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, Search Bar, and Pagination

- *Screenshots/Recordings:*
  - Demonstration of category filters.
  - Search bar in action.
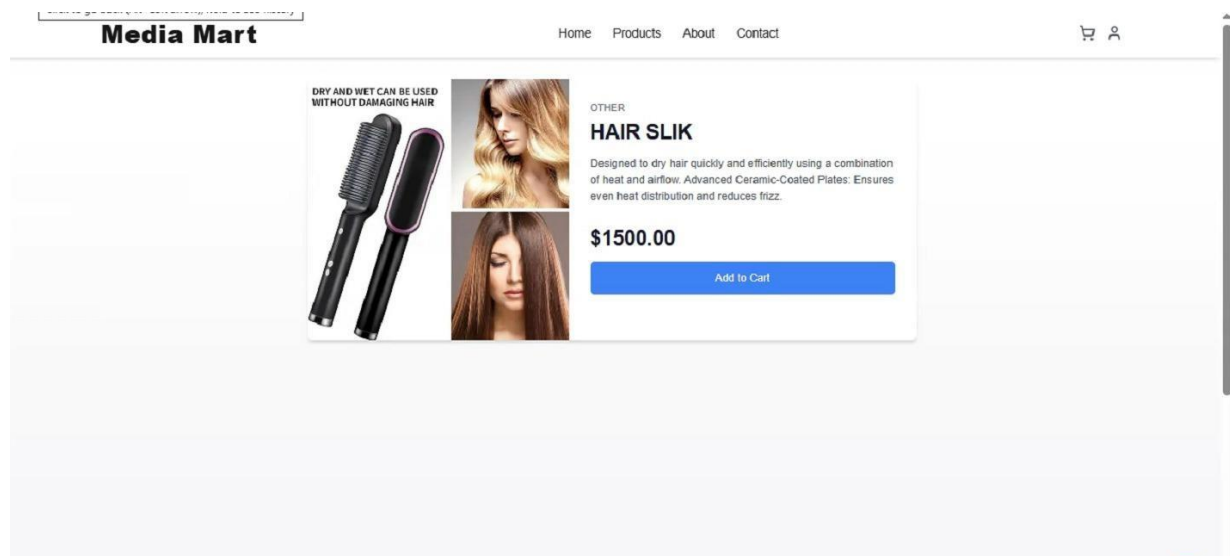 - Pagination functionality.

- **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.
  - Pagination: Improves performance and usability by dividing the
 - product list into multiple pages, ensuring faster load times and easier navigation.

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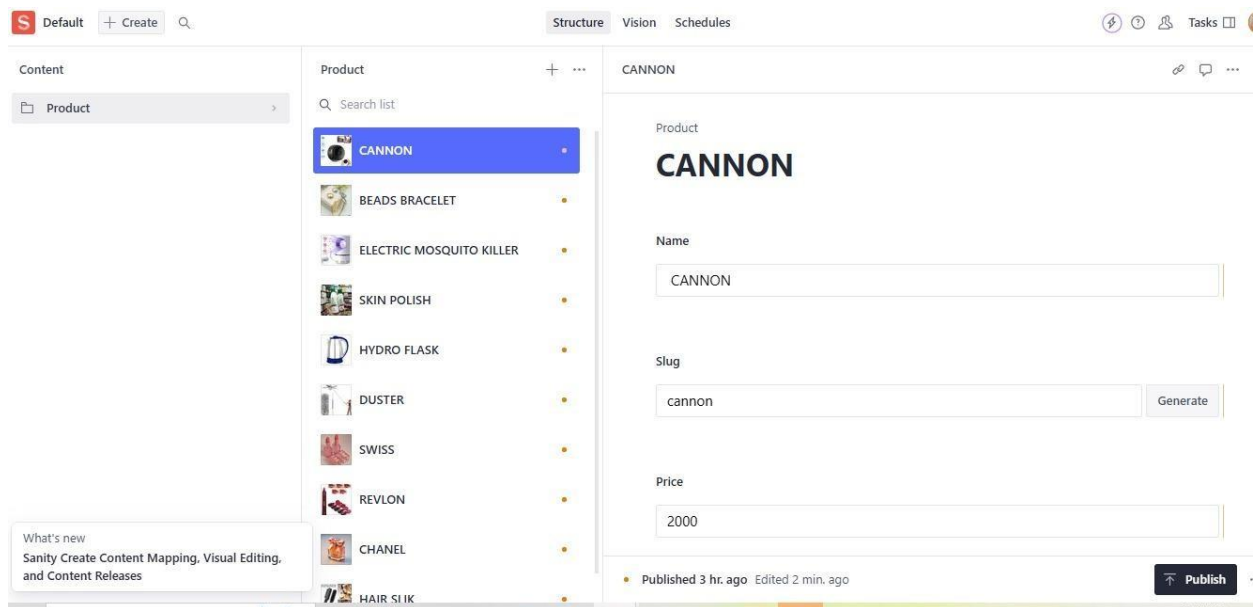
- **Description:** The product listing page dynamically displays products using a manually exported JSON dataset. Each product includes its image, name, price, and a brief description, presented in an aesthetically pleasing format.

