

Day 4!

Detailed Documentation for Dynamic Components and Functionalities

This documentation provides an in-depth analysis of the key functionalities for a dynamic marketplace, emphasizing modularity, reusability, and integration with Sanity CMS. Each feature is described comprehensively, followed by a conclusion summarizing the approach.

Step 1: Functionalities Overview

The project implements the following core functionalities:

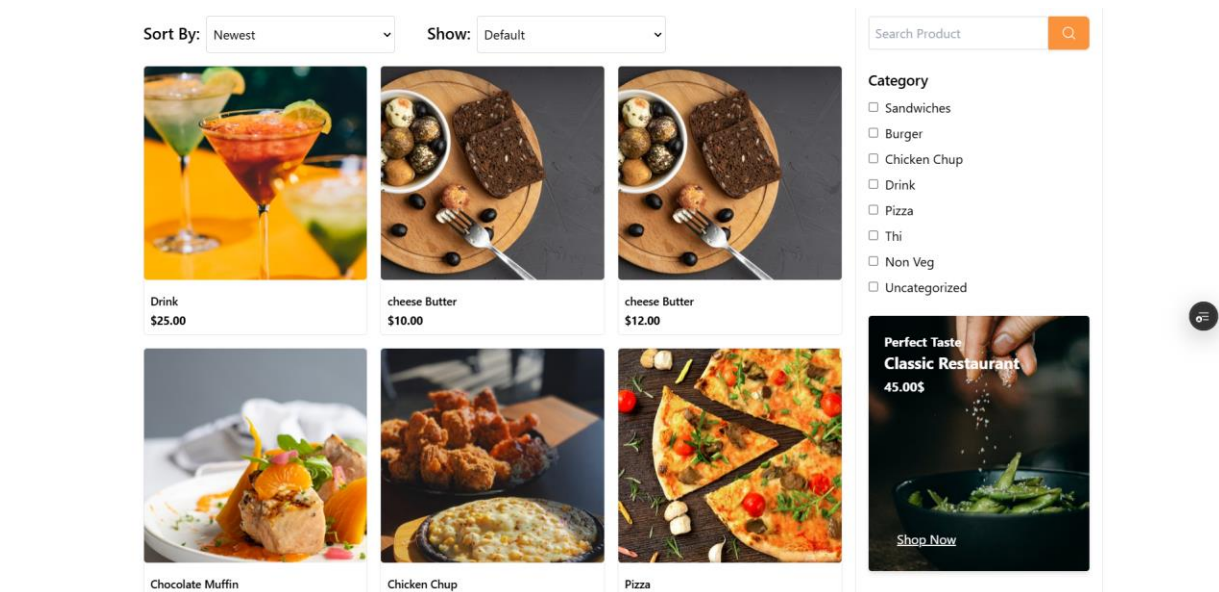
- 1. Product Listing Page**
- 2. Dynamic Route**
- 3. Cart Functionality**
- 4. Checkout**
- 5. Price Calculation**
- 6. Inventory Management**

Each functionality contributes to building a responsive and scalable marketplace.

Step 2: Functionalities in Detail

1. Product Listing Page

The Product Listing Page is the primary interface where users can view all the available products in a structured and visually appealing format. Products are displayed dynamically, fetched from Sanity CMS, and rendered in a grid or list layout.



Detailed Description:

- The page offers sorting and filtering options to enhance usability, allowing users to organize products based on price, categories, or popularity.
- Pagination ensures the seamless handling of large datasets, improving performance and user experience.
- Responsive design ensures compatibility across devices, from desktops to mobile phones.
- Integration with Sanity CMS ensures real-time updates, so any product changes in the backend are instantly reflected.

2. Dynamic Route

Dynamic routing allows for the creation of individual product detail pages, enabling users to view detailed information about each product.



cheese Butter

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque diam pellentesque bibendum non dui volutpat fringilla bibendum.

\$10

★★★★★ | 5 rating | 22 Reviews

Add to cart

Category: Pizza

Tag: Our Shop




Detailed Description:

- Every product has a unique identifier (ID or slug) used to dynamically generate its URL (e.g., /product/[id]).
- These pages are server-rendered to improve SEO and provide faster initial load times.
- Dynamic routes display details like product descriptions, images, price, stock status, and reviews.
- This approach ensures scalability, allowing new products to automatically generate corresponding pages without manual intervention.

