

Day 4 - Dynamic Frontend Components - Media Mart

Functional Deliverables

1. Product Listing Page with Dynamic Data

- **Description:** The product listing page dynamically displays products using a manually exported JSON dataset. Each product includes its image, name, price, and a brief description, presented in a clean and visually appealing layout to enhance user experience.

2. Individual Product Detail Pages with Accurate Routing and Data Rendering

- **Description:** Each product detail page dynamically renders detailed information for the selected product, including the title, full description, price, and related images. Leveraging accurate dynamic routing ensures users are directed seamlessly to the correct product page based on their selection.

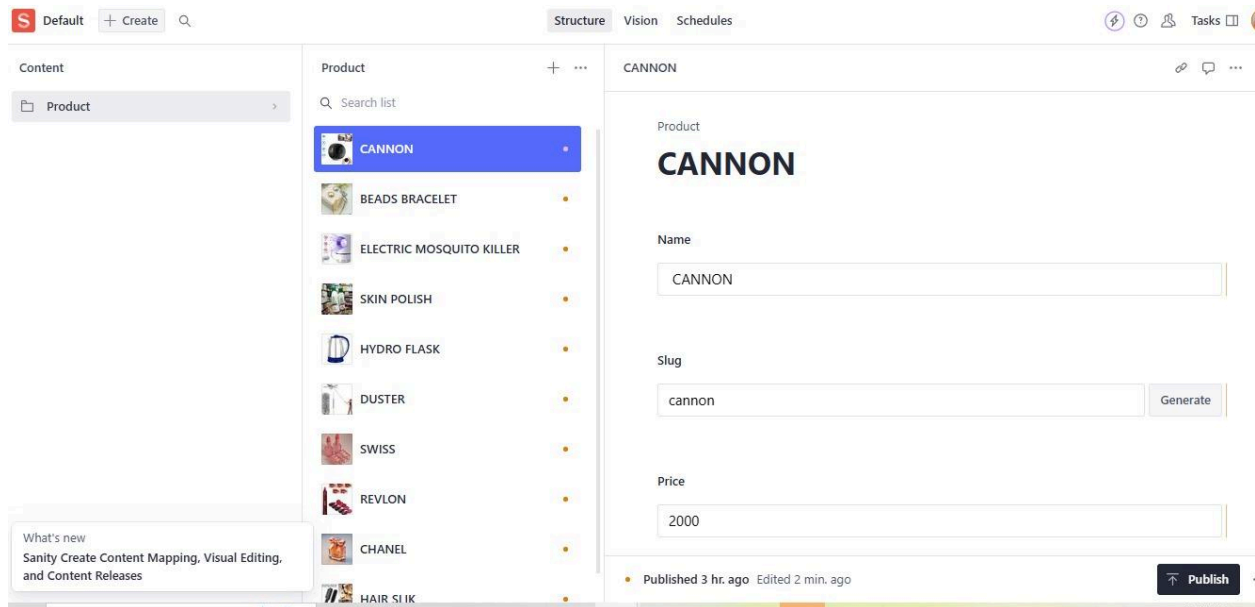
3. Working Category Filters, Search Bar, and Pagination

- **Screenshots/Recordings:**
 - Demonstration of category filters.
 - Search bar in action.
 - Pagination functionality.

