

## Day 4 - Dynamic Frontend Components

### Media Mart Functional Deliverables

#### 1. Product Listing Page with Dynamic Data

- **Description:** The product listing page dynamically displays products using a manually exported JSON dataset. Each product includes its image, name, price, and a brief description, presented in a clean and visually appealing layout to enhance user experience.

#### 2. Individual Product Detail Pages with Accurate Routing and Data Rendering

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

#### 3. Working Category Filters, and Search Bar

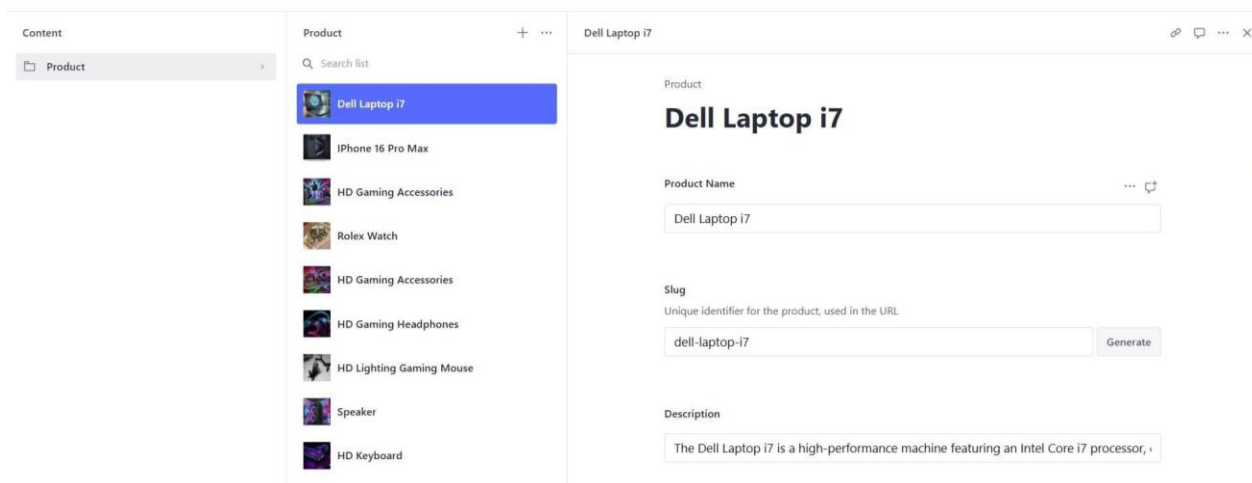
##### ➤ *Screenshots/Recordings:*

- Demonstration of category filters.
- Search bar in action.

