Hackathon-3

Dynamic Frontend Components

E-Commerce

Introduction

This assignment focusses on building a dynamic frontend, a fully functional & responsive marketplace for a modern e-commerce technologies, providing a seamless user experience for browsing, searching and purchasing products. This goal was to implement various components **SHOP.CO** that enhance user interaction advances features i.e. dynamic product listing, product-category, payment-gateway integration, an automatic cart system and optimize the marketplace usability. For implementing dynamic features such as,

   i.   Displaying products dynamically.
  ii.   Displaying product listing page.
 iii.   Adding product details page.
 iv.   Adding products to cart.
  v.   Shopping cart (or checkout button to check the product list for purchasing products dynamically)
 vi.   New user can easily Sign Up their website.
vii.   Regular customer can log in easily to their website.
viii.   Ensure responsiveness across devices.
 ix.   Implement modularity by breaking the components into smaller, reusable parts.

Tools and Technology

➢ **Framework**: React & Next.js
➢ **CMS:** Sanity CMS
➢ **Styling**: Tailwind CSS & CSS

- ➤ **API Integration**: APIs were utilized to fetch external data and sync it with the CMS.
- ➤ **ShadCn Library**: ShadCn was used to integrate pre-designed and accessible UI components, expending development without compromising design consistency.
- ➤ **State Management**: React Hooks.