- **Description:**

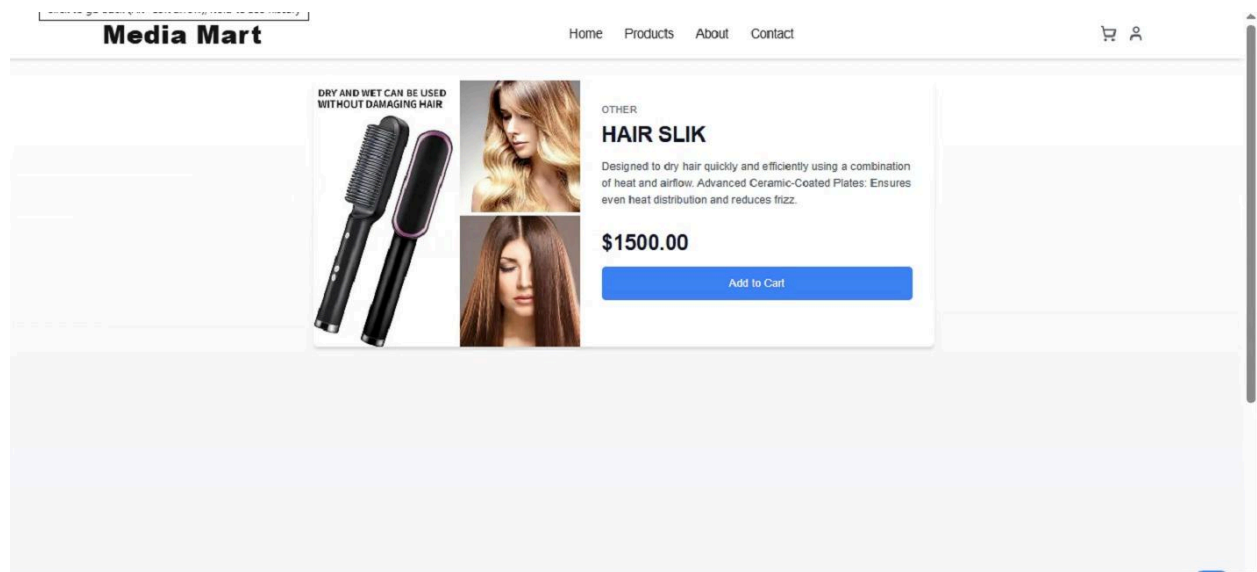
- Category Filters: Enables filtering of products based on categories like "Electronics," "Home Appliances," etc., allowing users to narrow down their preferences.
- Search Bar: Offers real-time search functionality, dynamically filtering products as users type keywords.
