DAY 04:

DYNAMIC FRONTEND COMPONENTS

GENERAL-E-COMMERCE

FURNITURE WEBSITE (SOFAS & CHAIRS)

INTRODUCTION:

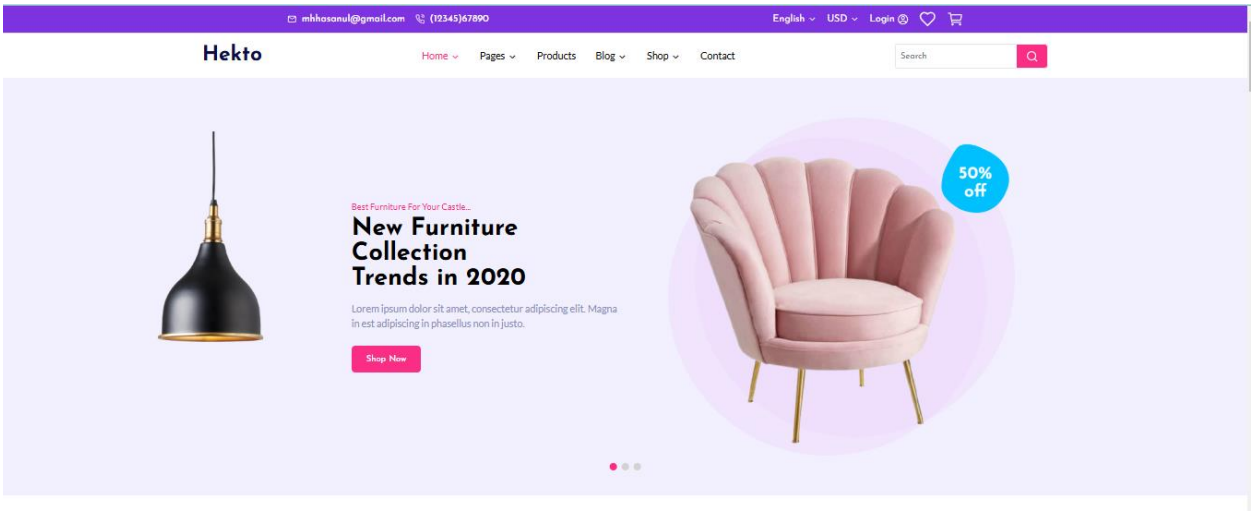
My project focuses on selling **sofas** and **chairs**, offering a wide range of stylish and comfortable furniture options. The product pages for each sofa and chair provide detailed descriptions, including size, material, color options, and pricing. Users can easily browse through various categories, check stock availability, and view product details with clear images. The platform allows customers to add their desired sofas and chairs to the cart or wishlist, making the shopping experience seamless. The integration of multiple payment gateways ensures easy and secure transactions for all users.

On Day 4, we integrated **Sanity CMS** with our **Next.js** application to manage dynamic content. Sanity allows us to manage and fetch data easily through its API, and we utilized this to display dynamic content such as blog posts and product details on the site. By combining **Sanity's API** with **Next.js**, we enabled seamless server-side rendering and dynamic data fetching, which allowed our site to be easily updated in real-time without the need for manual updates. This setup enhanced the flexibility and scalability of the application, making it ready for handling dynamic content effectively.

KHAZRA AYUB ROLL NO: 00239434

HOME PAGE:

The **Home Page** of our e-commerce site was designed to provide an intuitive and user-friendly experience. It features a clean layout showcasing the main product categories, highlighted promotions, and an easy navigation menu.



PRODUCT PAGE:

The **Product Page** of our e-commerce site is designed to provide detailed information about each item, including high-quality images, pricing, descriptions, discount , add to wish list and also a view page which route to full detail of product through dynamic routing . The page is dynamically populated using data fetched from **Sanity CMS**, ensuring that product details are always up-to-date. Users can easily add products to their cart, and the layout is responsive, offering a seamless shopping experience across different devices.