- **Description:**

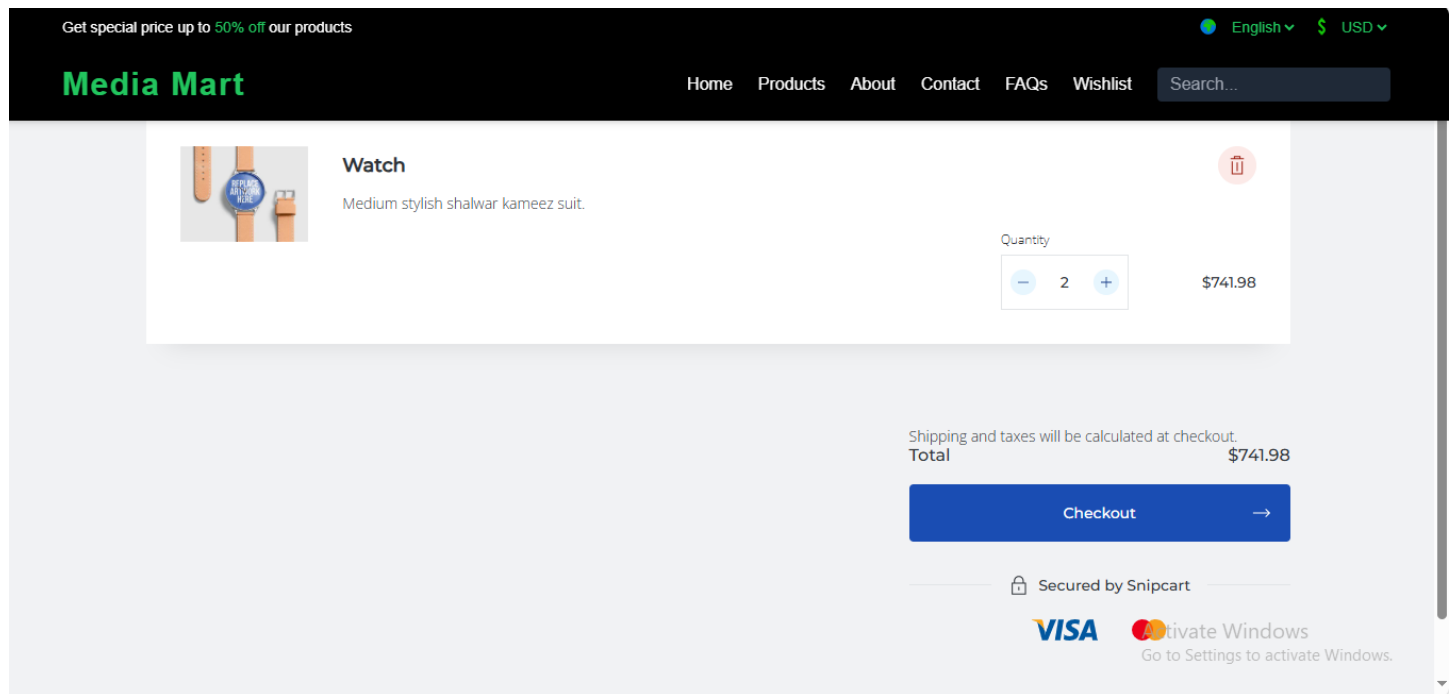
- Category Filters: Enables filtering of products based on categories like "Electronics," "Home Appliances," etc., allowing users to narrow down their preferences.
- Search Bar: Offers real-time search functionality, dynamically filtering products as users type keywords.