3. Cart Functionality

The Cart Functionality manages the user's selected items, providing a seamless shopping experience by tracking their choices and summarizing costs.

Product

 cheese Butter

Price

\$10.00


Quantity

Subtotal

\$10.00

Remove

X

 Drink

Price

\$25.00


Quantity

Subtotal

\$25.00

Remove

X

 Chicken Chup

Price

\$17.00

Quantity

Subtotal

\$17.00

Remove

X

Coupon Code

Enter a valid coupon code to get discounts.

Apply

Total Bill

Cart Subtotal

\$52.00

Shipping Charge

\$20.00

Total Amount

\$72.00

Proceed to Checkout

0

Detailed Description:

- Users can add products to their cart directly from the product listing or detail page.
- The cart dynamically updates quantities and calculates the total cost, ensuring a real-time experience.
- A mini-cart displays a quick summary of selected items, while a detailed cart page offers options to edit or remove items.
- State management tools, such as React Context or Redux, are used to maintain the cart state across the application.
- Cart data persistence is achieved using local storage or session storage, ensuring the cart remains intact even if the page is refreshed.

4. Checkout

The Checkout functionality streamlines the purchase process, collecting and validating user information to finalize the order.

Shipping Address

First name

Last name

Email address

Phone number

Company

Choose country

Choose city

Zip code


Address 1

Address 2


Billing Address

☐ Same as shipping address


< Back to cart

Chicken Tikka Kabab
150 gm net

\$50

Chicken Tikka Kabab
150 gm net

\$50

Chicken Tikka Kabab
150 gm net

\$50

Sub-total

\$130

Shipping

Free

Discount

25%

Tax

\$54.76

Total

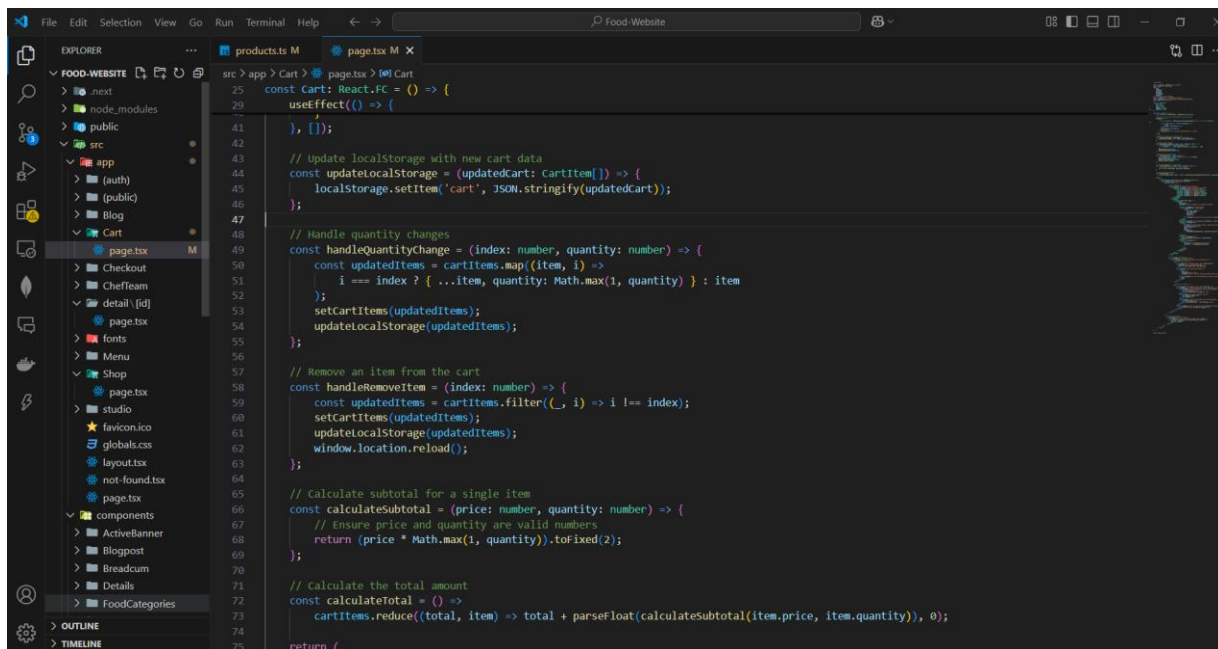
\$432.65

Detailed Description:

- The checkout process is divided into multiple steps: billing details, shipping address, and payment information.
- A dynamic progress tracker indicates the current step, enhancing the user experience.
- Input validation ensures that all required fields are filled correctly, reducing errors during order submission.
- Although payment integration can be mocked initially, it is designed to be extendable with payment gateways like Stripe or PayPal.
- Order summaries are displayed at the end, allowing users to confirm their details before finalizing the purchase.