- Pagination: Improves performance and usability by dividing the product list into multiple pages, ensuring faster load times and easier navigation.

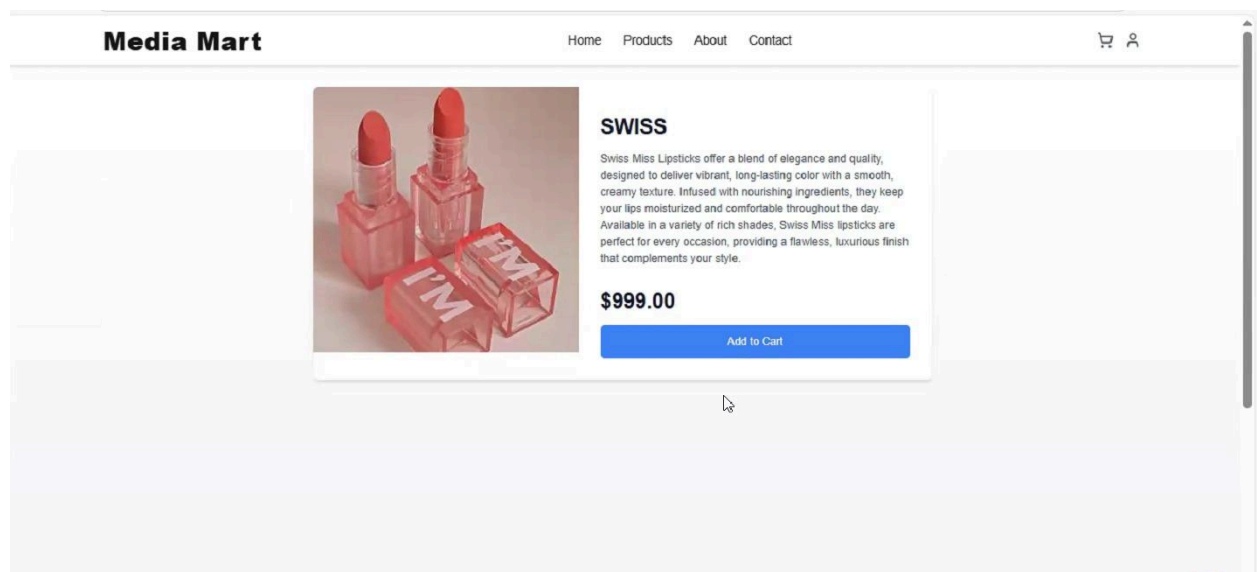
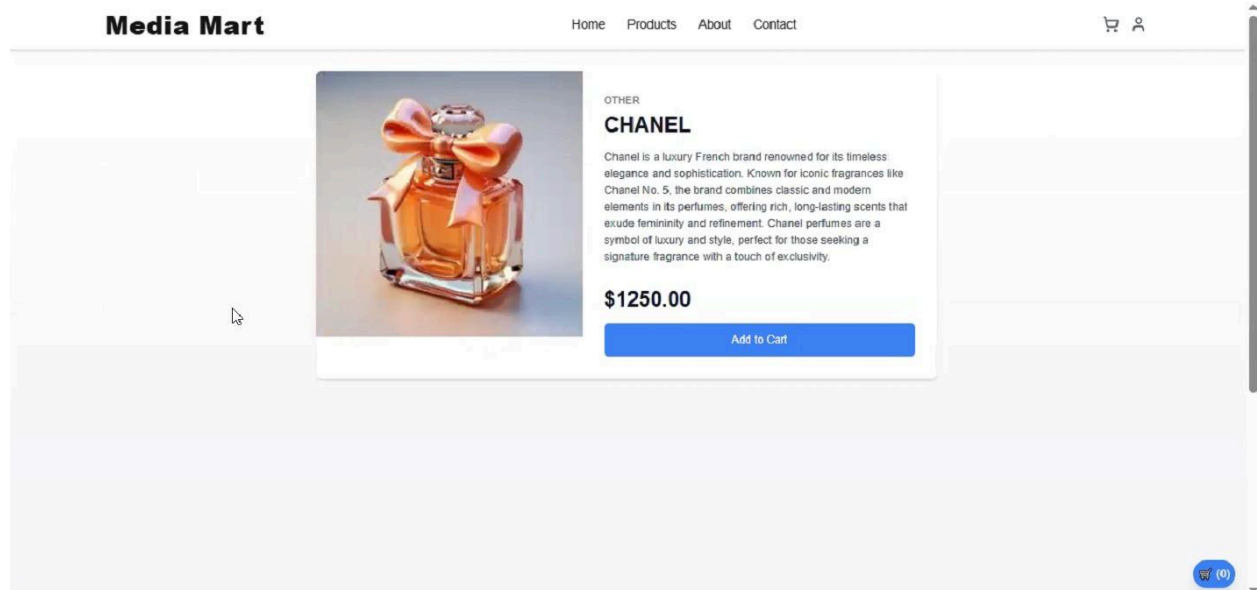
1. Product Listing Page with Dynamic Data



