

Day:4 Comprehensive Technical Documentation on Dynamic Components

This documentation provides a detailed analysis of essential functionalities in a dynamic marketplace, emphasizing modularity, reusability, and seamless integration with Sanity CMS. Each feature is explained in depth, followed by a conclusion summarizing the overall approach.

Functionalities Overview:

The project incorporates the following core functionalities:

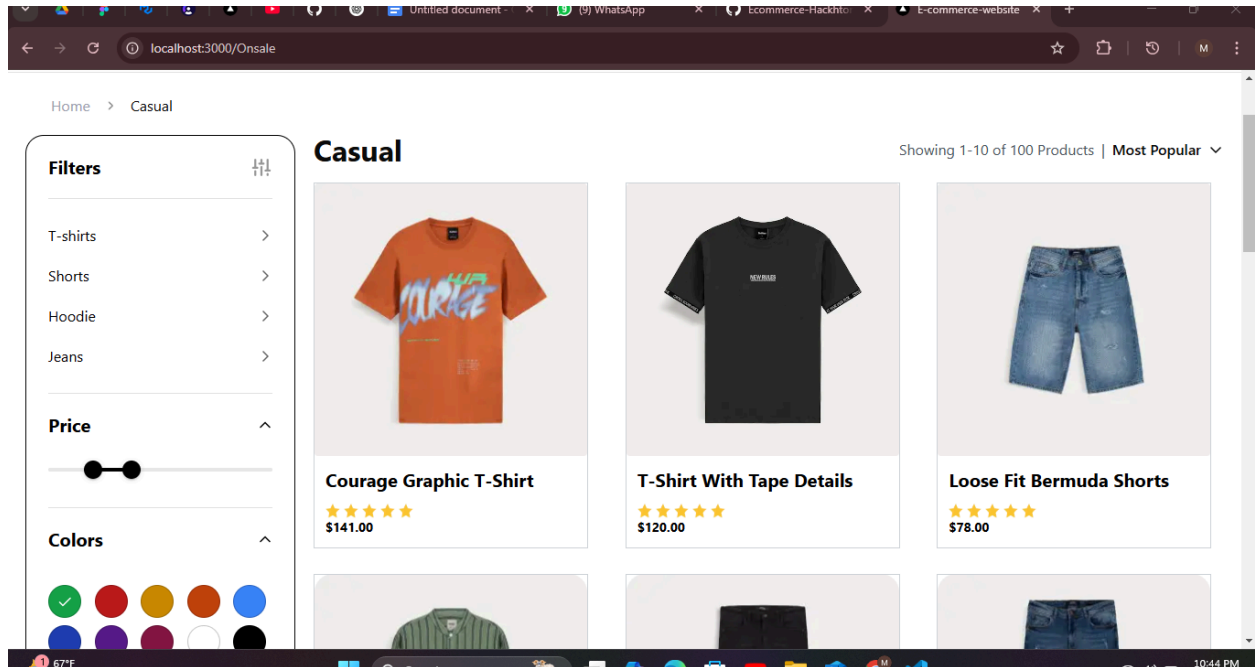
- **Product Listing Page**
- **Dynamic Routing**
- **Cart Functionality**
- **Price Calculation**
- **Search Bar**

1. Product Listing Page

The **Product Listing Page** serves as the main interface where users can explore all available products in an organized and visually appealing manner. Products are dynamically fetched from Sanity CMS and displayed in a grid or list layout.

Key Features:

- **Dynamic Data Rendering:** Fetches products directly from Sanity CMS using GROQ queries.
- **Grid & List Views:** Users can switch between different layouts for better navigation.
- **Pagination Support:** Ensures efficient browsing by loading a limited number of products per page.
- **Responsive Design:** Fully optimized for mobile and desktop users.

