E-Commerce Website Template Report

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HTML Structure

HTML Tags and Their Purposes:

1. <**!DOCTYPE html**>: Declares the document type and version of HTML (HTML5) being used.
2. <**html lang**="**en**">: Root element of the HTML document, setting the language of the document to English.
3. <**head**>: Contains metadata and links to external resources like stylesheets.
4. <**meta charset**="**UTF-8**">: Specifies the character encoding for the document as UTF-8, supporting various characters and symbols.
5. <**meta name**="**viewport**" **content**="**width**=**device-width, initial-scale**=**1.0**">: Ensures that the webpage is responsive and adjusts to different screen sizes.
6. <**title**>E-Commerce Website</**title**>: Sets the title of the webpage, which appears in the browser tab.
7. <**body**>: Contains the main content of the webpage.
8. <**div id**="**auth-section**">: This section includes the login form. It is displayed by default.
9. <**div id**="**main-content**">: Contains the main parts of the website (product list, cart, and checkout form). Initially hidden and displayed after a successful login.

Key HTML Elements in the Body:

- **Login Form**: Allows users to enter their credentials. It contains:
  - o <form id="login-form">: The form element with ID for handling login submissions.
  - o <label>: Provides a description for the form fields.
  - o <input>: Fields for username and password.
  - o <button>: Submits the login form.
- **Main Content**: Contains:
  - o **Filter and Sort Section**: Dropdown menus to filter and sort products.
  - o **Product List**: Display area for dynamically added products.
  - o **Cart Section**: Shows the cart's contents.
  - o **Checkout Form**: Collects payment information.

CSS Styling

Inline Styles vs. Bootstrap:

- **Inline Styles**: Defined within the <style> tag in the <head>. These are custom styles tailored to the specific needs of this template.
  - o **body**: Applies general styles to the body, including font family, padding, and background color.
  - o #**auth-section,** #**main-content**: Sets maximum width, margin, and display properties to manage visibility and layout.
  - o **.product-card**: Styles individual product cards with borders, padding, width, text alignment, and box shadows.
  - o **.filter-sort-section**: Styles the section with filter and sort options, including background color and padding.
- **Bootstrap**: Integrated via CDN link in the <head>. Provides predefined styles and components for responsive design and layout management.
  - o **.container, .row, .col-***: Bootstrap's grid system for responsive layout (not directly used here but common in many templates).

o **.btn**: Used for styling buttons (could be added for consistency with Bootstrap's design).

Custom CSS Details:

- **Responsive Design**: Includes media queries to adjust the layout for different screen sizes.
  - o **.product-card**: Adjusts width and layout for smaller screens.

JavaScript Functionality

Key Variables:

- **products**: An array of product objects, each with an id, name, price, and image property.
- **cart**: An array to store items added to the cart.
- **isLoggedIn**: A flag to track whether the user is logged in or not.

Functions:

10. **renderProducts():**
    - o Filters and sorts the products based on user selection.
    - o Dynamically generates and displays product cards.
    - o Attaches event listeners to "Add to Cart" buttons.
11. **addToCart(productId):**
    - o Finds the product by ID and adds it to the cart.
    - o Updates the total amount and renders the cart.
12. **removeFromCart(productId):**
    - o Removes the product from the cart by ID.
    - o Updates the total amount and renders the cart.
13. **updateTotalAmount():**

- o Calculates the total amount of all items in the cart and updates the displayed value.
14. **renderCart()**:
    - o Renders cart items or displays a message if the cart is empty.
15. **login(username, password)**:
    - o Mock login function that sets isLoggedIn to true and toggles visibility of sections.

Event Listeners:

- **login-form Submission**: Submits login form and triggers login function.
- **add-to-cart Buttons**: Calls addToCart function when a product is added to the cart.
- **Filter and Sort Changes**: Calls renderProducts to update the product list based on selected filter or sort option.

Bootstrap Components

Usage in Template:

- **.container**: A responsive container for layout management (though not used directly here).
- **.card**: Typically used for product display, but custom styles are applied.
- **.form-control**: Commonly used for form input fields (could be used for consistency with Bootstrap's design).
- **.btn**: Provides a consistent button styling (also could be used for consistency).

Note: While the template uses custom CSS for styling, incorporating more Bootstrap components could enhance consistency and responsiveness.

Summary

This e-commerce website template integrates HTML for structure, CSS for custom styling, and JavaScript for interactivity, with Bootstrap providing responsive design components. The template allows users to log in, filter and sort products, manage a cart, and proceed to checkout, demonstrating a comprehensive approach to creating a functional e-commerce site.

End of Report