

# Day 4 - Building Dynamic Frontend Components

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## Objective:

The goal was to enhance the marketplace platform by adding several key features, including a dynamic blogs page, user authentication, advanced cart management, and product filtering. New functionalities like sign-up/login features, real-time cart management, and product promotions were implemented to improve both usability and user engagement. Data management, including user and cart data, is now handled using the Neon database on Vercel with Drizzle for seamless integration.

## Key Learning Outcomes:

### 1. Dynamic Blogs Page:

- A dynamic blogs page was integrated to provide users with informative content related to products and categories. This enhances user experience by offering valuable insights, tips, and updates on new arrivals.

### 2. Add to Cart Functionality:

- A fully functional cart system was added, allowing users to add products, delete items, and view their cart's contents in real-time. This feature improves the shopping experience by enabling users to manage their selections before making a purchase.

### 3. Product Listing and Details:

- The product listing and details components were enhanced to allow users to view product information, images, descriptions, and pricing. This ensures users have all the details needed to make informed purchases.

### 4. Product Filtering:

- Several advanced filtering options were added to the platform, including:
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- **Price Range Slider:** Allows users to set a price range and filter products within that range.
  - **Categories:** Enables users to filter products by categories like food type or brand.
  - **Search Bar:** Helps users quickly search for products using keywords.
5. **Discounted Products with "Hot Offer" Tag:**
    - Discounted products are now highlighted with a "hot offer" tag, making it easier for users to identify ongoing promotions, encouraging purchases and increasing sales.
  6. **User Authentication (Sign-Up and Login):**
    - A sign-up and login system was implemented, requiring users to create an account before they can add items to the cart or place an order. This ensures only authenticated users can interact with the cart and checkout functionalities.
    - Non-authenticated users attempting to add products to their cart or place an order will see an alert prompting them to log in or sign up.
  7. **Cart Management for Authenticated Users:**
    - The cart is linked to the user's account, allowing them to add, remove, and manage items. Cart data is stored in the Neon database and persists across sessions.
  8. **Database Integration:**
    - User data and cart information are stored in Vercel's Neon database, with Drizzle managing the data storage and retrieval. This setup allows seamless access to user and cart data across the platform.

### **Key Features Implemented:**

1. **Dynamic Blogs Page:**
  - A dedicated section for blog posts was added, allowing dynamic display of content fetched from APIs or a CMS. This keeps the content fresh and engaging for users.
2. **Add to Cart Functionality:**

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- Users can now add, delete, and manage items in their cart. However, only authenticated users can interact with the cart. Non-logged-in users are prompted with an alert to sign up or log in.
3. **Product Listing and Product Details:**
    - The product listing page displays all available products, with each having its detailed page showcasing specifications, images, and prices.
  4. **Product Filtering:**
    - **Price Range Slider:** Enables users to filter products by a specific price range.
    - **Categories Filter:** Allows users to select product categories (e.g., food types, brands).
    - **Search Bar:** Users can search for specific products by name or keyword, improving product discoverability.
  5. **Discounted Products (Hot Offer):**
    - Products on sale are marked with a "hot offer" tag, making them easily recognizable for users looking for discounts.
  6. **Sign-Up and Login Functionality:**
    - Users are required to sign up and log in to interact with the cart or place an order. An alert pops up for non-authenticated users when they try to add items to the cart or proceed with checkout.
  7. **Database Handling:**
    - Cart and user data are stored in Vercel's Neon database. Drizzle manages the schema and data queries, enabling smooth and efficient data handling across the platform.
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This report combines all the new functionalities added to my marketplace, including the dynamic blogs page, authentication features, cart management, and product filtering.