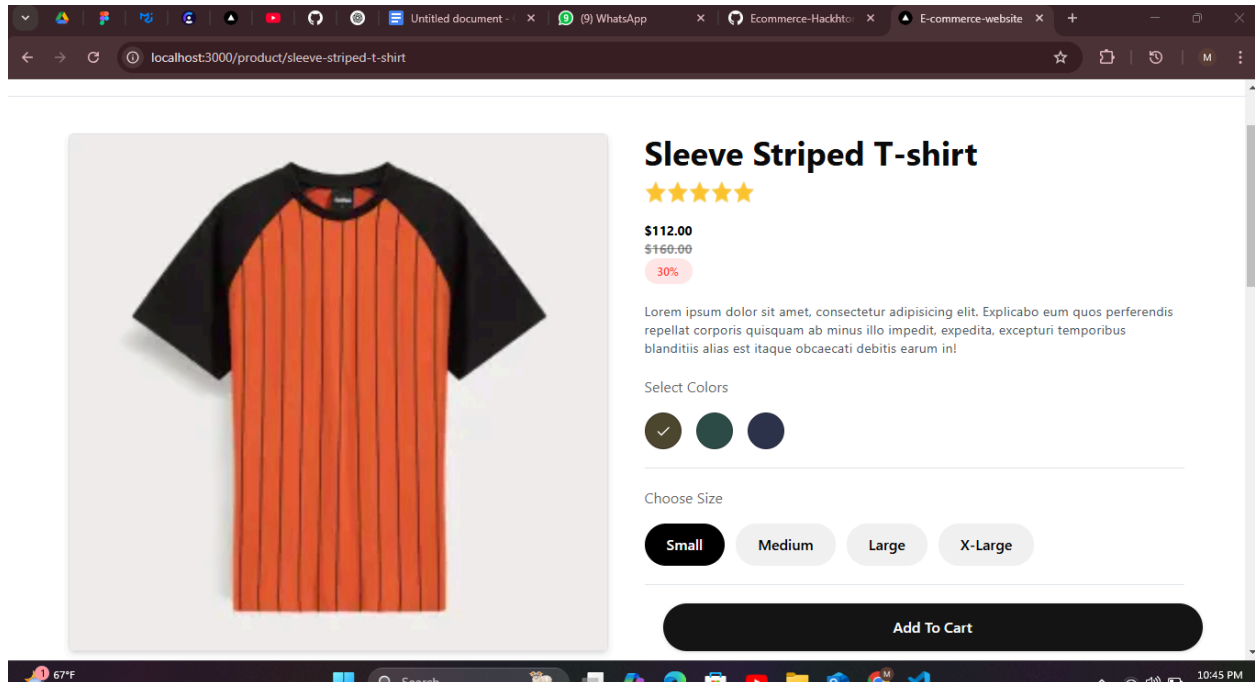


2. Dynamic Routing

Dynamic Routing enables the creation of individual product detail pages, allowing users to view comprehensive information about each product.

Key Features:

- **SEO-Friendly URLs:** Uses slugs to generate clean and readable URLs.
- **Automatic Page Generation:** Dynamically creates product pages without manually defining routes.
- **Efficient Data Fetching:** Retrieves product details based on the route parameters.
- **Enhanced Navigation:** Enables smooth transitions between product listings and details.

