# Progress Report: Day 4 - Developing Interactive Frontend Modules for the Marketplace (E-Commerce)

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## Overview of Task:

The focus of Day 4 was on creating dynamic frontend modules tailored for a marketplace application. These modules aimed to display real-time data from Sanity CMS or APIs while maintaining a focus on reusability, modularity, and responsiveness to deliver an efficient user experience.

## Highlights of Completed Modules:

* - Dynamic Product Grid: Rendered product details dynamically in a visually appealing grid layout.
* - Detailed Product View: Configured individual product pages utilizing Next.js routing.
* - Category Display and Filtering: Created a user-friendly interface to dynamically show categories.
* - Integrated Search Functionality: Built a responsive search bar to locate products by name or tags seamlessly.
* - Cart and Wishlist Management: Enabled users to save items for later, with data persistence via local storage.
* - Checkout Process: Designed a structured, multi-step checkout form.

## Adherence to Best Practices:

Developed scalable and reusable components such as `ProductCard` and `CategoryFilter`.

Applied state management using React hooks for smooth data flow.

Employed responsive design principles with Tailwind CSS.

Enhanced performance by leveraging lazy loading techniques for media.

## Challenges Resolved:

* Challenge: Data Integration Errors

Solution: Refined the API call methods and added robust error-handling mechanisms.

* Challenge: Ensuring Cross-Device Compatibility

Solution: Conducted extensive testing across various devices and adjusted CSS breakpoints accordingly.

* Challenge: Maintaining State Across Sessions

Solution: Combined React Context API with local storage for session persistence.

## Deliverables and Submissions:

Snapshots of Key Modules: Product Grid, Product Detail Page, Cart Functionality.

## Code Example:

Implementation of the `SearchBar` Component:

const SearchBar = ({ onSearch }) => {  
 const [query, setQuery] = useState("");  
   
 const handleSearch = () => {  
 onSearch(query);  
 };  
   
 return (  
 <div className="search-bar">  
 <input  
 type="text"  
 value={query}  
 onChange={(e) => setQuery(e.target.value)}  
 placeholder="Search products..."  
 />  
 <button onClick={handleSearch}>Search</button>  
 </div>  
 );  
};  
export default SearchBar;

## Summary:

The assigned tasks for Day 4 were completed successfully, covering the development of essential modules, integration of dynamic data, and application of best practices in frontend development. These modules are ready for further enhancements and deployment in a live environment.

For additional details or feedback, reach out to **Nazia Imran**





