- **Description:** The product listing page dynamically displays products using a manually exported JSON dataset. Each product includes its image, name, price, and a brief description, presented in an aesthetically pleasing format.

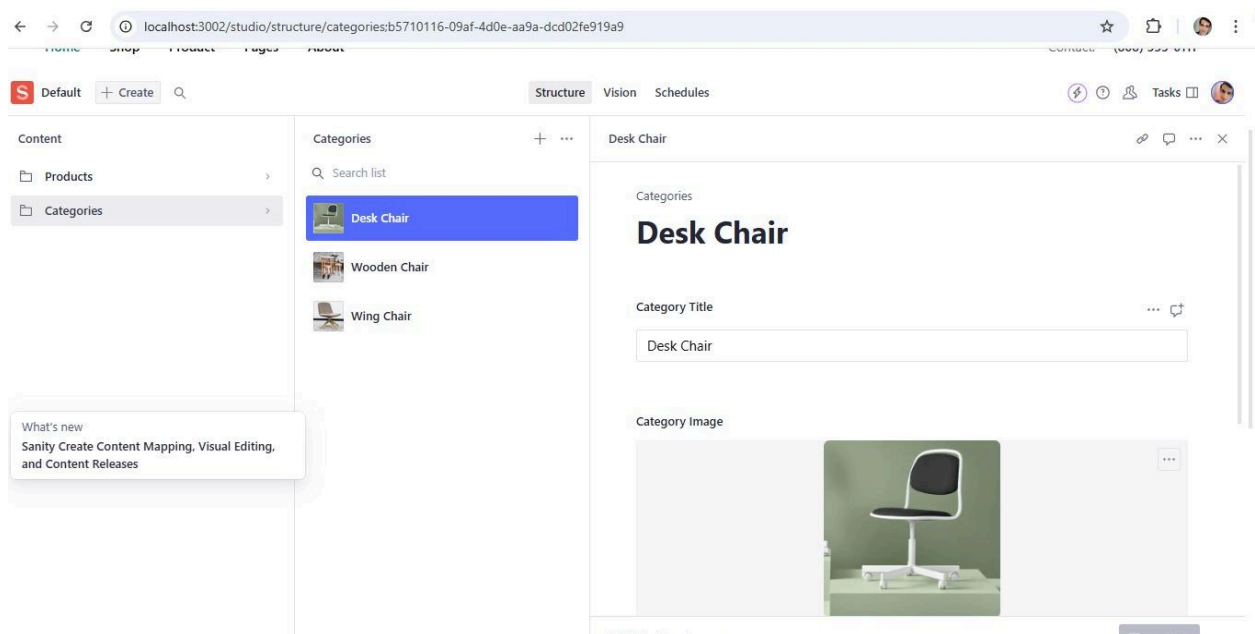
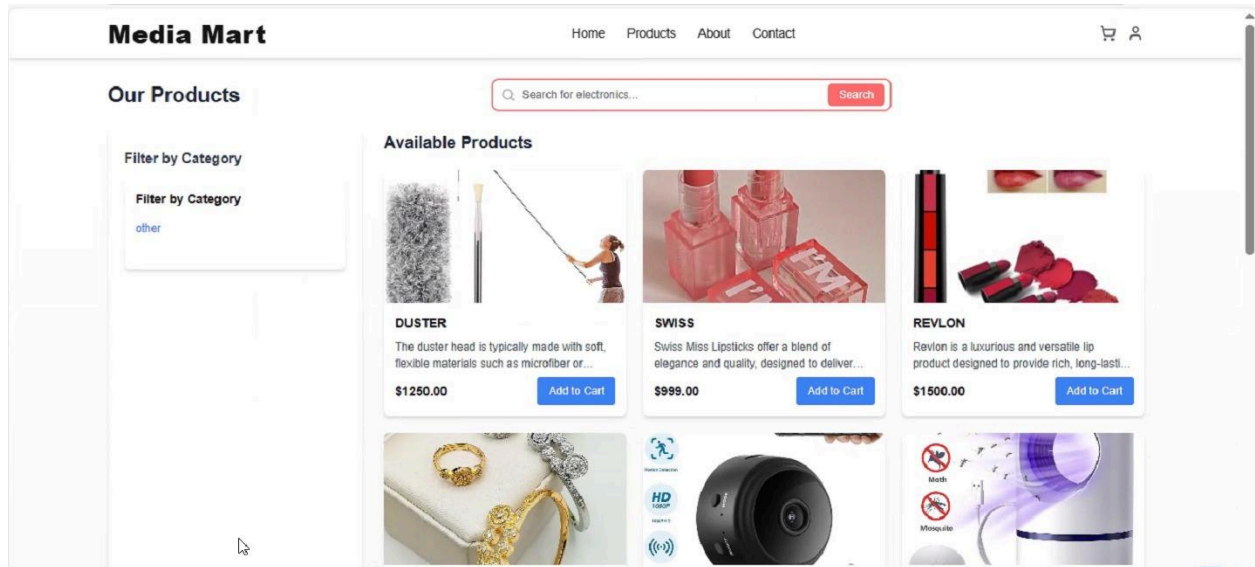
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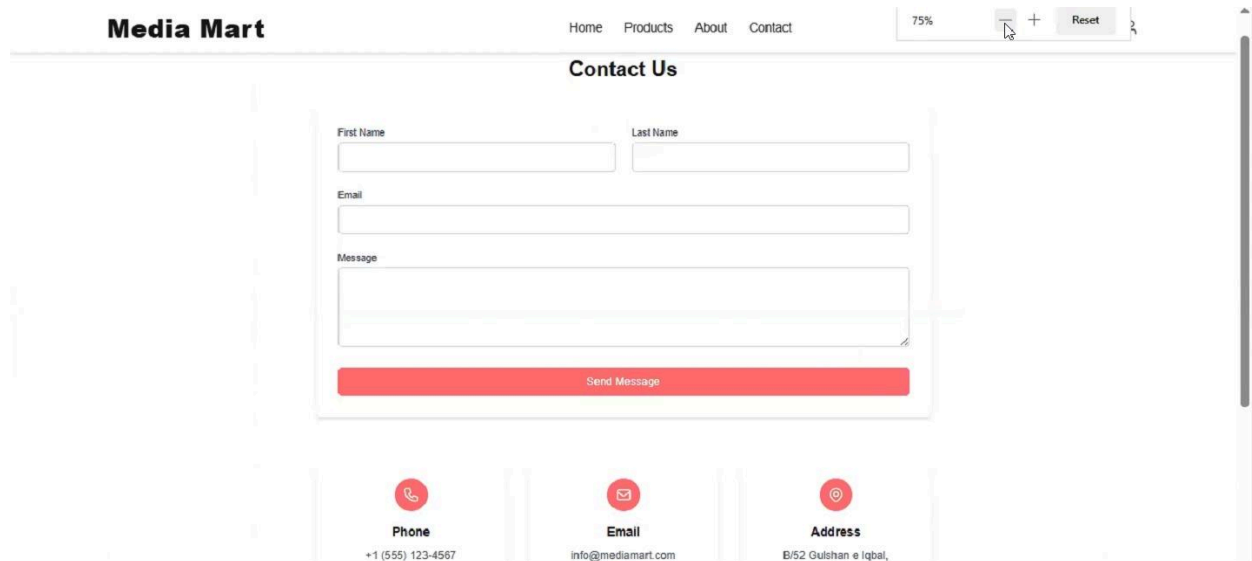