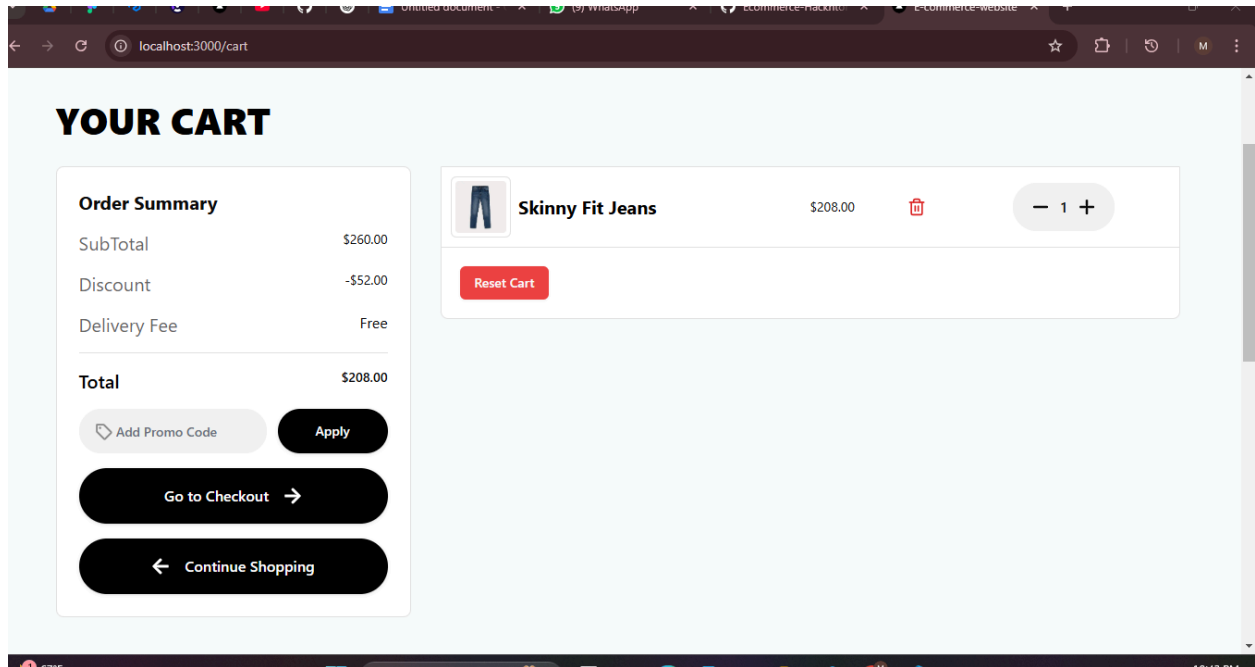


3. Cart Functionality

The **Cart Functionality** manages the user's selected items, ensuring a seamless shopping experience by tracking products and summarizing costs.

Key Features:

- **Add/Remove Items:** Users can add products to the cart or remove them as needed.
- **Persistent Cart State:** Stores cart data even after page reloads.
- **Quantity Management:** Allows users to update the number of items dynamically.
- **Total Cost Calculation:** Automatically updates the total price based on cart contents.

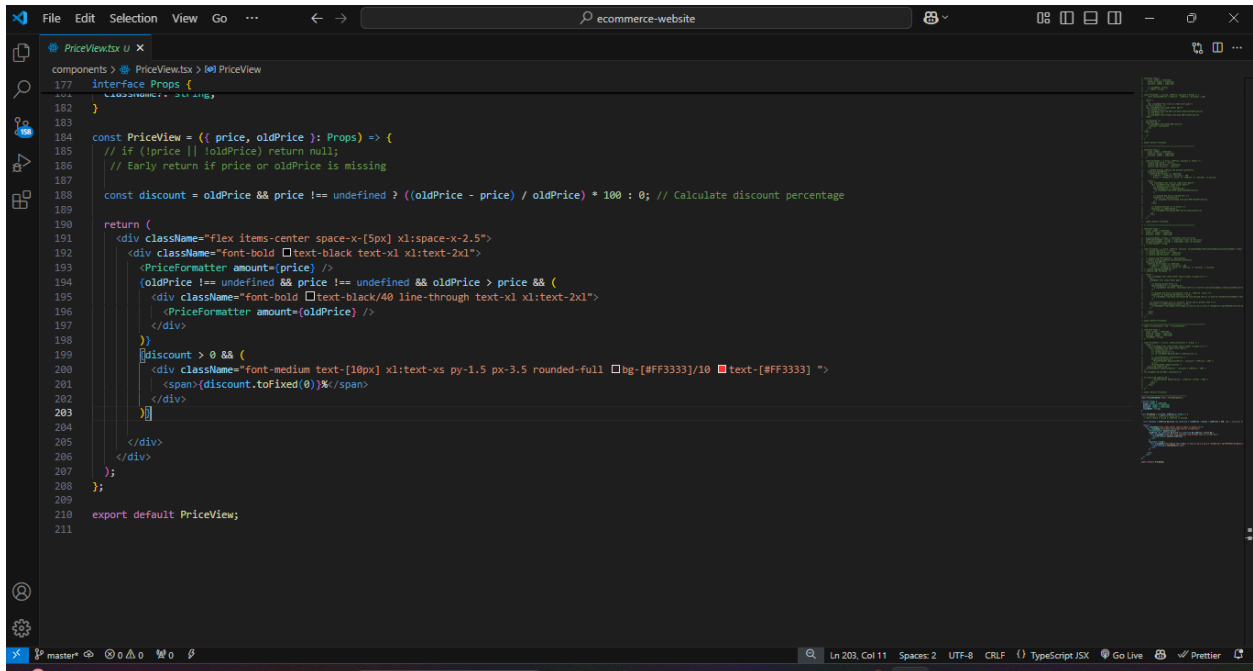


4. Price Calculation

The **Price Calculation** feature dynamically computes the total cost of items in the cart, factoring in discounts, taxes, and other adjustments.

Key Features:

- **Real-Time Updates:** Reflects changes in pricing immediately when items are added or removed.
- **Discount Application:** Applies promotional discounts or coupon codes.
- **Tax Computation:** Calculates applicable taxes based on user location.
- **Currency Formatting:** Displays prices in a user-friendly format.