Overview

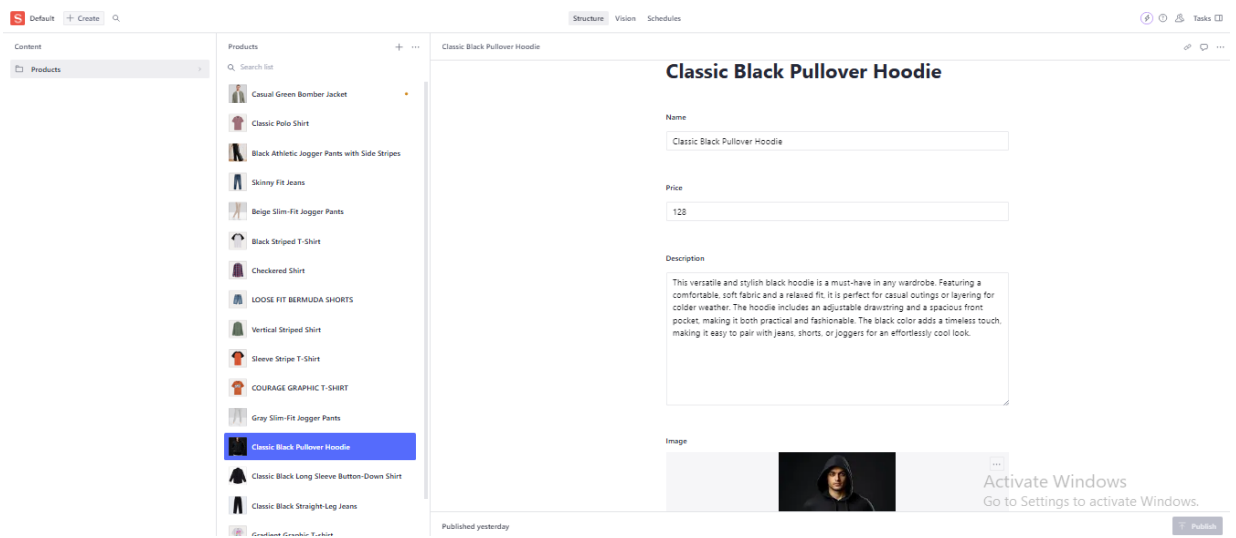## 1. Product Listing
  - o Dynamically fetched product data from APIS.
  - o Displayed products in a responsive layout with name, price, image & description.
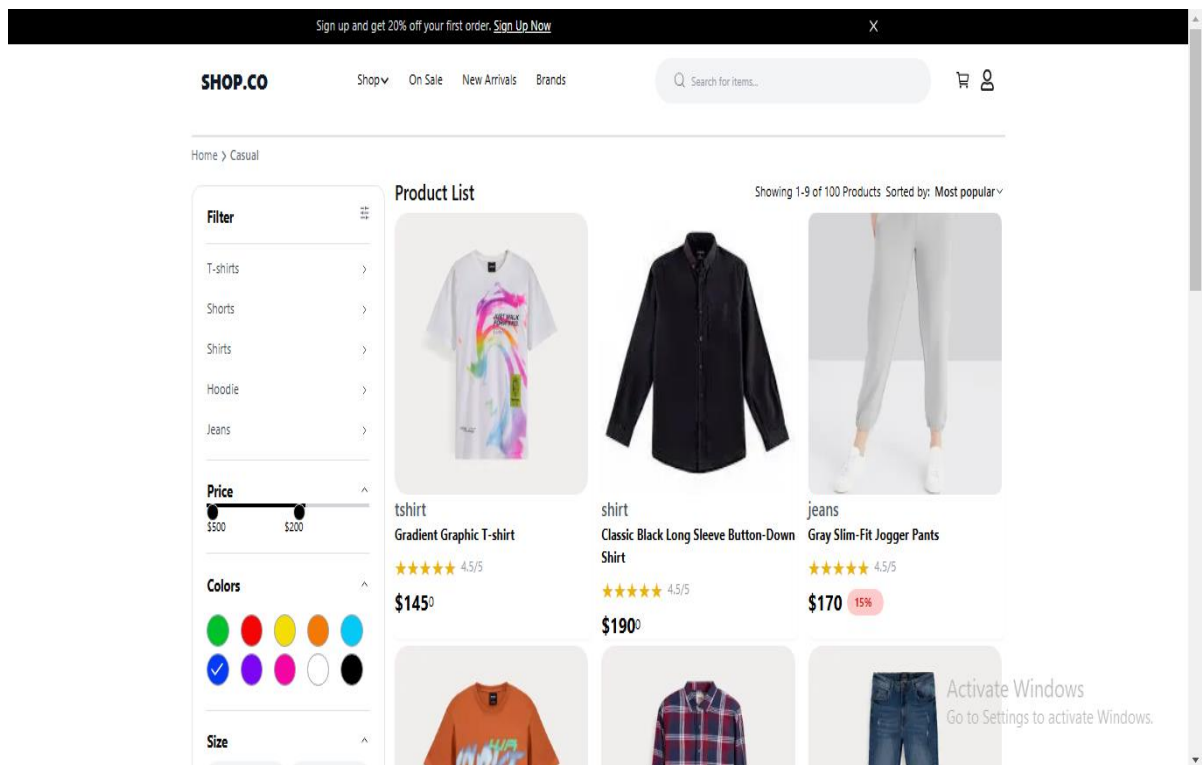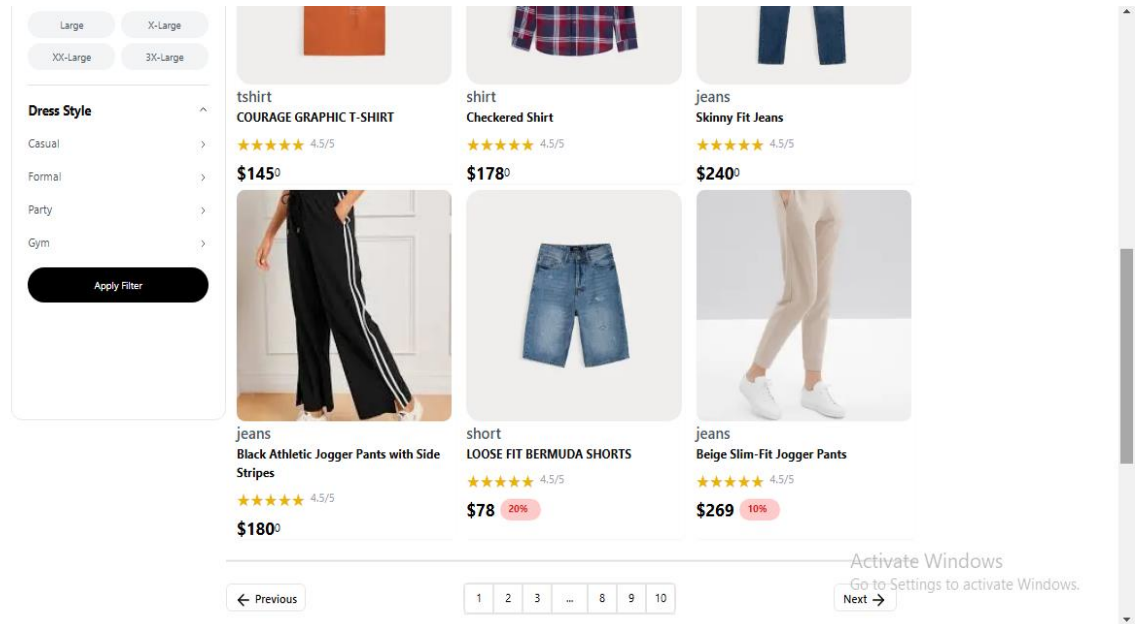
2. Sanity CMS