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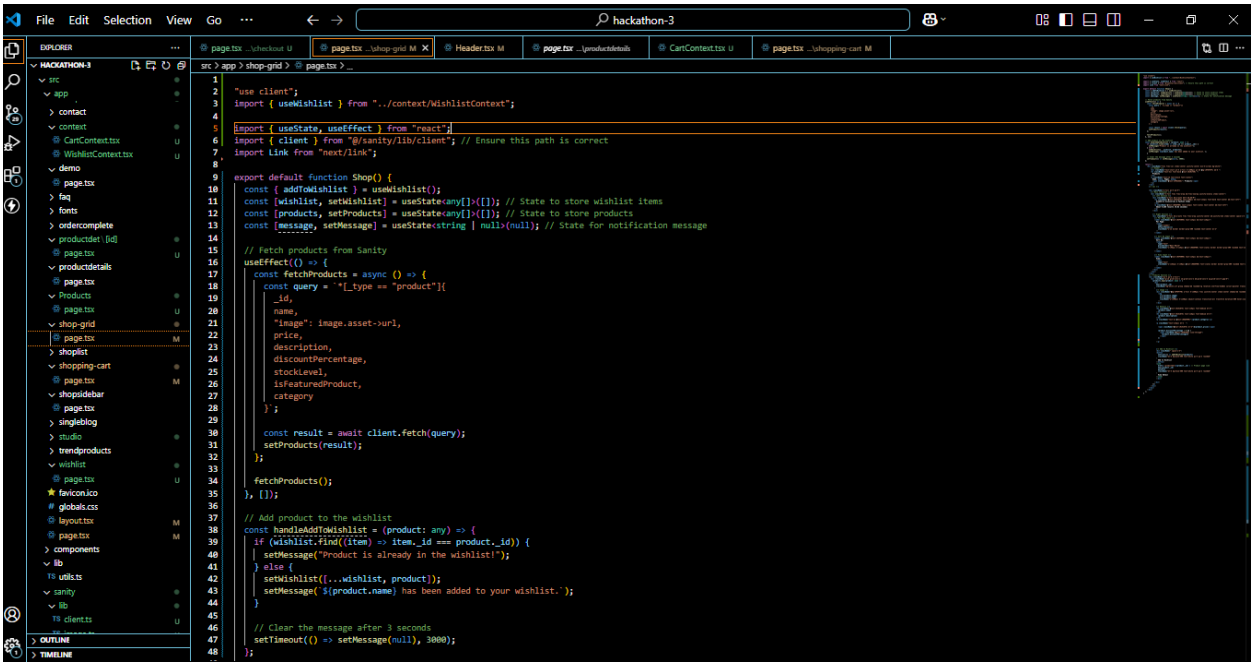