## 1. Product Listing Page with Dynamic Data



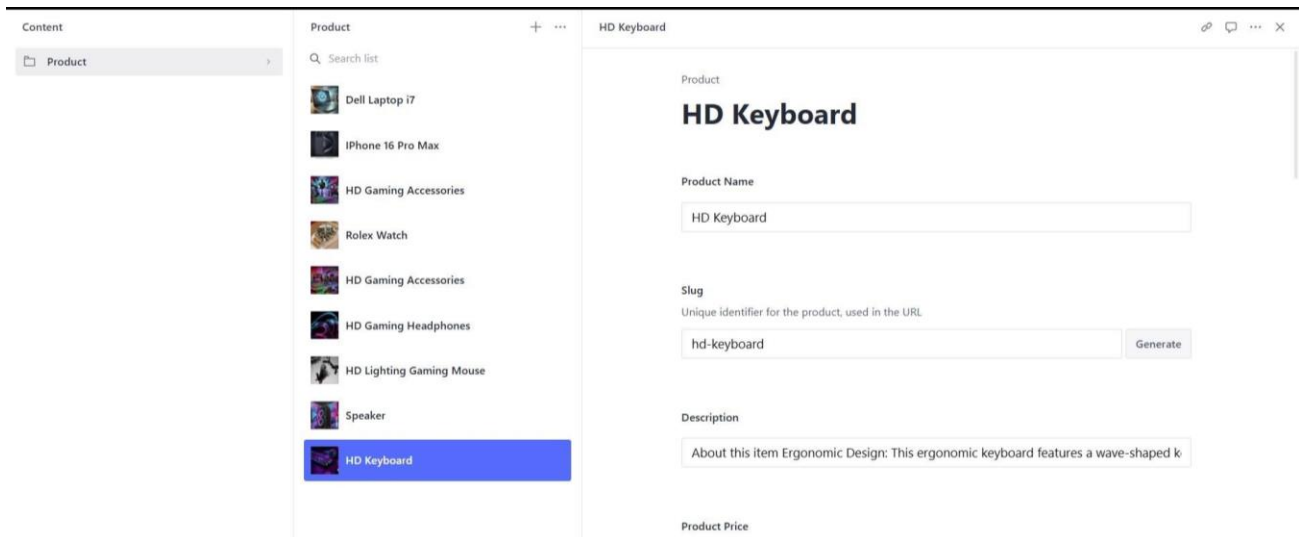
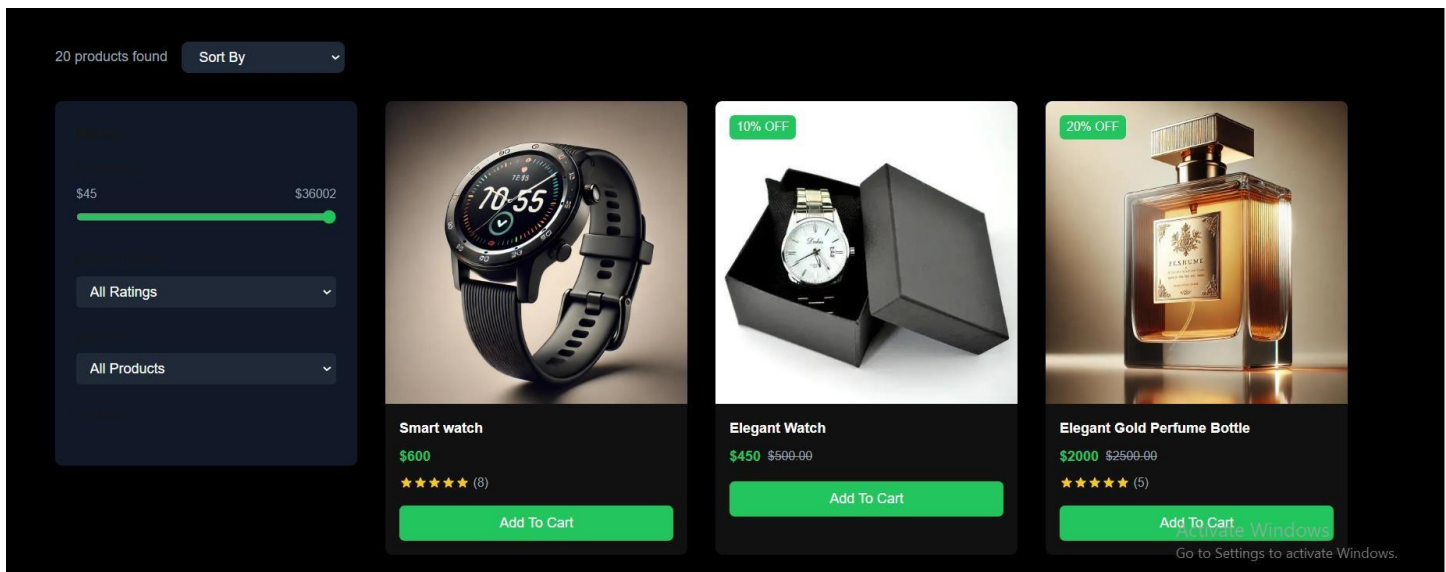
- **Description:** The product listing page dynamically displays products using a manually exported JSON dataset. Each product includes its image, name, price, and a brief description, presented in an aesthetically pleasing format.