Sanity, a headless content management system (CMS), was integrated to, manage product data dynamically, it provides a robust platform for data management and real-time updates.

3. Product Page with Dynamic Data

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

CASUAL GREEN BOMBER JACKET

★★★★ 4.5/5

$300 `20%`

This stylish green bomber jacket offers a sleek and modern twist on a classic design. Made from soft and comfortable fabric, it features snap buttons and ribbed cuffs, giving it a sporty yet refined look. The minimalist style makes it perfect for layering over casual t-shirts or hoodies. Whether you're out with friends or just lounging, this jacket provides a laid-back yet fashionable vibe. Its muted green color adds a subtle, earthy tone that pairs well with a variety of outfits, making it a versatile addition to your casual wardrobe.

Select Colors
Blue Red Black Yellow

Choose Size
S XXL XL L

[Add to Cart]

SHIRT

CHECKERED SHIRT

★★★★ 4.5/5

$178 `0%`

This men's plaid shirt combines timeless style and comfort, featuring a bold red, navy, and white checkered pattern. With a classic button-down collar and long sleeves, it offers a relaxed fit for easy wear. Made from soft, breathable fabric, this shirt is perfect for casual outings, weekends, or layering over a t-shirt. Its versatile design ensures it pairs well with jeans or chinos, making it a wardrobe essential for any season.