## 2. Individual Product Detail Pages with Accurate Routing and Data Rendering
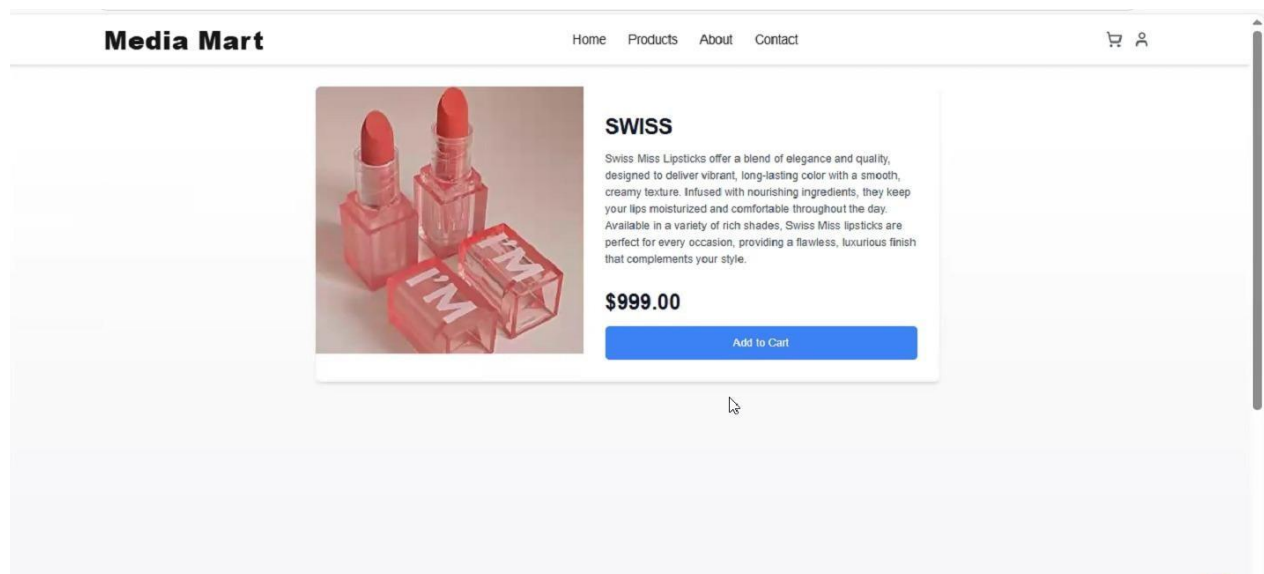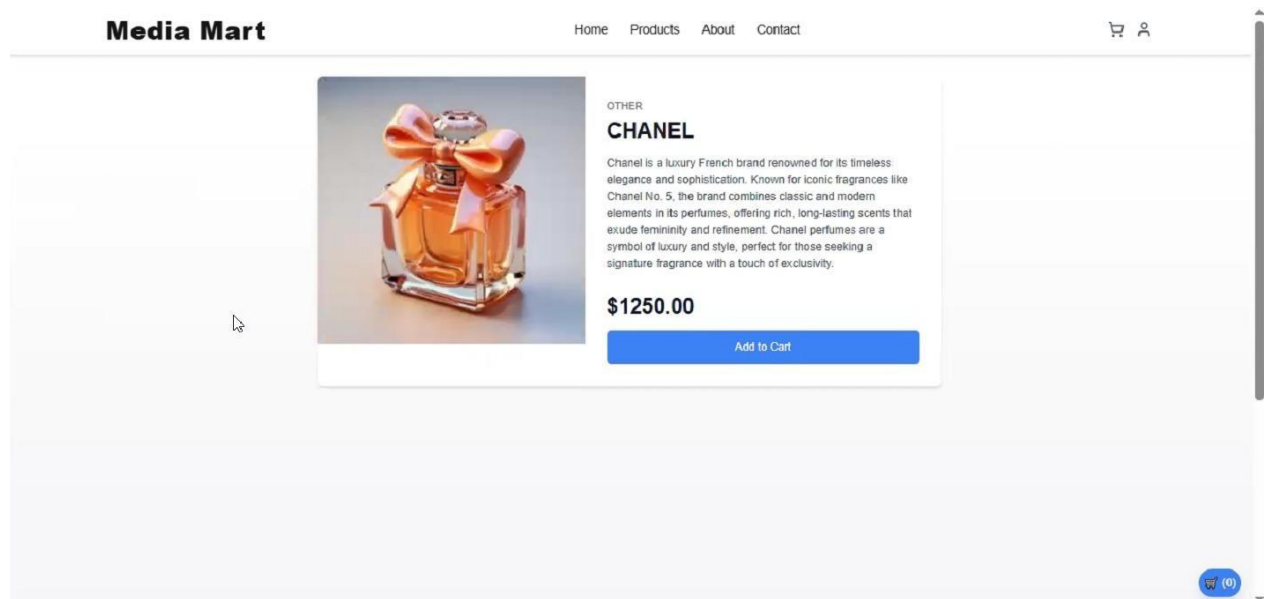
- **Description:** Each product detail page dynamically renders data for the selected product, including the title, full description, price, and related images. Accurate dynamic routing ensures users are directed to the correct product page based on their selection.