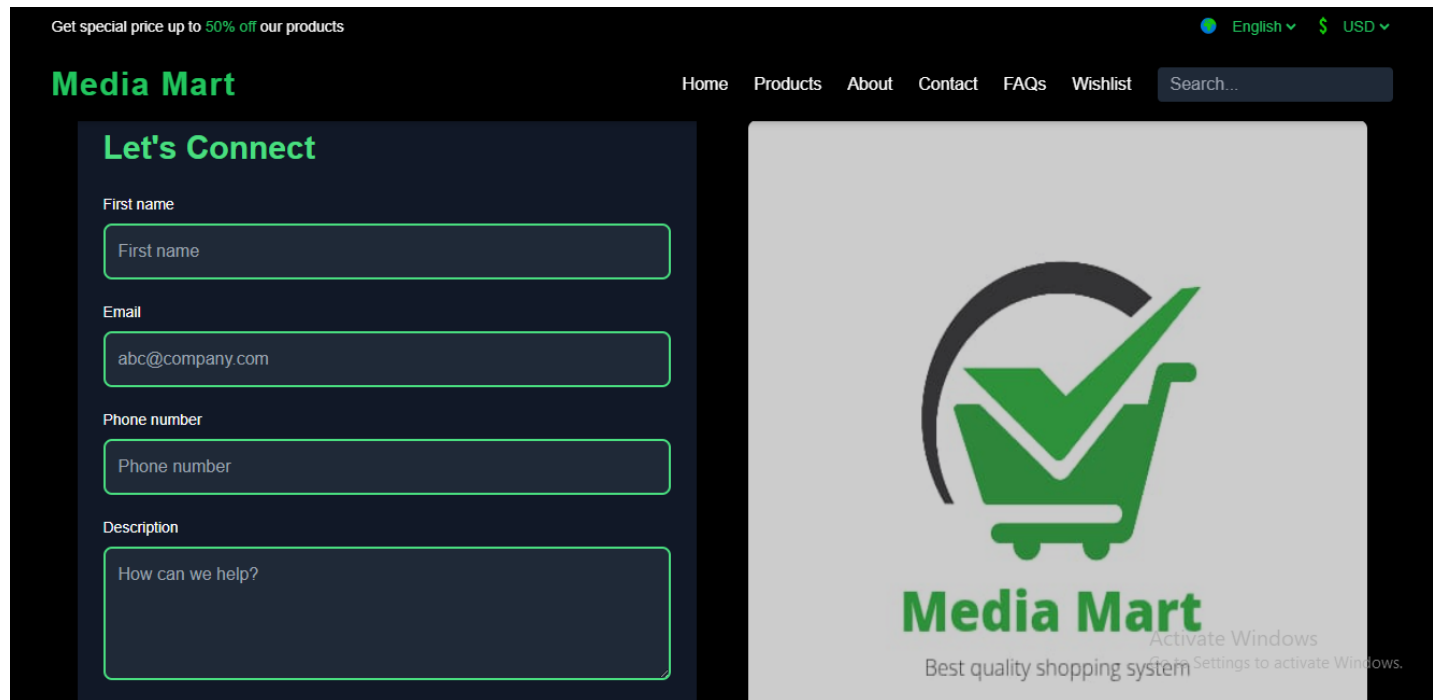
## 2. Individual Product Add to cart



- **Description:** Each product detail page dynamically renders data for the selected product, including the title, full description, price, and related images. Accurate dynamic routing ensures users are directed to the correct product page based on their selection.

### 3. Working Category Filters, Search Bar, and Pagination





- **Screenshots/Recordings:**

- Demonstration of category filters.
- Search bar in action.