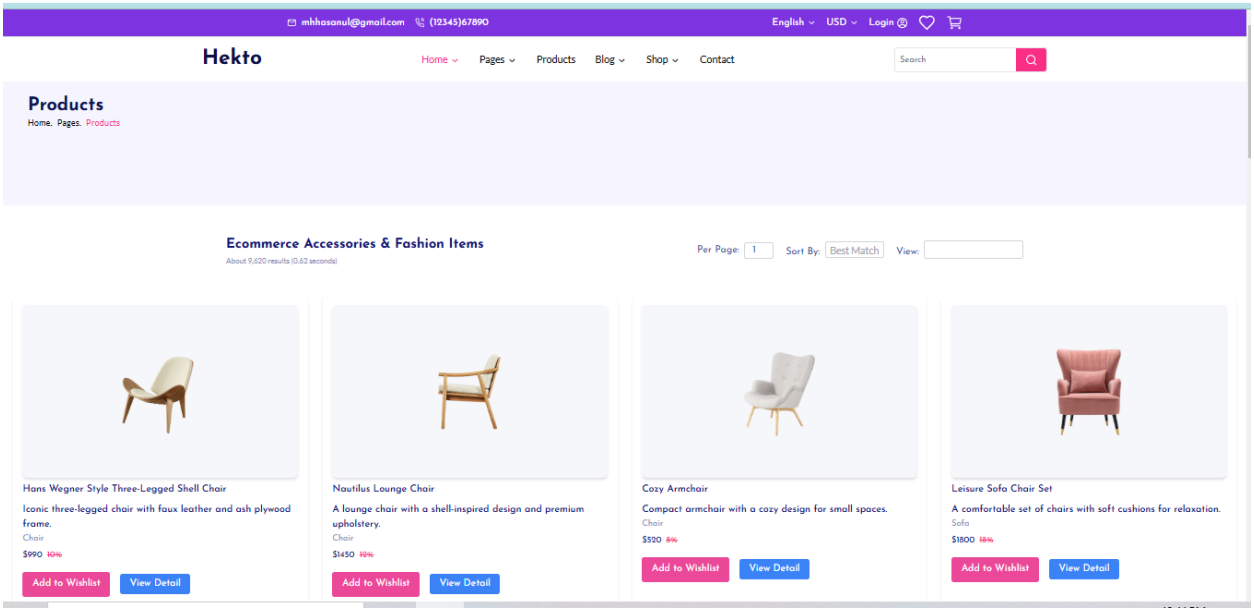

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