3. Working Category Filters, Search Bar, and Pagination
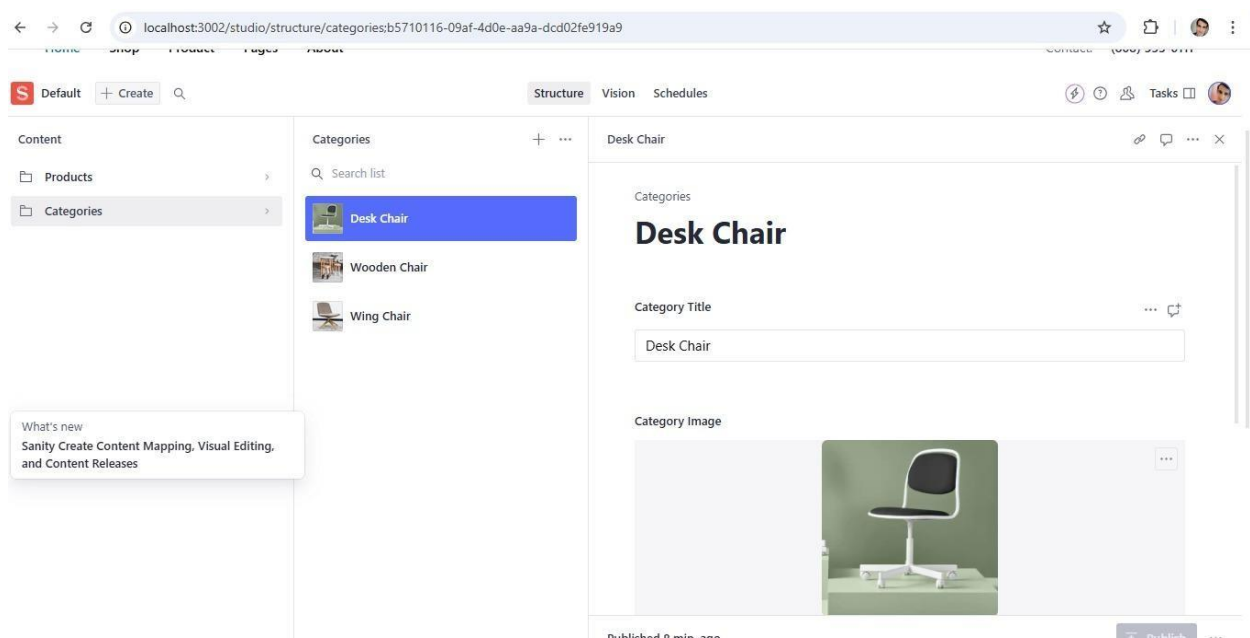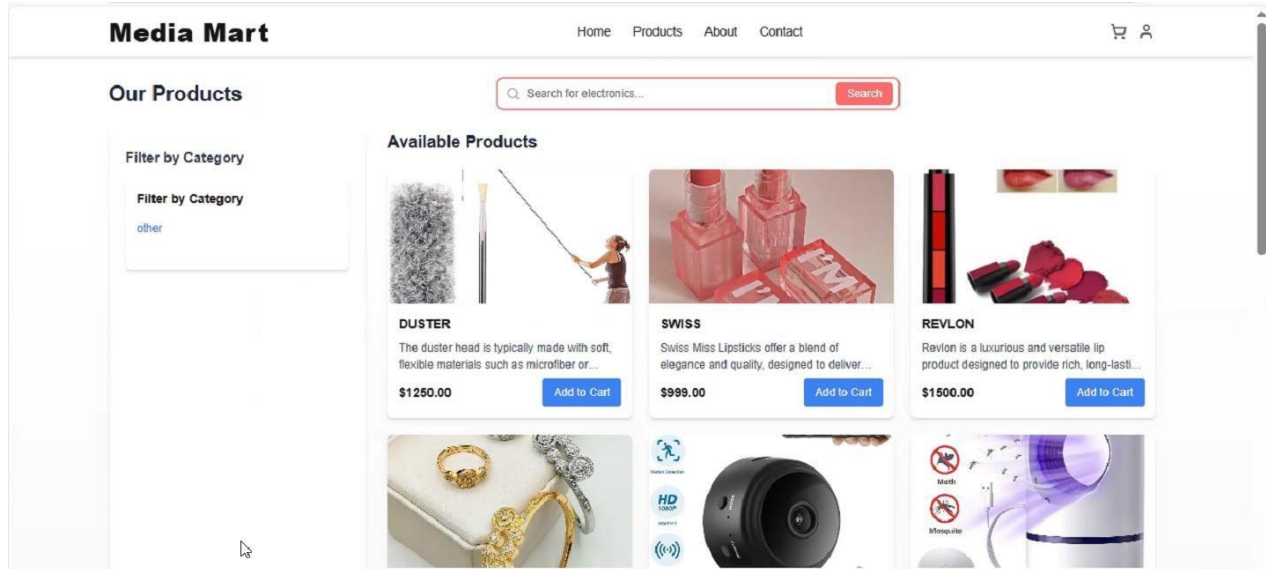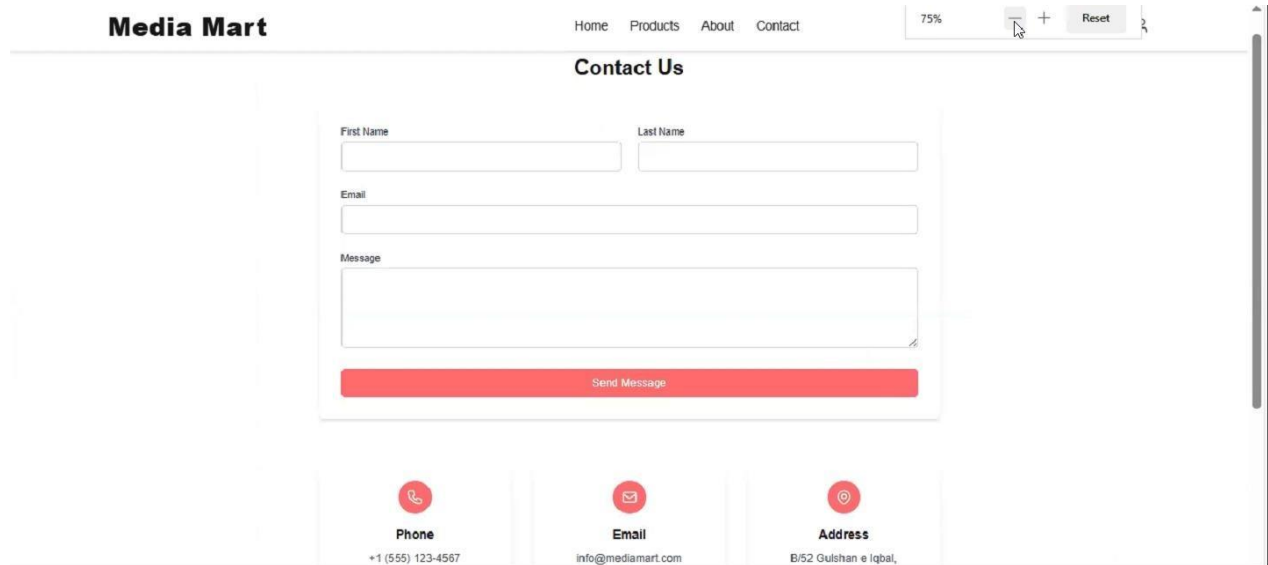