Select Colors
White Black Yellow Blue

Choose Size
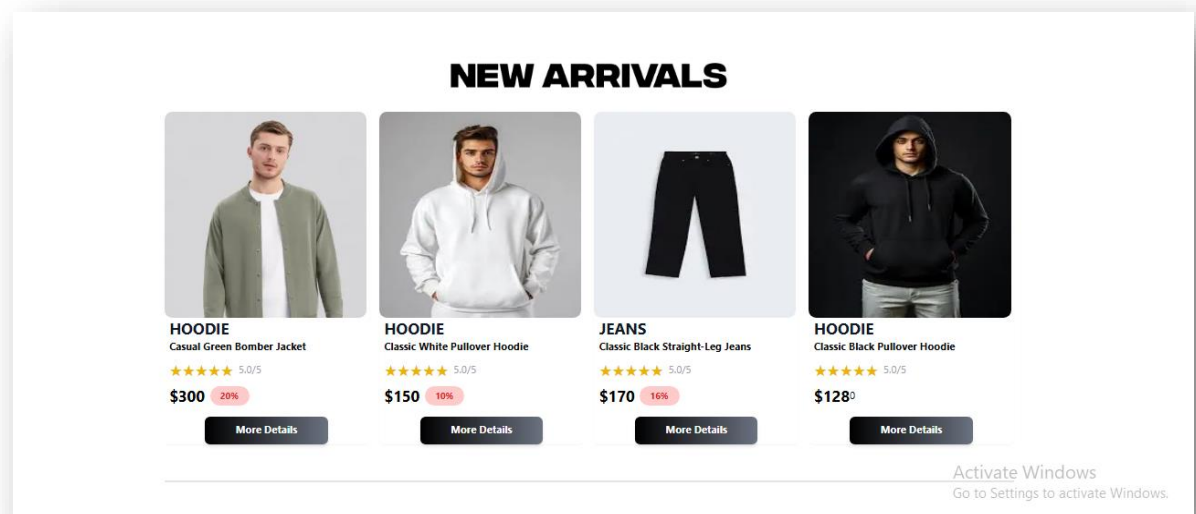XL L XXL M

[Add to Cart]
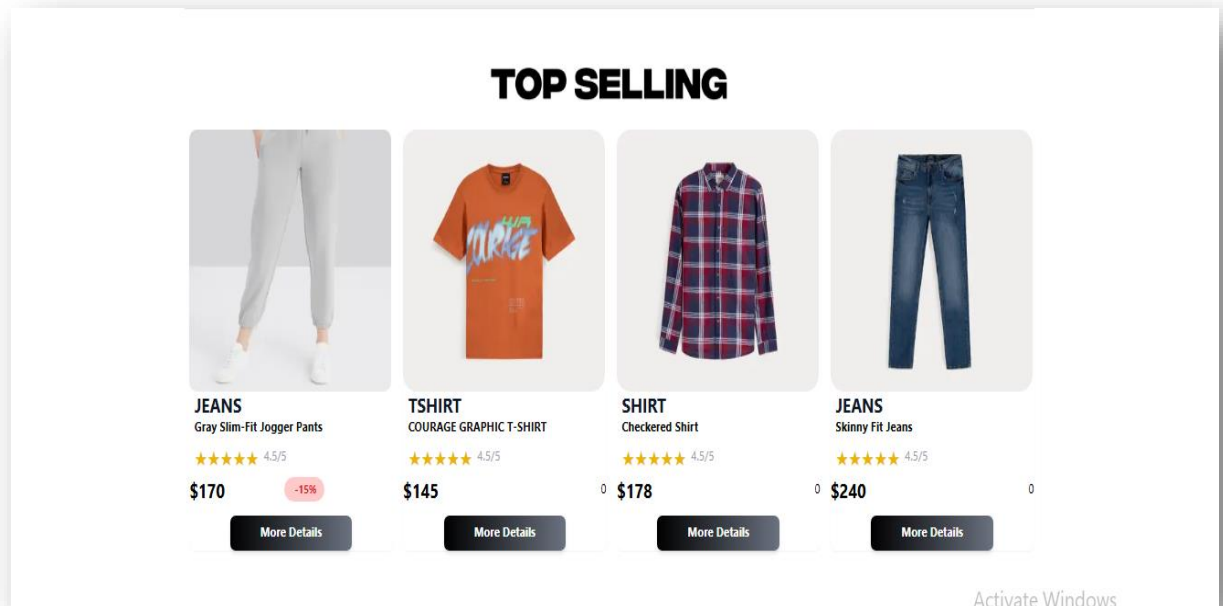
[4]