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- **Screenshots/Recordings:**

- Demonstration of category filters.
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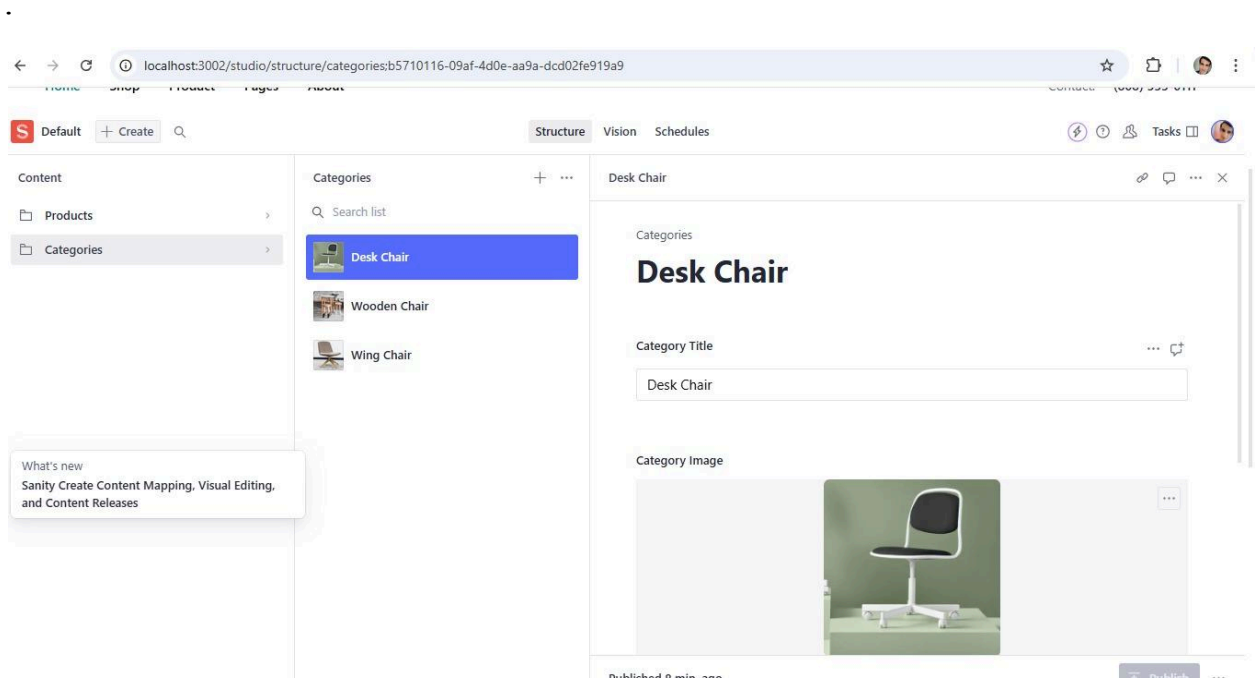
- **Description:**

- **Category Filters:** Filters products based on categories like "Electronics," "Home Appliances," etc.
- **Search Bar:** Provides real-time search functionality, filtering products dynamically as users type.