- **Screenshots/Recordings:**
  - Demonstration of category filters.
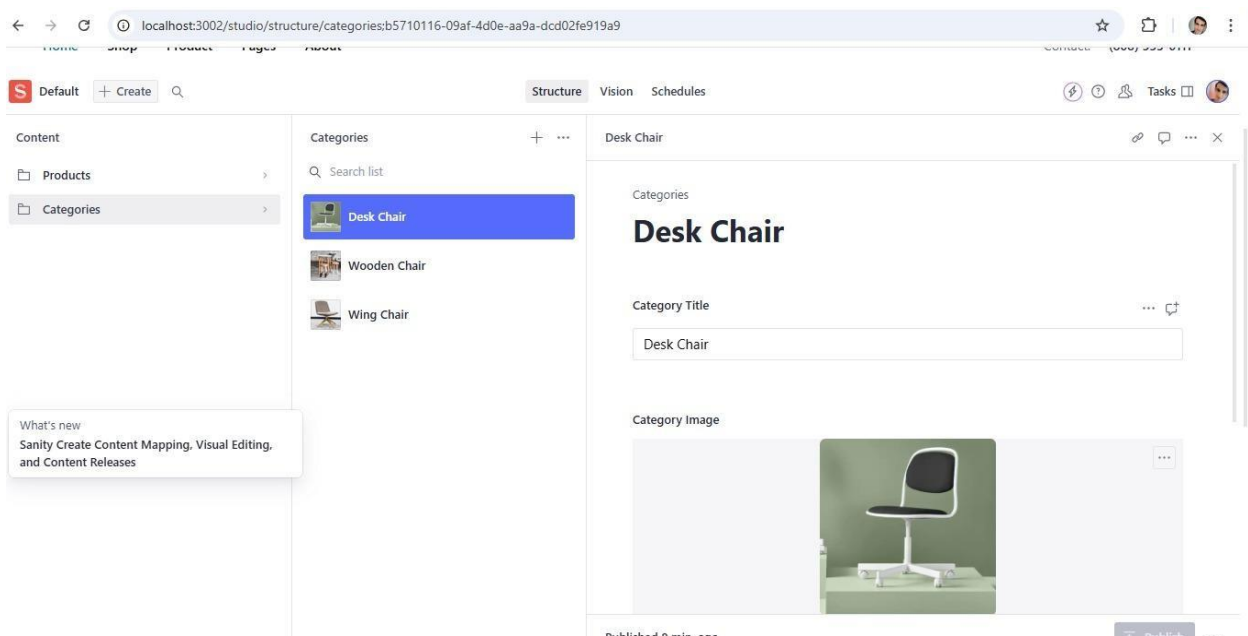 - Search bar in action.
  - Pagination functionality.
- **Description:**
  - **Category Filters:** Filters products based on categories like "Electronics," "Home Appliances," etc.
  - **Search Bar:** Provides real-time search functionality, filtering products dynamically as users type.