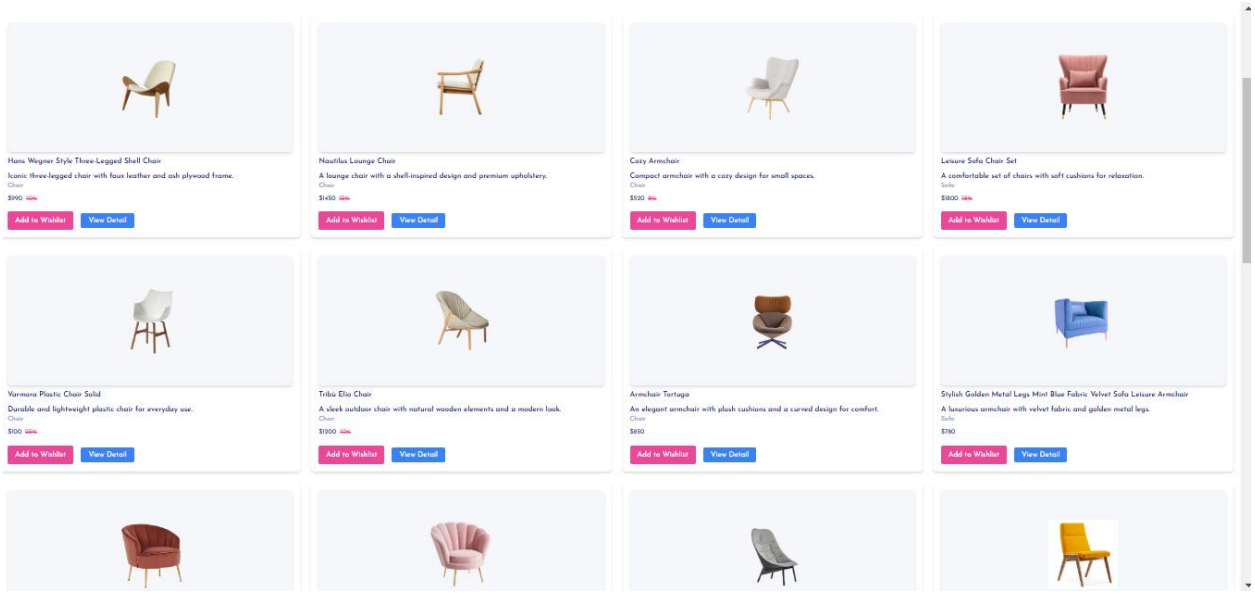
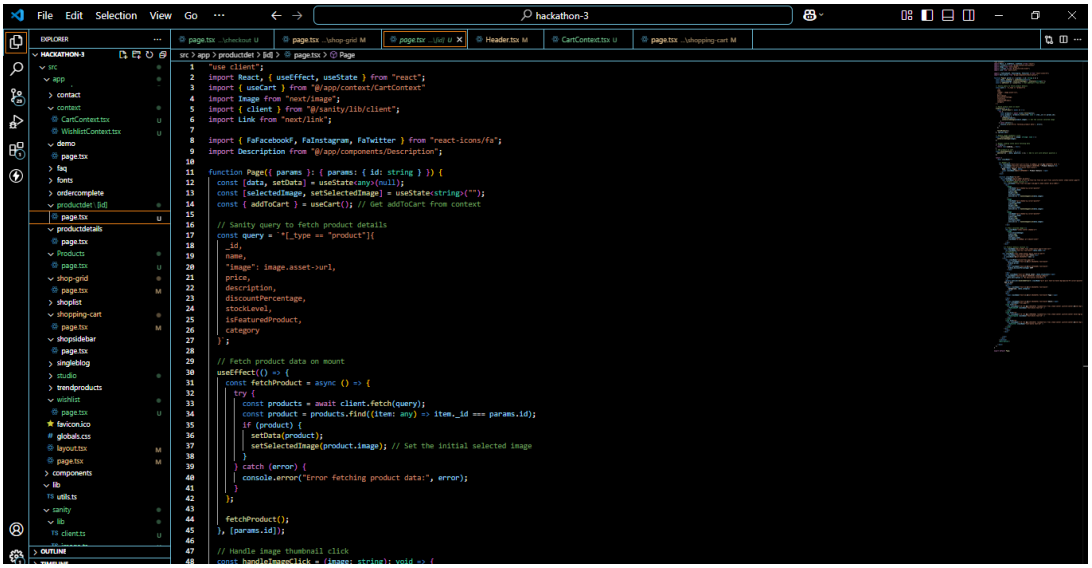