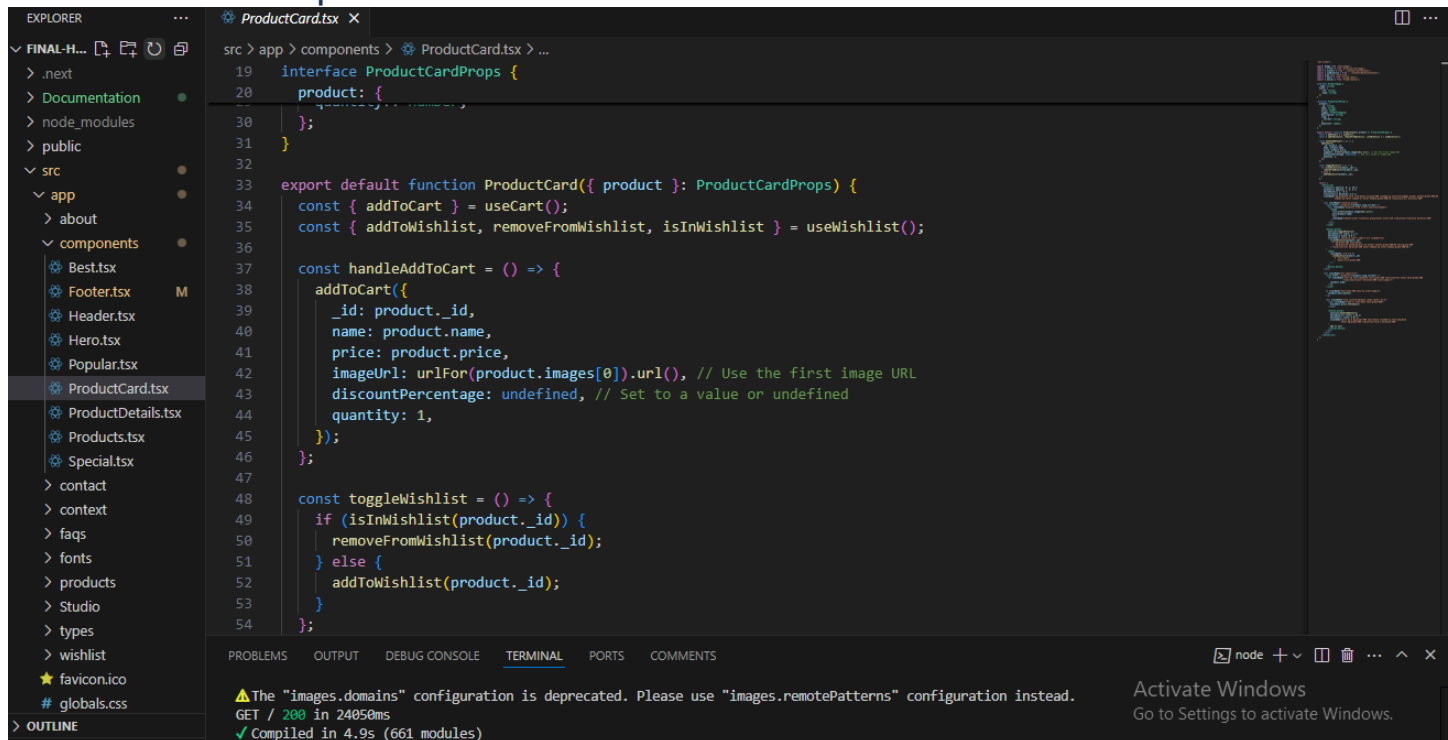
- **Description:**

- **Category Filters:** Filters products based on categories like "Electronics," "Home Appliances," etc.
- **Search Bar:** Provides real-time search functionality, filtering products dynamically as users type.

## Code Deliverables

## Key Components

### Product Card Component



The screenshot shows a Visual Studio Code editor with the `ProductCard.tsx` file open. The Explorer sidebar on the left shows the project structure, with the `components` folder expanded. The `ProductCard.tsx` file is selected. The main editor displays the following code:

```
19 interface ProductCardProps {
20   product: {
21     // ...
22   };
23 }
24
25 export default function ProductCard({ product }: ProductCardProps) {
26   const { addToCart } = useCart();
27   const { addToWishlist, removeFromWishlist, isInWishlist } = useWishlist();
28
29   const handleAddToCart = () => {
30     addToCart({
31       _id: product._id,
32       name: product.name,
33       price: product.price,
34       imageUrl: urlFor(product.images[0]).url(), // Use the first image URL
35       discountPercentage: undefined, // Set to a value or undefined
36       quantity: 1,
37     });
38   };
39
40   const toggleWishlist = () => {
41     if (isInWishlist(product._id)) {
42       removeFromWishlist(product._id);
43     } else {
44       addToWishlist(product._id);
45     }
46   };
47 }
```

The bottom of the editor shows the `TERMINAL` tab with the following output:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
⚠ The "images.domains" configuration is deprecated. Please use "images.remotePatterns" configuration instead.
GET / 200 in 24050ms
✓ Compiled in 4.9s (661 modules)
```

An "Activate Windows" watermark is visible in the bottom right corner of the image.

## Review Component

The screenshot shows the VS Code editor with the Explorer sidebar on the left. The file 'ProductDetails.tsx' is selected under the 'components' folder. The main editor displays the code for this component. The code defines a function 'ProductDetails' that takes 'props' and returns a JSX element. It includes a 'handleAddToCart' function and a 'motion.div' containing an 'Image' and a 'div' with a 'h1' and a 'p'. The terminal at the bottom shows a message about the deprecated 'images.domains' configuration and a successful compilation in 4.9s.

