module

Displays product images and details Shows price and availability.

5.2 Size Selection Module

Displays available sizes dynamically and Allows users to select the required size.

5.3 Cart Module

Adds selected items to the cart and Updates cart contents in real time.

5.4 Sold-Out Management Module

Marks product as sold after adding it to cart and Prevents duplicate purchases.

6. Conclusion

The interactive e-commerce website with dynamic size selection and cart management improves the online shopping experience. The system provides real-time size display, efficient cart operations, and prevents duplicate purchases. It demonstrates practical full-stack web development concepts and can be extended with additional features such as user authentication, payment gateway integration, and order tracking for real-world applications.

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