- **Pagination:** Enhances performance by dividing the product list into pages.

4. Additional Features

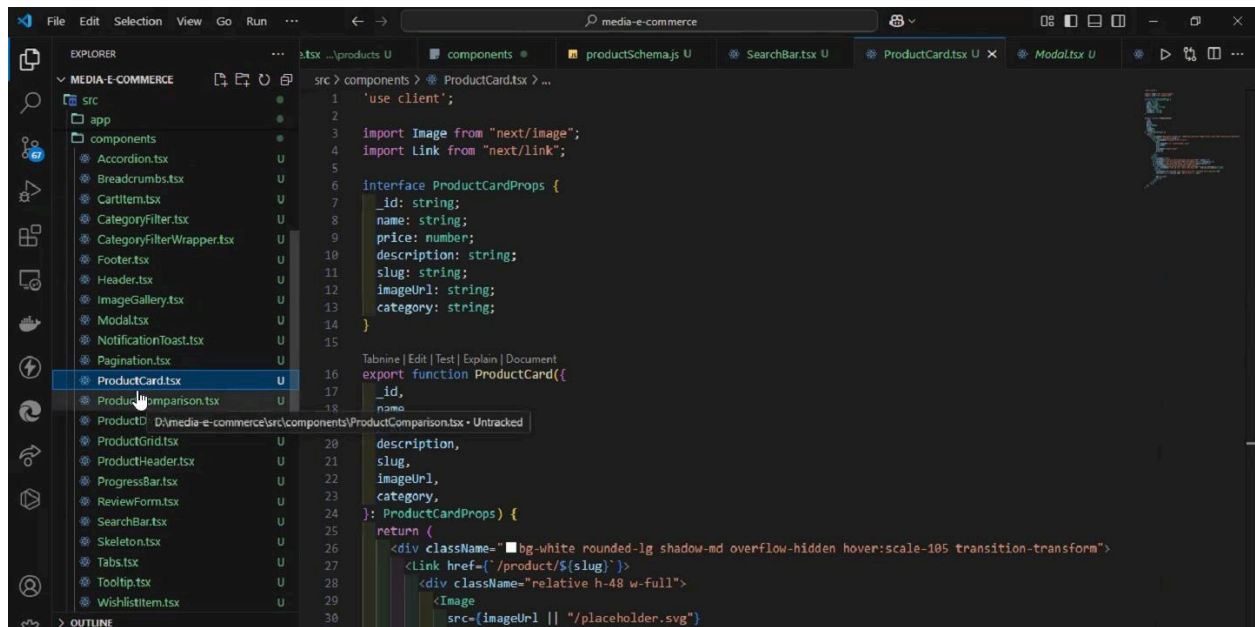
- **Related Products:** Displays similar products on the product detail page, encouraging user engagement.
- **User Profile Components:** Includes a basic user profile section showcasing user details.