```
src > app > components > ProductDetails.tsx > ...
20 const ProductDetails: React.FC<Props> = ({ product }) => {
21
22
23   const handleAddToCart = () => {
24     addToCart({
25       _id: product._id,
26       name: product.name,
27       price: product.price,
28       imageUrl: urlFor(product.image[0]).url(),
29       quantity: 1,
30     });
31   };
32
33   return (
34     <div className="container mx-auto px-4 py-8 min-h-screen">
35       <div className="grid grid-cols-1 md:grid-cols-2 gap-8">
36         <motion.div initial={{ opacity: 0, y: 20 }} animate={{ opacity: 1, y: 0 }}>
37           <Image
38             src={urlFor(product.image[0]).url()}
39             alt={product.name}
40             width={500}
41             height={500}
42             className="rounded-lg"
43           />
44         </motion.div>
45         <div>
46           <h1 className="text-4xl font-bold text-green-500">{product.name}</h1>
47           <p className="text-gray-300 mt-4">{product.description}</p>
48         </div>
49       </div>
50     </div>
51   );
52 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

node + v ...

Activate Windows  
Go to Settings to activate Windows.

⚠ The "images.domains" configuration is deprecated. Please use "images.remotePatterns" configuration instead.  
GET / 200 in 24050ms  
✓ Compiled in 4.9s (661 modules)