o **Pagination:** Enhances performance by dividing the product list into pages.
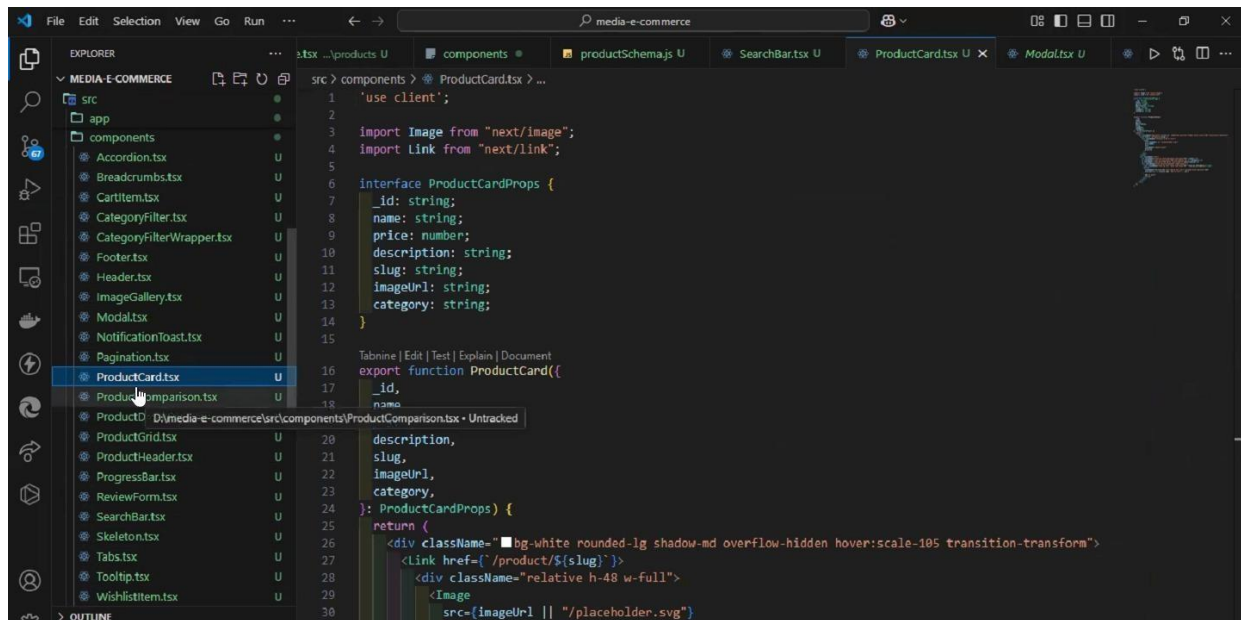
4. Additional Features