Dynamic Data Show from Terminal

```
 Compiled in 1097ms (3128 modules)
{
  category: 'hoodie',
  price: 300,
  sizes: [ 'S', 'XXL', 'XL', 'L' ],
  imageUrl: 'https://cdn.sanity.io/images/wf4viek5/production/4e2ed6a9eaa6e1413843e53f3113ccfd2104c301-278x296.png',
  _id: 'Pt3ANWWznCudbYDKQJL9cB',
  name: 'Casual Green Bomber Jacket',
  description: "This stylish green bomber jacket offers a sleek and modern twist on a classic design. Made from soft and comfortable fabric, it featu
res snap buttons and ribbed cuffs, giving it a sporty yet refined look. The minimalist style makes it perfect for layering over casual t-shirts or ho
odies. Whether you're out with friends or just lounging, this jacket provides a laid-back yet fashionable vibe. Its muted green color adds a subtle,
earthy tone that pairs well with a variety of outfits, making it a versatile addition to your casual wardrobe.",
  discountPercent: 20,
  isNew: true,
  colors: [ 'Blue', 'Red', 'Black', 'Yellow' ]
}
 GET /Dynamic/Pt3ANWWznCudbYDKQJL9cB 200 in 611ms
 Compiled in 976ms (3128 modules)
 Compiled in 2.8s (3128 modules)
{
  description: "This stylish green bomber jacket offers a sleek and modern twist on a classic design. Made from soft and comfortable fabric, it featu
res snap buttons and ribbed cuffs, giving it a sporty yet refined look. The minimalist style makes it perfect for layering over casual t-shirts or ho
odies. Whether you're out with friends or just lounging, this jacket provides a laid-back yet fashionable vibe. Its muted green color adds a subtle,
earthy tone that pairs well with a variety of outfits, making it a versatile addition to your casual wardrobe.",
  price: 300,
  discountPercent: 20,
  isNew: true,
  sizes: [ 'S', 'XXL', 'XL', 'L' ],
  _id: 'Pt3ANWWznCudbYDKQJL9cB',
  category: 'hoodie',
  name: 'Casual Green Bomber Jacket',
  imageUrl: 'https://cdn.sanity.io/images/wf4viek5/production/4e2ed6a9eaa6e1413843e53f3113ccfd2104c301-278x296.png',
  colors: [ 'Blue', 'Red', 'Black', 'Yellow' ]
}
```
Activate Windows
Go to Settings to activate Windows.

This is how we can work dynamically with terminal inputs in **Visual Studio Code**.

4. Category Components
o   Fetch categories dynamically from the data source
o   Allow filtering products by selected category.