5. Price Calculation

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

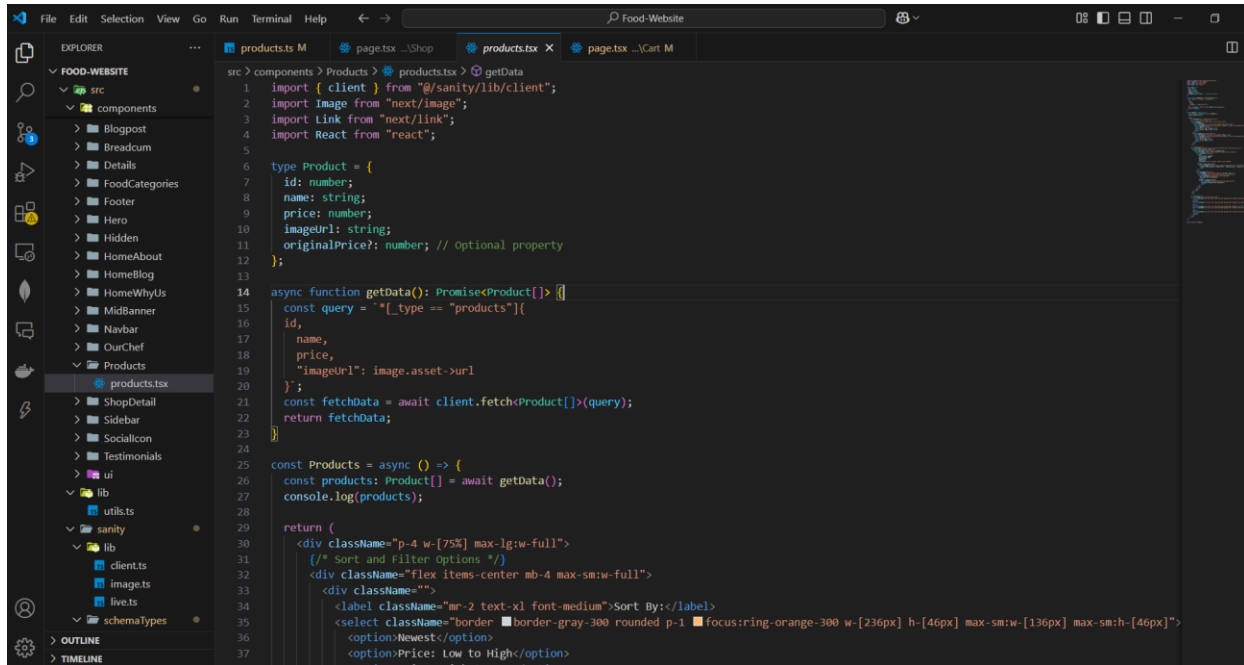


Detailed Description:

- The subtotal updates in real-time as items are added, removed, or quantities are adjusted.
- Taxes and discounts are calculated dynamically based on predefined rules, offering flexibility to apply promotional codes.
- The calculation logic is optimized to handle multiple scenarios, such as bulk discounts or tiered pricing.
- This functionality improves transparency by breaking down costs, giving users a clear understanding of the final price.

Step 3: Integration with Sanity CMS

Sanity CMS serves as the backend for managing and retrieving product data dynamically.



Detailed Description:

- Products, categories, and other metadata are stored in Sanity CMS, allowing admins to update content without touching the codebase.
- A robust client is used to query Sanity CMS, fetching data dynamically and efficiently.
- Changes made in the CMS are instantly reflected on the frontend, providing a seamless content management experience.
- The integration is designed to be extendable, allowing the addition of new data types or fields as the marketplace grows.

Conclusion:

This documentation outlines a comprehensive approach to building dynamic and responsive marketplace components. By leveraging Sanity CMS for backend management and modular frontend development techniques, the application achieves scalability, efficiency, and a superior user experience.

Each functionality—from product listing to—plays a vital role in delivering a professional marketplace that meets real-world needs. Future enhancements, such as integrating advanced analytics or AI-based recommendations, can further elevate the platform.