

# **DYNAMIC FRONTEND COMPONENTS AND STATE MANAGEMENT**

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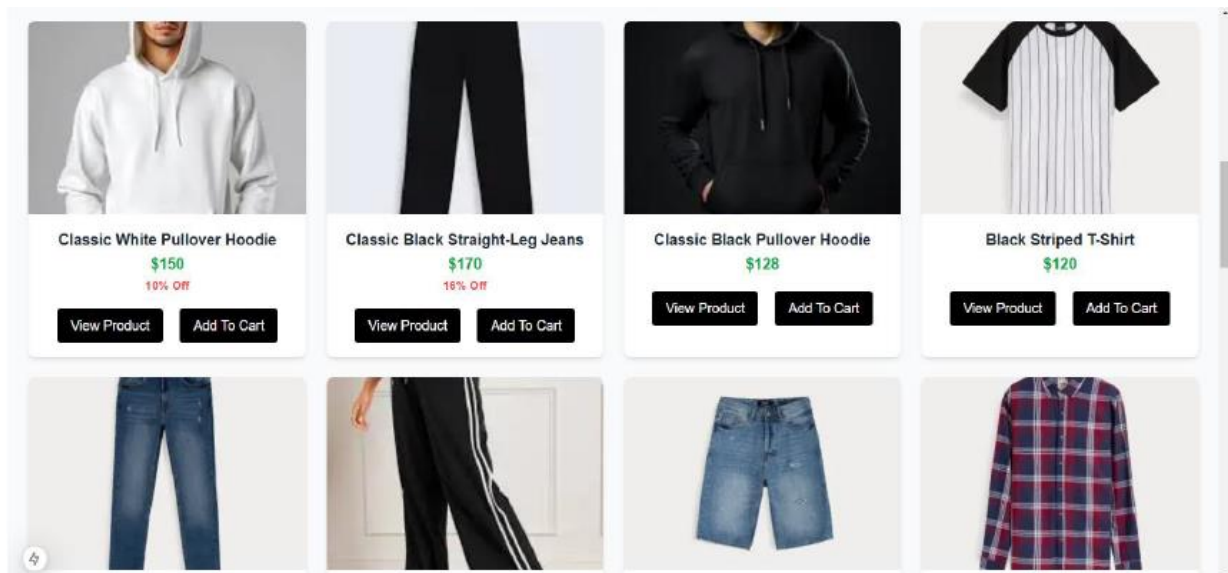
**Hackathon 3 Day 4**

**Mehak Shahbaz  
Reg no: 00368545**

## Achievements on Day 4:

### 1. Products List Page

- Implemented a **Products List Page** by fetching data dynamically from **Sanity CMS**.
- Designed **product cards** with **hover effects**, ensuring they were visually appealing and interactive.
- Utilized reusable components for a **clean and organized code structure**.
- Made the page **fully responsive**, ensuring it displays perfectly on different devices (e.g., mobile, tablet, desktop).



### 2. Product Details Page

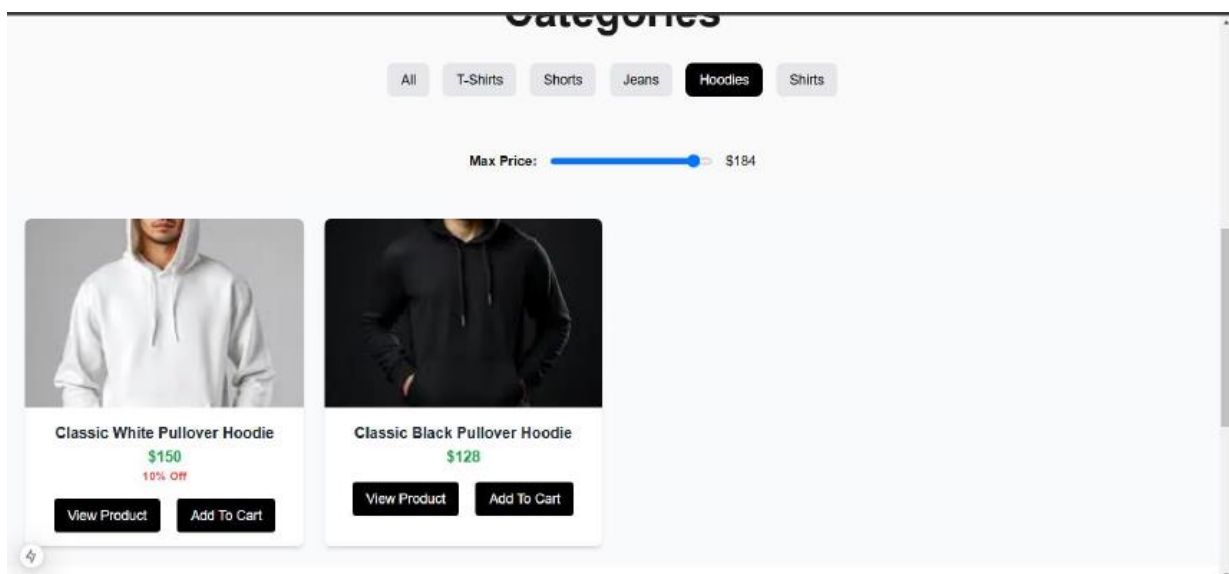
- Created a **Product Details Page** by defining slug in **Sanity schemas** and generating a unique slug for each product.
- Designed the page to dynamically display detailed product information fetched from Sanity.
- Focused on an intuitive layout, ensuring easy navigation and readability.