TOP SELLING

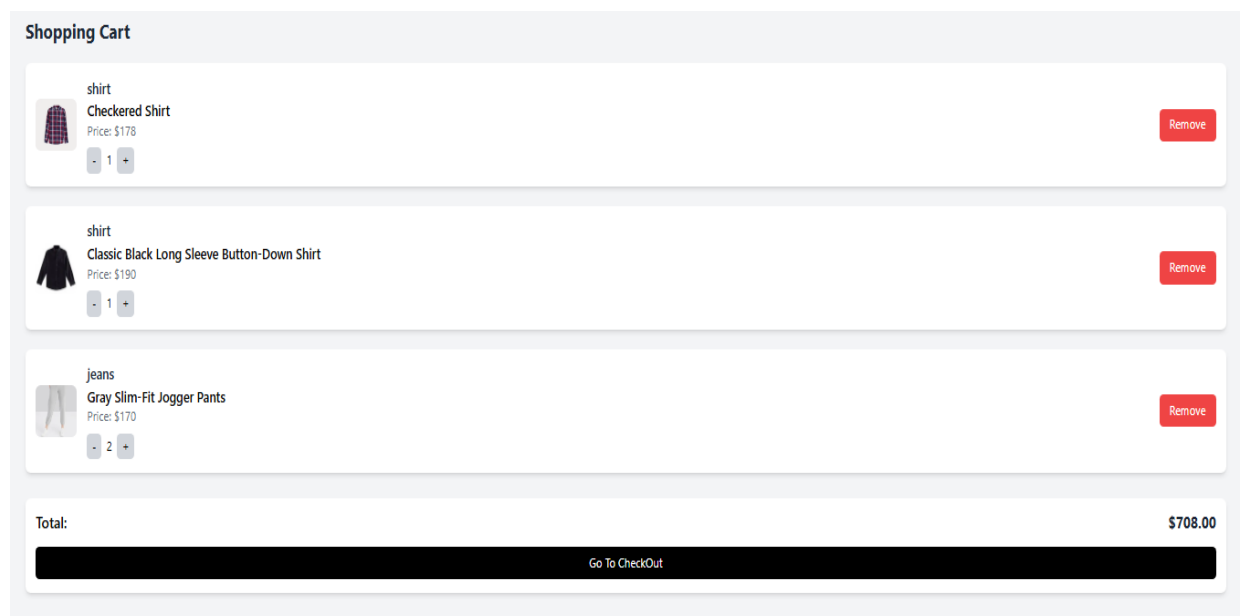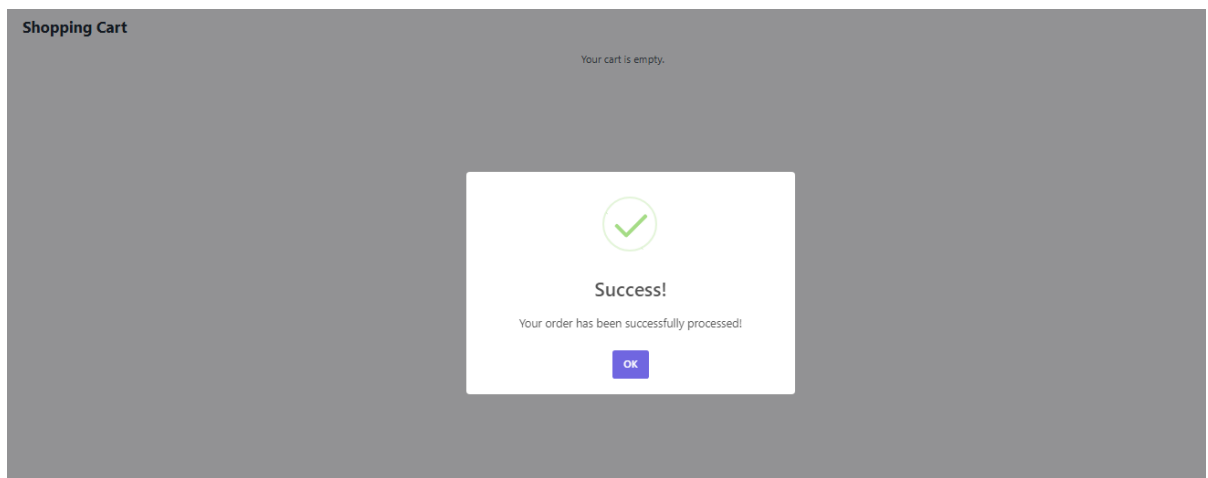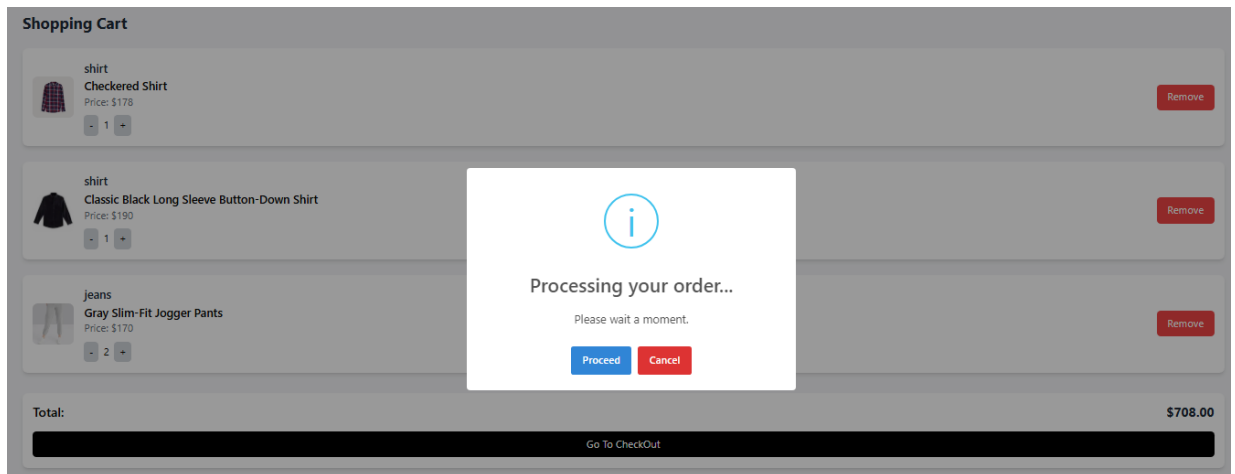| JEANS	TSHIRT	SHIRT	JEANS
Gray Slim-Fit Jogger Pants	COURAGE GRAPHIC T-SHIRT	Checkered Shirt	Skinny Fit Jeans
★★★★★ 4.5/5	★★★★★ 4.5/5	★★★★★ 4.5/5	★★★★★ 4.5/5
$170 -15%	$145	$178	$240
More Details	More Details	More Details	More Details

