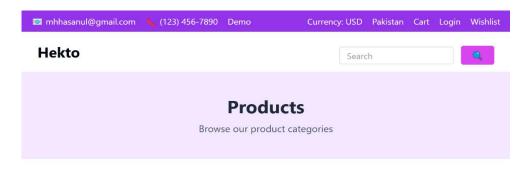
Hackathon Day 4

Product Dynamic Listing: Code

```
equal default familiam bloop() {
    cont searchimens. _ usclear/otherwas();
    cont searchimens. _ usclear/otherwas();
    cont searchimens.gat('search')?.toLowerCase() || "";
    cont [product, seafconduct] _ usclear/otherwas();([));
    cont [product, seafconduct] _ usclear/otherwas();([));
    cont [searchimens], whicheld continued _ usclear/otherwas();([));
    cont [search(search, seafconductor)] _ usclear-otherwas();([));
    cont [search(search, seafconductor)] _ usclear-otherwas();([));
    cont [search(search, seafconductor)] _ usclear-otherwas();([));

            The Cashing Time and and a common to common the common the common to common the common
```

Page:



Ecommerce Items

8 Product Categories



Phones



Electronics



Sport goods







Furniture



Beauty

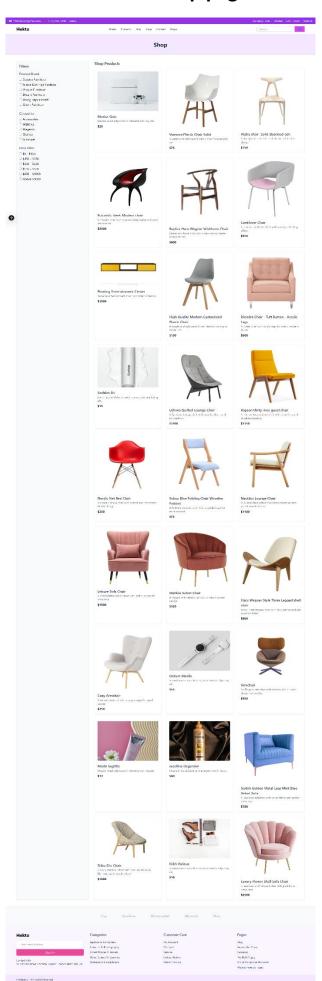




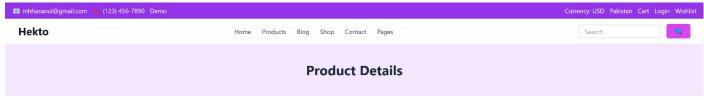
Previous 1 2 3 4 ... Next >

Live Sunshine Handcrafted Mestonix Pure Hekto Categories **Customer Care Pages** Laptops & Computers My Account Blog Enter Email Address Cameras & Photography Discount Browse the Shop Smart Phones & Tablets Returns Category Pre-Built Pages Video Games & Consoles Orders History Contact Info Waterproof Headphones Order Tracking Visual Composer 17 Princess Road, Elements London, Greater London NW1 8JR, UK WooCommerce Pages ©Webecy - All Rights Reserved

Products Shop page

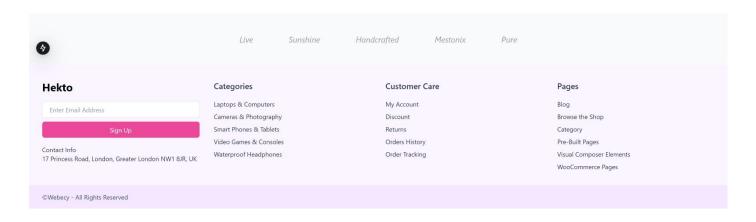


Product Details Page





Stylish Golden Metal Legs Mint Blue Velvet Sofa A luxurious armchair with velvet fabric and golden metal legs \$-780 \$ Add to Cart