o **Related Products:** Displays similar products on the product detail page, encouraging user engagement.
o **User Profile Components:** Includes a basic user profile section showcasing user details.
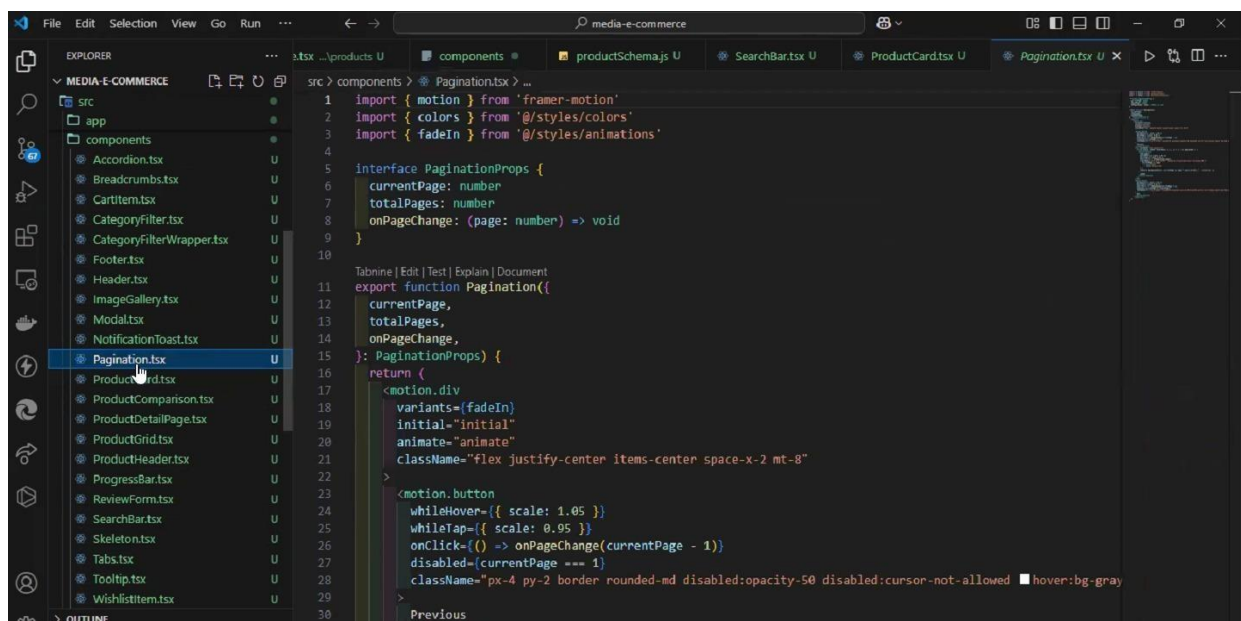
.