Activate Windows

5. Shopping Cart with "using Shopping-Cart"

Use Shopping Cart provide a building function for managing cart functionality.

6. Check Out

User Cart items are synchronized during the checkout process.

Shopping Cart

shirt
Checkered Shirt
Price: $178
- 1 +
Remove

shirt
Classic Black Long Sleeve Button-Down Shirt
Price: $190
- 1 +
Remove

jeans
Gray Slim-Fit Jogger Pants
Price: $170
- 2 +
Remove

Total: $708.00

Go To CheckOut

Shopping Cart

shirt
Checkered Shirt
Price: $178
- 1 +
Remove

shirt
Classic Black Long Sleeve Button-Down Shirt
Price: $190
- 1 +
Remove

jeans
Gray Slim-Fit Jogger Pants
Price: $170
- 2 +
Remove

Total: $708.00

Go To CheckOut

Processing your order...
Please wait a moment.
Proceed   Cancel

Shopping Cart

Your cart is empty.

Success!
Your order has been successfully processed!
OK

Functional Deliverable
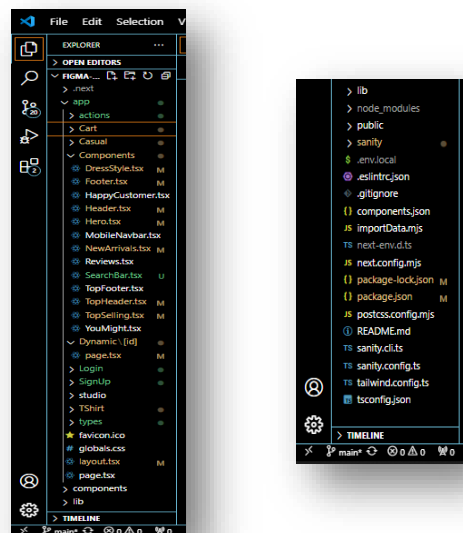
Challenges Faced and Solution Implementation

✓ **Challenge:**

1) Managing Time management product updates.
2) Responsive design complexity.
3) Dynamic Integration.
4) Create Add to Cart.

Solution: Designed logic to save, retrieve and update cart data in local storage effectively, ensuring real-time updates without performance loss.

Best Practice Followed During Development

✓ Components Reusability
✓ Dynamic Routing
✓ Error Handling and UI
✓ Efficient Image Handling
✓ State and Management

Self-Validation Checklist

Frontend Component Development	Styling & Responsiveness	Code Quality	Documentation & Submission	Final Review
✓	✓	✓	✓	✓

Conclusion:

This e-commerce website utilized modern web-development frameworks and tools, providing user-friendly platform for online shopping. Its dynamic category page, responsive design & real time data updates make it suitable for marketplace-based application.