# Dynamic Frontend Components and State Management



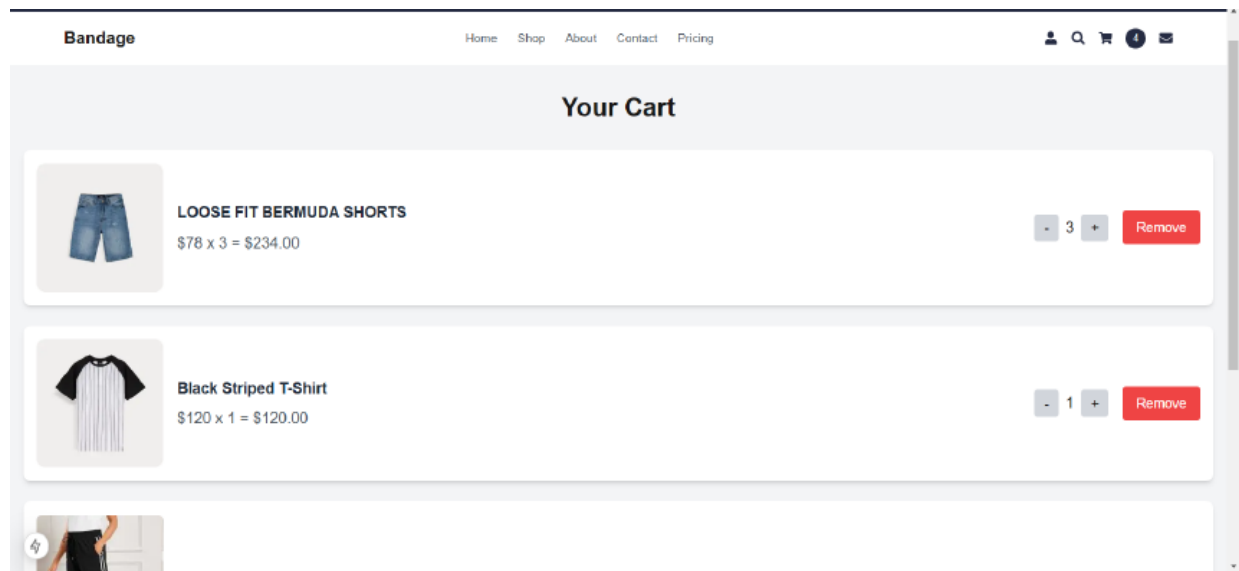
## 3.Filters Implementation

- Added a **Categories Filter** to filter products like **Men's Shirts**, **T-Shirts**, **Hoodies**, etc., based on categories defined in Sanity.
- Implemented a **Price Filter** to allow users to sort products by price range.
- Utilized **React hooks** and **state management** for seamless functionality of filters.
- Ensured filters were efficient and integrated smoothly with the UI.



## 4. Cart Page

- Developed a **Cart Page** with functionalities managed using **Redux Toolkit**.
- Implemented a **smooth Add to Cart feature** for enhanced performance and user experience.
- Focused on **state management** for organized and scalable code.
- Designed the cart to dynamically update product quantities and calculate totals in real time