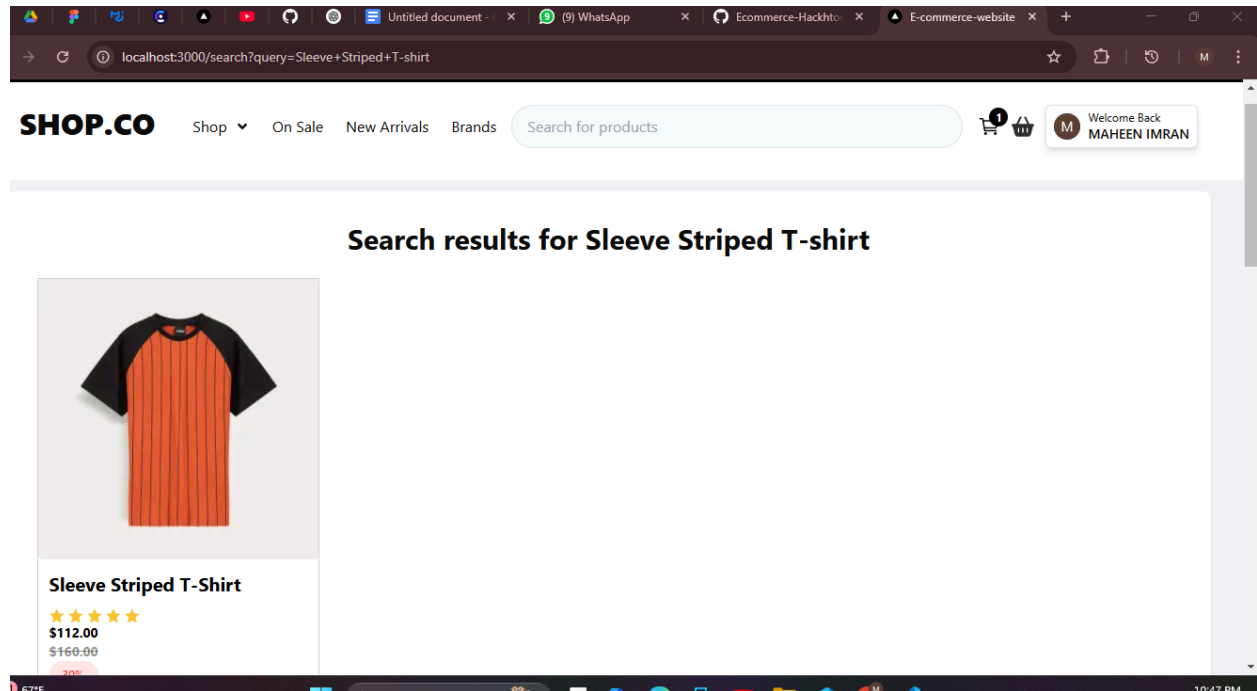
```
components > PriceViews > PriceView
177 interface Props {
178   price: number;
179   oldPrice: number;
180 }
181
182
183
184 const PriceView = ({ price, oldPrice }: Props) => {
185   // if (!price || !oldPrice) return null;
186   // Early return if price or oldPrice is missing
187
188   const discount = oldPrice && price !== undefined ? ((oldPrice - price) / oldPrice) * 100 : 0; // Calculate discount percentage
189
190   return (
191     <div className="flex items-center space-x-[5px] xl:space-x-2.5">
192       <div className="font-bold text-black text-xl xl:text-2xl">
193         <PriceFormatter amount={price} />
194         <div className="font-bold text-black/40 line-through text-xl xl:text-2xl">
195           <PriceFormatter amount={oldPrice} />
196         </div>
197       </div>
198       <div>
199         <div className="font-medium text-[10px] xl:text-xs py-1.5 px-3.5 rounded-full bg-[#FF3333]/10 text-[#FF3333]">
200           <span>{discount.toFixed(0)}%</span>
201         </div>
202       </div>
203     </div>
204   );
205 }
206
207
208
209 export default PriceView;
210
211
```

5. Search Bar

The **Search Bar** allows users to locate products efficiently by filtering results based on keywords or specific attributes. It enhances navigation and improves the user experience.

Key Features:

- **Keyword-Based Search:** Users can search by product name, category, or attributes.
- **Optimized Performance:** Queries the database efficiently for quick search results.
- **User-Friendly Design:** Features an intuitive layout with a placeholder for better usability.
- **Integration with Sanity:** Fetches relevant products using GROQ queries.



Nutshell Summary

On **Day 4**, the focus was on refining key functionalities within the dynamic marketplace, ensuring seamless integration with **Sanity CMS** and optimizing user experience.