Product detail Code:

```
import Header from "@/app/Components/component1";
import Foot from "@/app/Components/component2";
import Bottom1 from "@/app/Components/component3";
import { useState, useEffect } from "react";
import Image from "next/image";
import { client } from "@/sanity/lib/client";
const query = '*[_type == 'Shop']{
   ProductID,
   ProductName,
   "imageUnl": ProductImage.asset->url,
   ProductPrice,
   ProductPrice,
interface Product {
  ProductID: string;
     ProductName: string;
    imageUrl: string;
ProductPrice: number;
   ProductDiscount: number;
ProductBrand: string;
interface Params {
  item?: number;
export default function Home(props: { params: Promise<Params> }) {
  const [params, setParams] = useState<Params>({});
  const [products, setProducts] = useState<Product[]>([]);
    useEffect(() => {
  async function fetchProducts() {
  const data = await client.fetch(query);
  setProducts(data);
    }
fetchProducts();
}, []);
    useEffect(() => {
  async function resolveParams() {
  const resolvedParams = await props.params;
  setParams(resolvedParams);
     resolveParams();
}, [props.params]);
     const itemIndex = params.item || 0;
const selectedItem = products[itemIndex] || products[0];
              ddv>
<header />
<div className="bg-gray-50">
<section className="bg-purple-100 text-center py-10">
<hl className="text-3xl font-bold text-gray-800">Product Details</hl>

                  src={selectedItem.imageUrl}
alt={selectedItem.ProductName}
                                         className="rounded-md w-full h-100 object-cover"
width=(300}
height=(200)
                      />
</div>
</div>
</div>
</div>
</div>
</div>
</div className="w-full md:w-1/2 md:ml-8">
</div className="w-full md:w-1/2 md:ml-8">
</div className="text-gxxl font-semibold text-gray-800">{selectedItem.ProductName}</hl>

<{selectedItem.ProductDescription>

${selectedItem.ProductPrice - selectedItem.ProductDiscount>
${selectedItem.ProductPrice}
${selectedItem.ProductPrice}
<button className="bg-pink-500 text-white py-2 px-6 rounded-full mt-4">Add to Cart</button>
```

Code Deliverables:

Product Card

```
cont default function Shop() {
    cont contribute = unchearching.man();
    cont contribute = unchearching.man();
    cont contribute = unchearching.man();
    contribute = unchearching = unchearching.pt();
    contribute = unchearching = unchearching.pt();
    contribute = unchearching = unchearching.pt();
    contribute = unchearching.pt();

                                 Forch products when the component mounts deffort() => {
    sept. function lumbbreducts() {
        constitute = ansit fulcibilizeruducts();
        astronomer (state);
        settillarenderuducts(date);
        settillarenderuducts(date); // set initia
```

Product List

Search Bar



Technical Report: Development of a Fully Functional E-Commerce Frontend

1. Introduction

This report outlines the steps taken to build and integrate components in the development of a fully functional frontend e-commerce website using React, Next.js, TypeScript (TSX), and Tailwind CSS. Additionally, it covers challenges faced, solutions implemented, and best practices followed during the development process.

2. Development Process

2.1 Project Setup

- Initialized the project using Next.js and TypeScript.
- Installed required dependencies including React, Tailwind CSS, and Sanity CMS client.
- Configured TypeScript settings for strict type-checking.

2.2 Component Development & Integration

- Header & Footer Components: Created reusable components for navigation and branding.
- Home Page: Designed a visually appealing homepage with featured products and categories.

- Shop Page: Implemented a dynamic product listing with filtering and sorting options.
- Product Details Page: Integrated product-specific data from Sanity CMS.

2.3 Sanity CMS Integration

- Set up a Sanity project and defined the schema for products.
- Connected Sanity CMS to Next.js via API calls using GROQ queries.
- Rendered dynamic product data on the shop and product details pages.

3. Challenges Faced & Solutions Implemented

3.1 Tailwind CSS Configuration

- Challenge: Customizing Tailwind themes for a consistent UI.
- Solution: Modified tailwind.config.js to extend colours, spacing, and typography.

3.2 TypeScript Type Safety

- Challenge: Ensuring type safety while fetching data from Sanity.
- Solution: Defined strict TypeScript interfaces for product data and utilized type assertions where necessary.

4. Best Practices Followed

4.1 Code Organization

- Used a modular structure to separate concerns (e.g., components, pages, utils).
- Maintained a consistent naming convention and folder structure.

4.2 Performance Optimization

- Utilized Next.js static generation and caching mechanisms.
- Optimized images with Next.js Image component for better load times.

5. Conclusion

The development of the e-commerce website followed a structured approach, leveraging Next.js, TypeScript, and Tailwind CSS for a scalable and maintainable frontend. Integrating Sanity CMS successfully enabled dynamic content management. Overcoming key challenges improved performance and code quality, resulting in a robust, user-friendly e-commerce template.