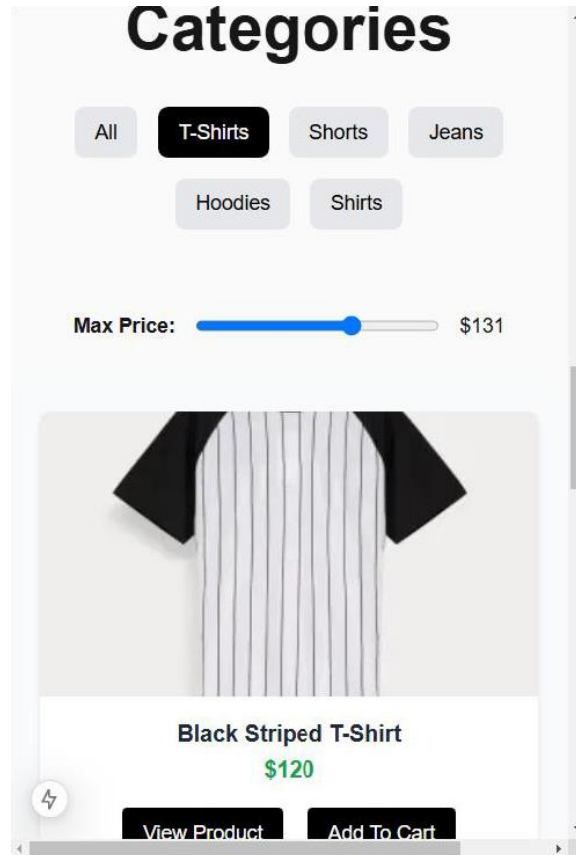


## 5. UI Enhancements and Animations

- Worked extensively on the **user interface** to provide a **better user experience**.
- Added **animations** and **hover effects** to make the website interactive and engaging.
- Ensured that the design was **consistent** and visually appealing across all pages.

## 6. Responsive Design

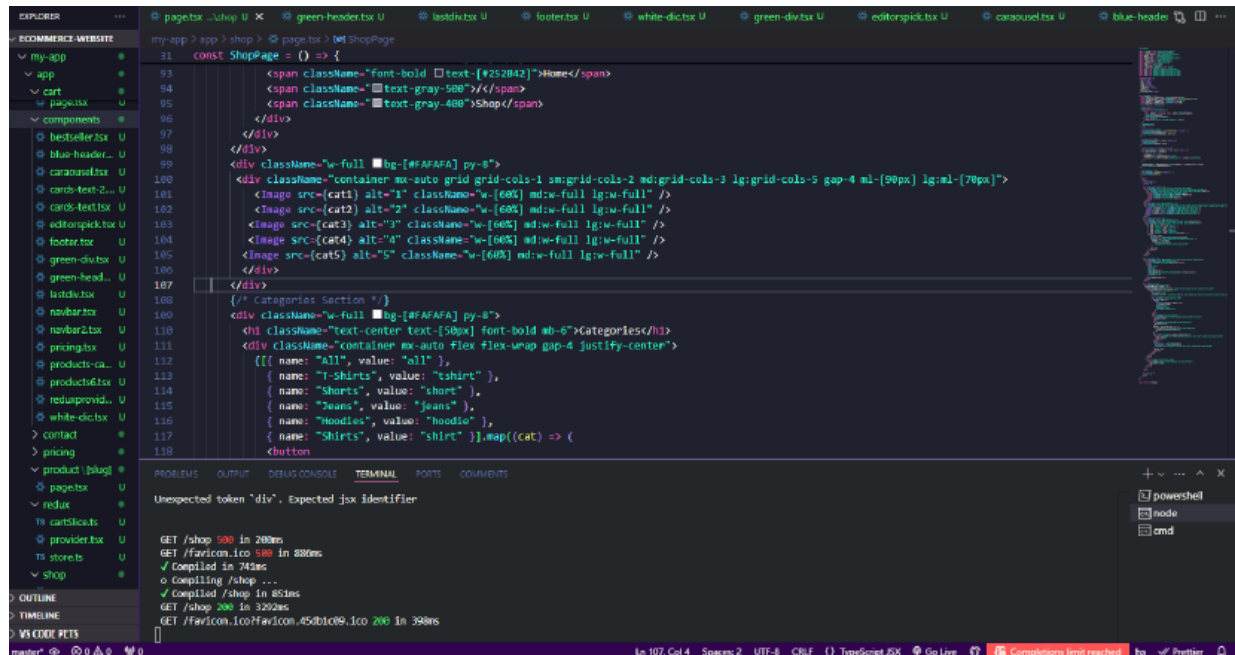
- Ensured the entire website was **responsive** and optimized for viewing on **different devices**.
- Tested and adjusted layouts for mobile, tablet, and desktop screens.