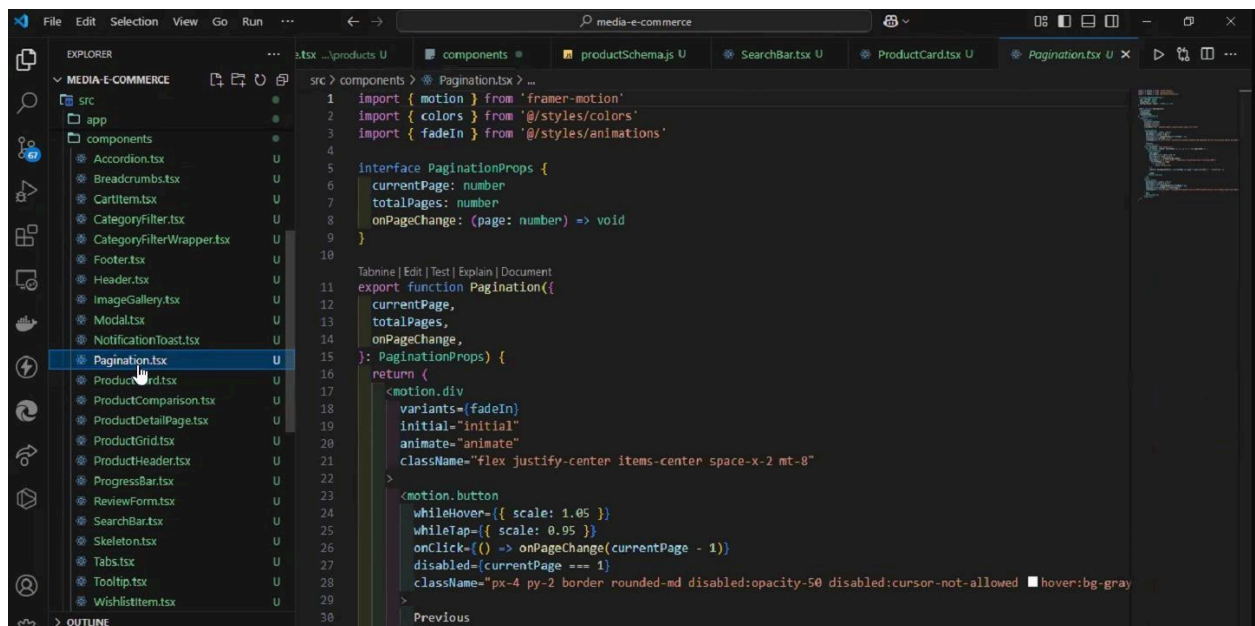
Code Deliverables

Key Components

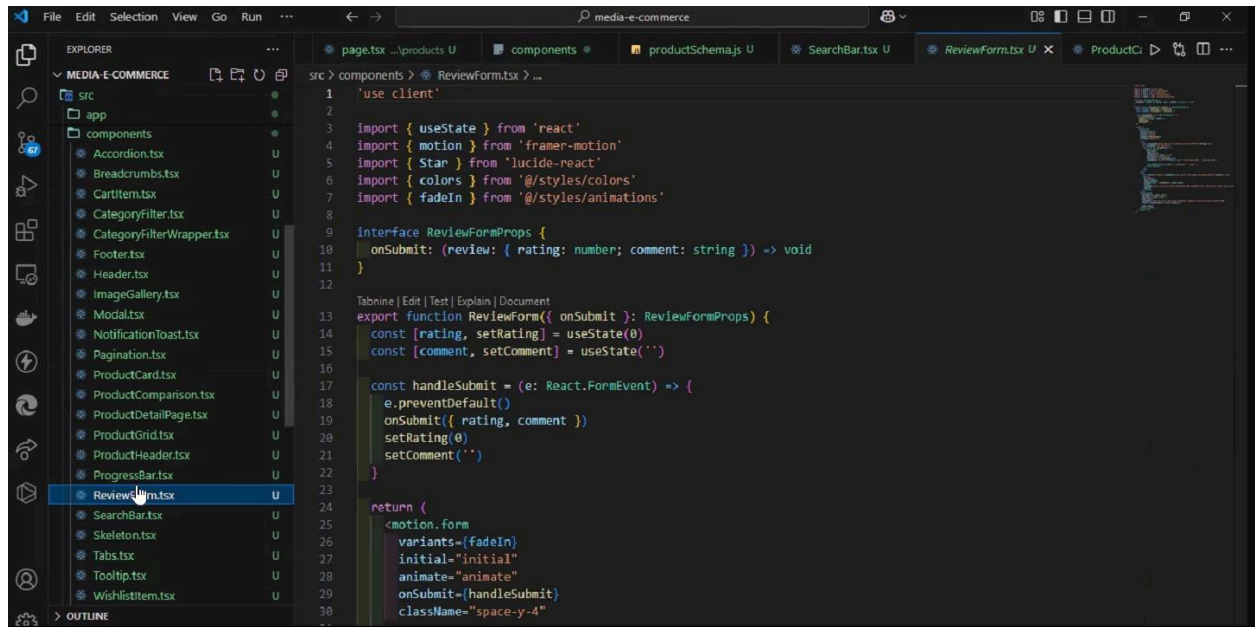
ProductCard Component



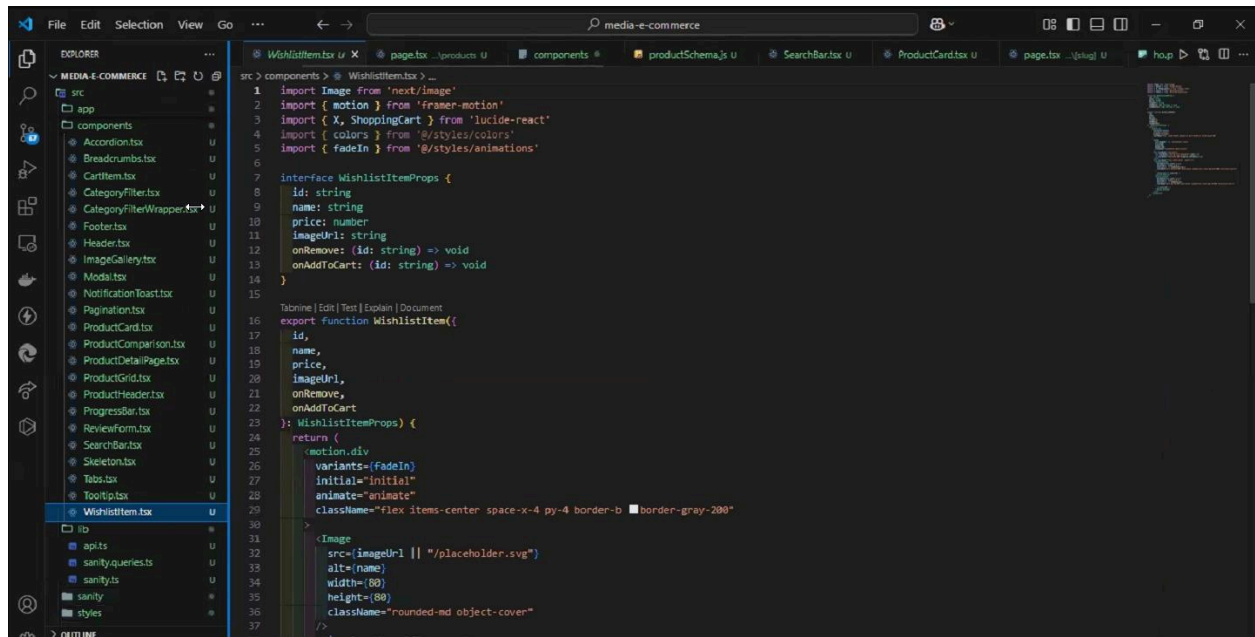
Pagination



Review Component



whishList Component



Documentation

Steps Taken to Build and Integrate Components

1. Data Preparation:

- Created a JSON dataset with fields such as `id`, `name`, `price`, `image`, and `category`.

2. Component Development:

- Built reusable components, including `ProductCard`, `ProductList`, and `SearchBar`.
- Developed additional components like `cart`, `add-to-cart`, and `user profile` sections.

3. Dynamic Routing:

- Implemented Next.js dynamic routing for product detail pages.

4. UI/UX Enhancements:

- Added category filters, search functionality, and pagination.
- Styled components using Tailwind CSS for responsiveness and consistency.

Challenges Faced and Solutions Implemented

1. Efficiently Rendering Large Datasets:

- **Solution:** Implemented pagination to improve performance and load times.

2. Maintaining Consistent Routing and Data Handling:

- **Solution:** Utilized Next.js dynamic routing and centralized data in a JSON file.

3. Creating Responsive and User-Friendly Components:

- **Solution:** Applied Tailwind CSS for styling and ensured a responsive design for various devices.

Best Practices Followed

- Adopted a modular component structure for code reusability.
- Used TypeScript for enhanced type safety and error prevention.
- Ensured responsive designs for optimal user experience on both mobile and desktop.

Components Developed for Media Mart

- Accordion
- ProductCard
- ProductList
- SearchBar
- Image Gallery
- Add-to-Cart
- WishList
- Pagination
- Header
- Footer
- Payment Method

Conclusion

The Media Mart e-commerce platform demonstrates the power of dynamic frontend components in creating an engaging and functional user experience. By utilizing reusable components, efficient data handling, and responsive design principles, the platform successfully combines usability and performance. Key features such as dynamic routing, category filters, search functionality, and pagination ensure smooth navigation and interaction for users. The challenges encountered during development were effectively addressed through best practices, making the platform robust and scalable. Media Mart is a testament to the effectiveness of modern frontend technologies and thoughtful design in crafting user-centric digital solutions.