Code Deliverables
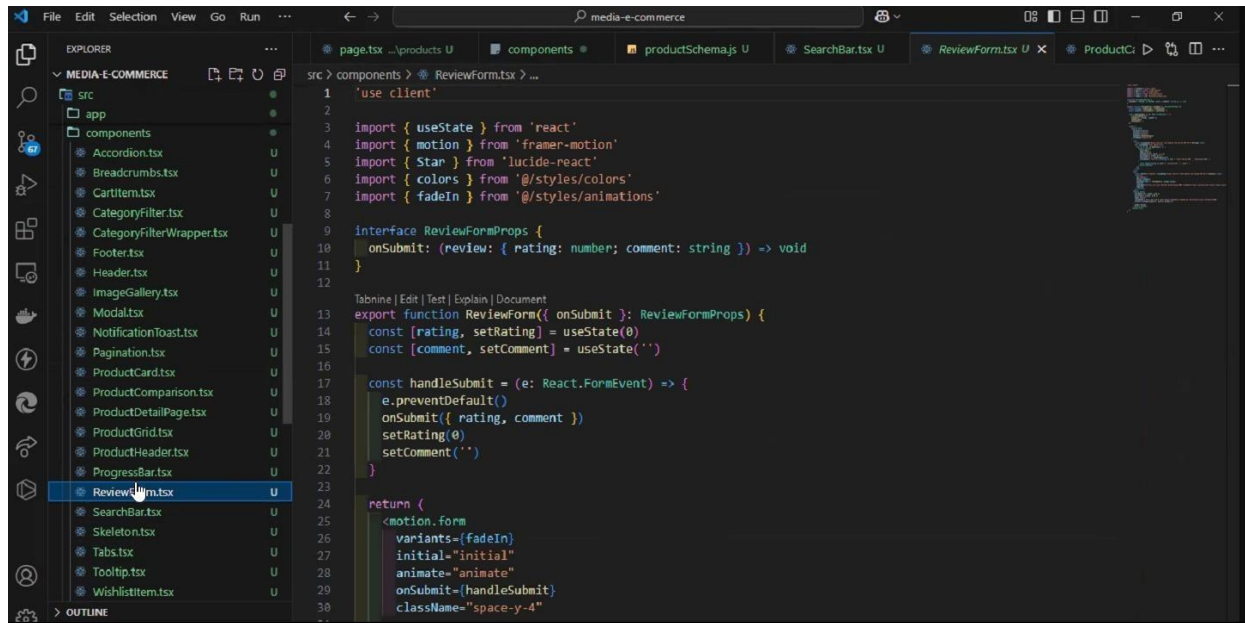
Key Components

Product Card Component

Pagination

Review Component


```tsx
'use client'

import { useState } from 'react'
import { motion } from 'framer-motion'
import { Star } from 'lucide-react'
import { colors } from '@/styles/colors'
import { fadeIn } from '@/styles/animations'

interface ReviewFormProps {
  onSubmit: (review: { rating: number; comment: string }) => void
}

export function ReviewForm({ onSubmit }: ReviewFormProps) {
  const [rating, setRating] = useState(0)
  const [comment, setComment] = useState('')

  const handleSubmit = (e: React.FormEvent) => {
    e.preventDefault()
    onSubmit({ rating, comment })
    setRating(0)
    setComment('')
  }

  return (
    <motion.form
      variants={fadeIn}
      initial="initial"
      animate="animate"
      onSubmit={handleSubmit}
      className="space-y-4"
```

Whish List Component


```tsx
import Image from 'next/image'
import { motion } from 'framer-motion'
import { X, ShoppingCart } from 'lucide-react'
import { colors } from '@/styles/colors'
import { fadeIn } from '@/styles/animations'

interface WishlistItemProps {
  id: string
  name: string
  price: number
  imageUrl: string
  onRemove: (id: string) => void
  onAddToCart: (id: string) => void
}

export function WishlistItem({
  id,
  name,
  price,
  imageUrl,
  onRemove,
  onAddToCart
}: WishlistItemProps) {
  return (
    <motion.div
      variants={fadeIn}
      initial="initial"
      animate="animate"
      className="flex items-center space-x-4 py-4 border-b border-gray-200"
    >
      <Image
        src={imageUrl || "/placeholder.svg"}
        alt={name}
        width={80}
        height={80}
        className="rounded-md object-cover"
      />
```

Documentation:

Steps Taken to Build and Integrate Components

1. **Data Preparation:**

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

2. **Component Development:**

   o Built reusable components, including Product Card, Product List, and Search Bar.

   o Developed additional components like cart, add-to-cart, and user profile sections.

3. **Dynamic Routing:**

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

4. **UI/UX Enhancements:**

   o Added category filters, search functionality, and pagination.

   o Styled components using Tailwind CSS for responsiveness and consistency.

Challenges Faced and Solutions Implemented

1. **Efficiently Rendering Large Datasets:**

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

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

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

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

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

Best Practices Followed

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

Components Developed for "Media Mart"

- o Accordion
- o Product Card
- o Product List
- o Search Bar
- o Image Gallery
- o Add-to-Cart
- o Wish List
- o Pagination
- o Header
- o Footer
- o Payment Method

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 frontend technologies and thoughtful design in crafting user-centric digital solutions.

Best Regards

Web & Media Agency teams

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