## 7. Reusable Components

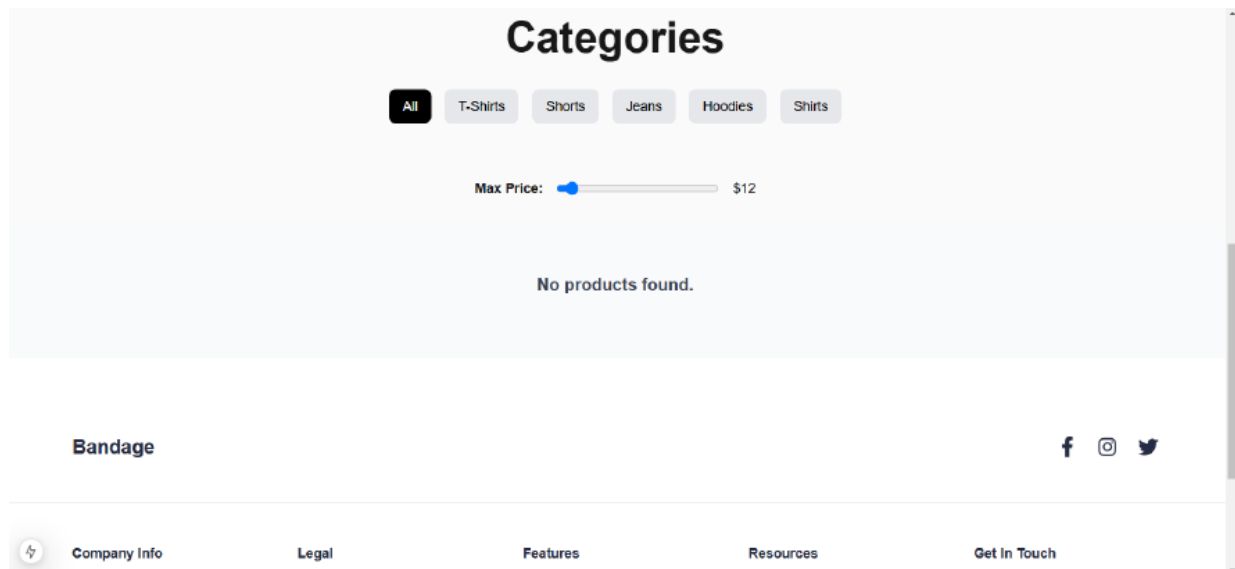
- Created **dynamic components** for products and other elements to maintain consistency and reusability.
- Enabled these components to be used anywhere in the project, reducing redundancy and improving maintainability.

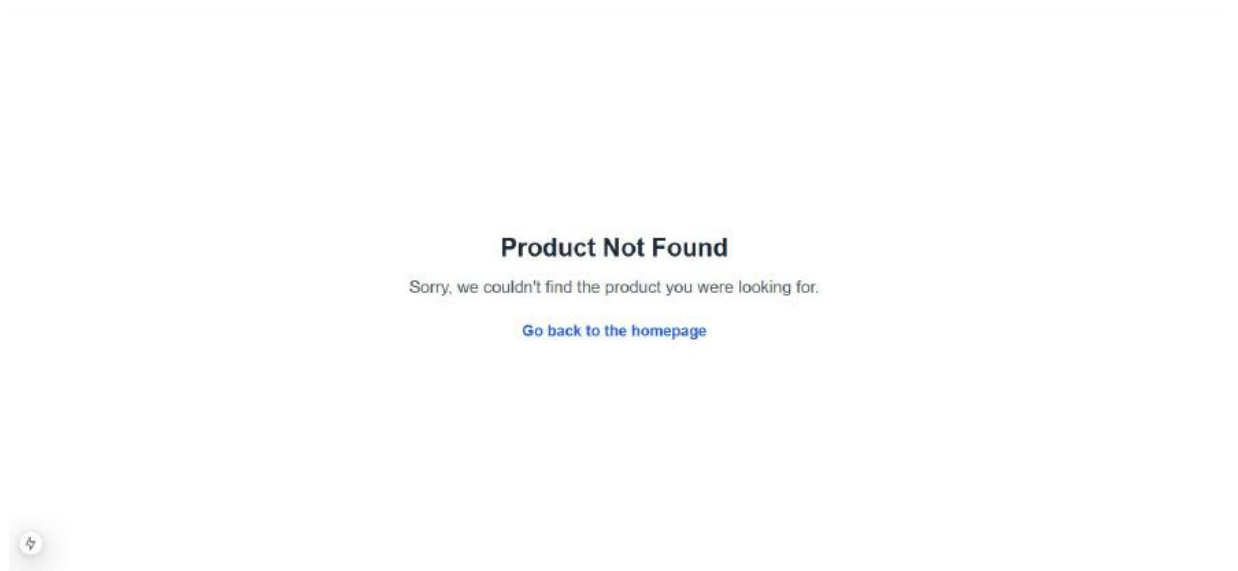
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## 8. Friendly Pages for Error Handling

- I also created user-friendly pages to handle cases where the backend is unavailable, displaying
- graceful "No Products Found" or "Not Found" messages to enhance the user experience.





## Tools and Technologies Used:

- **Sanity CMS** for managing and fetching product data.
- **Redux Toolkit** for state management and organizing cart functionalities.
- **React Hooks** for managing component state and lifecycle.
- **CSS Animations** for hover effects and animations.
- **Responsive Design Techniques** for device compatibility.

## Reflection

Day 4 was both challenging and rewarding. Implementing Redux Toolkit for the cart was initially tricky, but after debugging and refining the code, the functionality came together smoothly. The addition of filters and hover effects elevated the user experience, and watching the website come to life was incredibly satisfying. This project has significantly enhanced my skills in **React**, **Redux**, **Sanity**, and **responsive web design**.