## Whish List Component

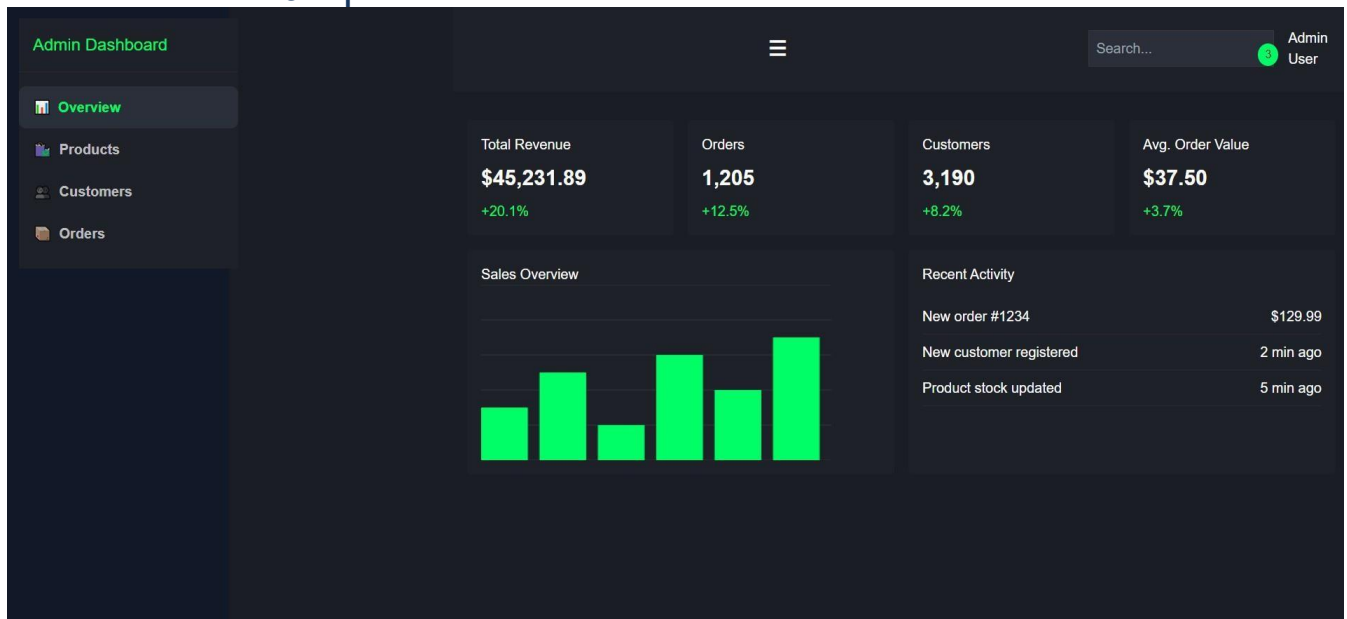
The screenshot shows the VS Code editor with the Explorer sidebar on the left. The file 'page.tsx' is selected under the 'wishlist' folder. The main editor displays the code for this component. The code defines a function 'WishlistPage' that takes 'props' and returns a JSX element. It includes a 'p' with a message, a 'Link' to the products page, and a 'div' containing a 'motion.div' with a 'p' and a 'Link'. The terminal at the bottom shows a message about the deprecated 'images.domains' configuration and a successful compilation in 4.9s.

```
src > app > wishlist > page.tsx > ...
32 export default function WishlistPage() {
33
34
35   </h2>
36   <p className="text-gray-400 mb-6">
37     Add some awesome products to your wishlist!
38   </p>
39   <Link
40     href="/products"
41     className="inline-block bg-green-500 text-white px-6 py-3 rounded-lg font-semibold
42     | | | | hover:bg-green-600 transition-transform duration-300 shadow-lg hover:shadow-green-500/20 transfo
43   >
44     Explore products
45   </Link>
46 </div>
47 ) : (
48   <div className="grid grid-cols-1 sm:grid-cols-2 lg:grid-cols-3 gap-8">
49     {wishlistProducts.map((product) => (
50       <motion.div
51         key={product._id}
52         initial={{ opacity: 0, y: 20 }}
53         animate={{ opacity: 1, y: 0 }}
54         exit={{ opacity: 0, y: 20 }}
55         className="bg-gradient-to-b from-black to-gray-800 rounded-lg overflow-hidden
56         | | | | border border-green-500/20 shadow-lg hover:shadow-2xl hover:shadow-green-500/20
57         | | | | transition-all duration-300 transform hover:scale-105"
58       >
59         <Link href={` /products/${product.slug}`}>
60           <div className="relative h-64 w-full group">
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## Admin Dashboard Component



## Login Page

The Login Page has a dark background with a central shield icon and the text 'SECURE ACCESS TERMINAL'. It contains two input fields: one for the email 'saadmohsin123@gmail.com' and another for a password represented by dots. Below the fields is a green button labeled 'INITIATE LOGIN SEQUENCE'.

saadmohsin123@gmail.com

\*\*\*\*\*

INITIATE LOGIN SEQUENCE

## Documentation:

### Steps Taken to Build and Integrate Components

#### 1. Data Preparation:

- Created a JSON dataset with fields such as id, name, price, image, and category.

## 2. **Component Development:**

- Built reusable components, including Product Card, Product List, and Search Bar.
- Developed additional components like cart, add-to-cart, and user profile sections.

## 3. **Dynamic Routing:**

- Implemented Next.js dynamic routing for product detail pages.

## 4. **UI/UX Enhancements:**

- Added category filters, search functionality, and pagination.
- Styled components using Tailwind CSS for responsiveness and consistency.

## **Challenges Faced and Solutions Implemented**

### 1. **Efficiently Rendering Large Datasets:**

- **Solution:** Implemented pagination to improve performance and load times.

### 2. **Maintaining Consistent Routing and Data Handling:**

- **Solution:** Utilized Next.js dynamic routing and centralized data in a JSON file.

### 3. **Creating Responsive and User-Friendly Components:**

- **Solution:** Applied Tailwind CSS for styling and ensured a responsive design for various devices.

## Best Practices Followed

- Adopted a modular component structure for code reusability.
- Used TypeScript for enhanced type safety and error prevention.
- Ensured responsive designs for optimal user experience on both mobile and desktop.

## Components Developed for “Media Mart”

- Accordion
- Product Card
- Product List
- Search Bar
- Image Gallery
- Add-to-Cart
- Wish List
- Pagination
- Header
- Footer
- Admin Dashboard
- Login
- Payment Method(Snip Cart)

## Conclusion

The **Media Mart** e-commerce platform demonstrates the power of dynamic frontend components in creating an engaging and functional user experience. By utilizing reusable components, efficient data handling, and responsive design principles, the platform successfully combines usability and performance. Key features such as dynamic routing, category filters, search functionality, and pagination ensure smooth navigation and interaction for users. The challenges encountered during development were effectively addressed through best practices, making the platform robust and scalable. **Media Mart** is a testament to the effectiveness of modern front-end technologies and thoughtful design in crafting user-centric digital solutions.

Best Regards

**Web & Media Agency teams**