DYNAMIC ROUTING:

We implemented **dynamic routing** in our Next.js application to create individual pages for each product. By utilizing Next.js's file-based routing, we created dynamic routes using square brackets, such as productdetail/[id]/page.tsx for product. This allowed us to fetch content dynamically from **Sanity CMS** based on the unique identifier of each product . When a user navigates to a specific product, the page is generated on-demand, displaying the relevant content from the CMS, ensuring a personalized and dynamic user experience.



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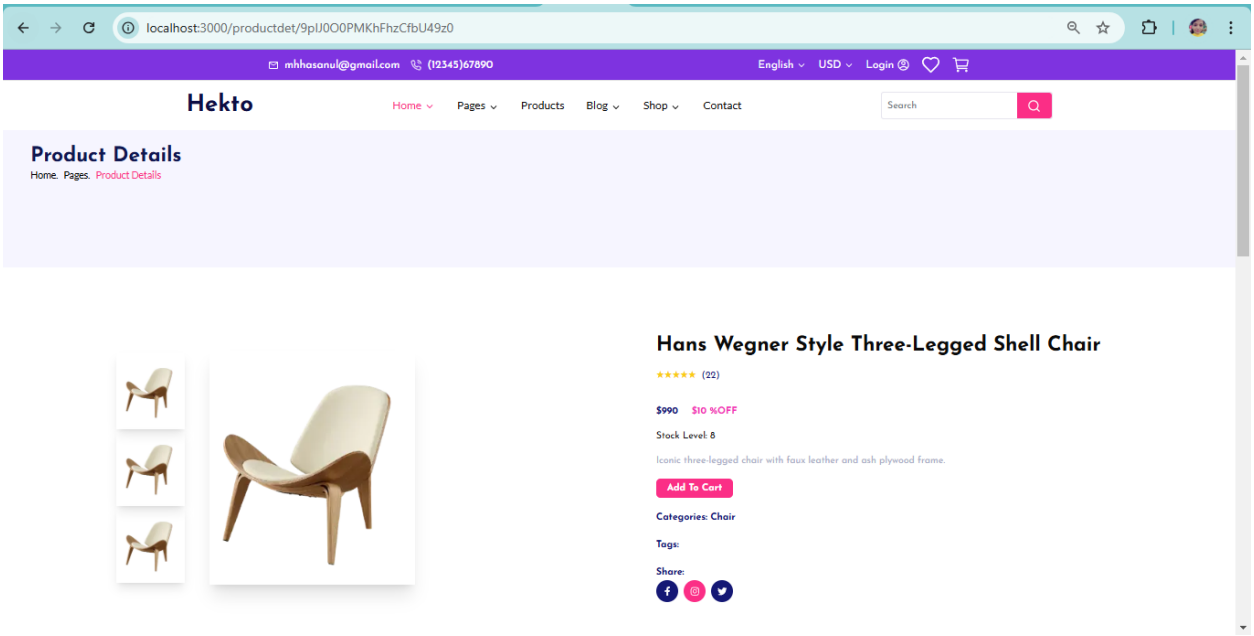
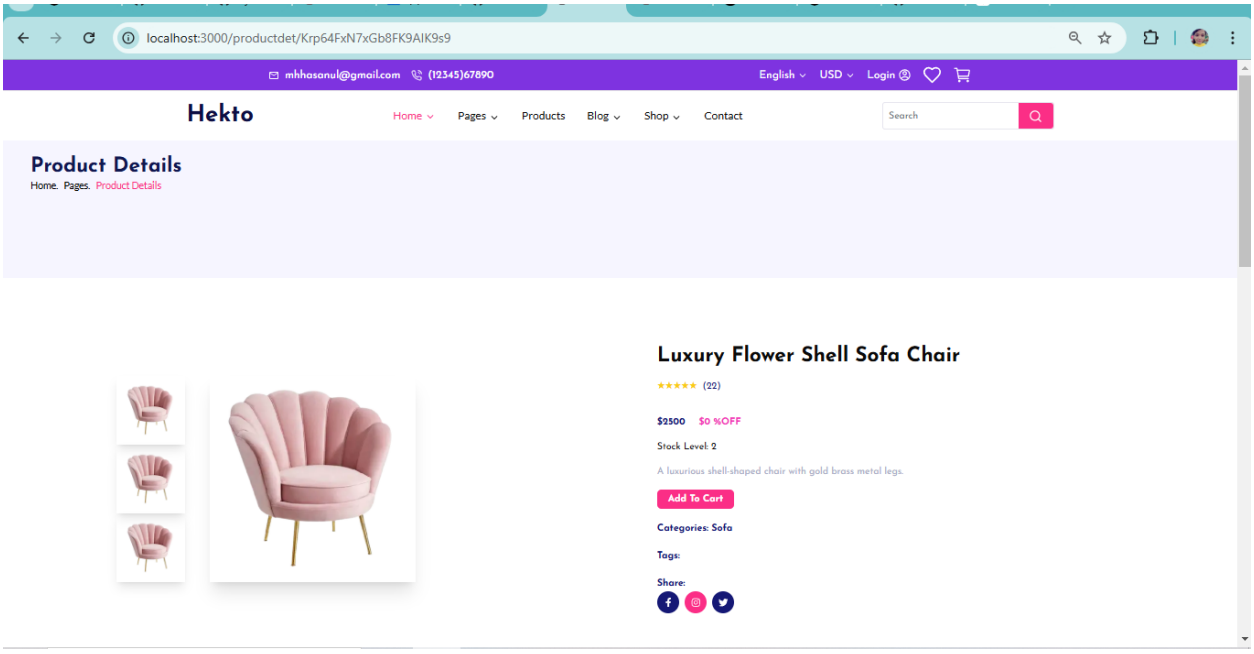
Product 1:



Product 2:



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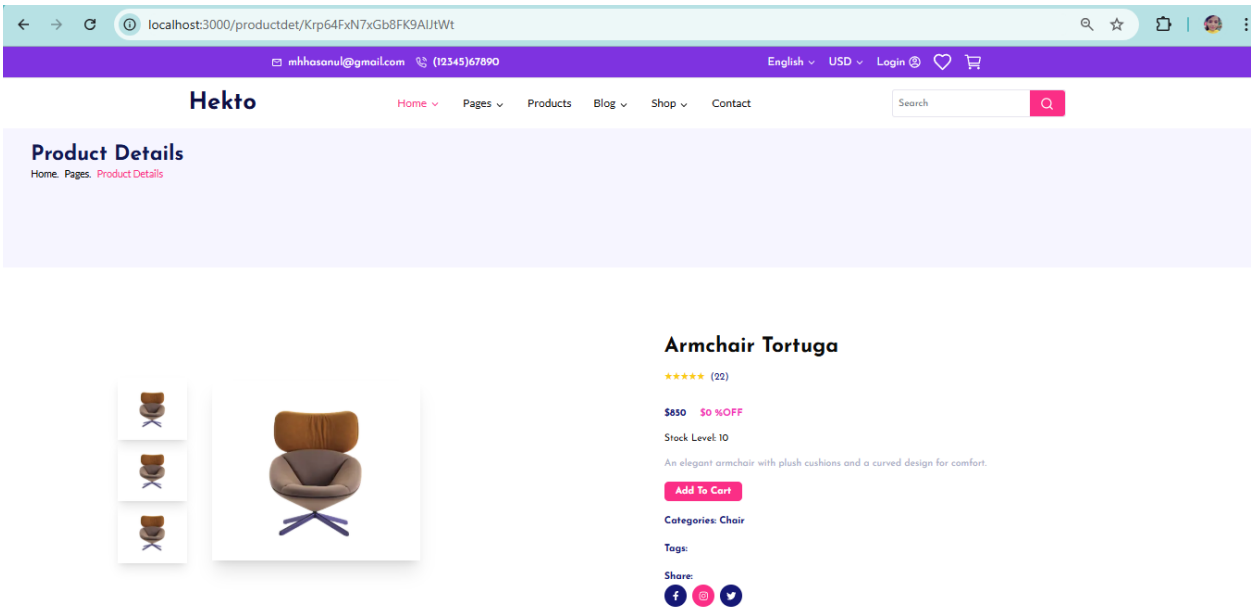
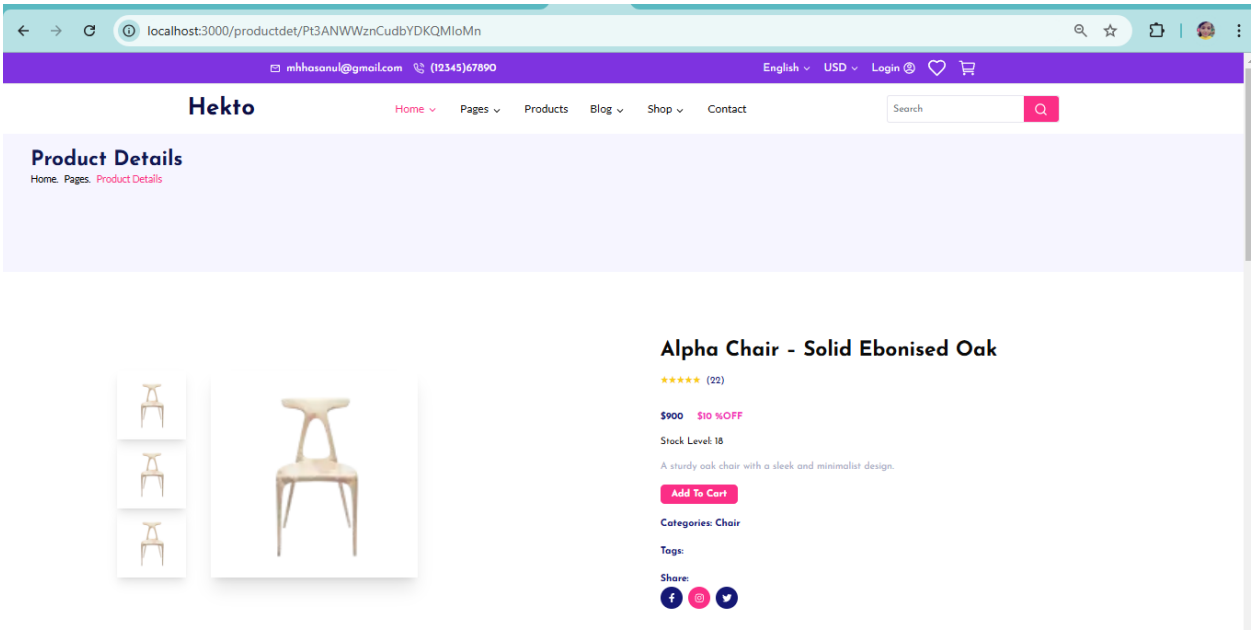
Product 3:



Product 4:



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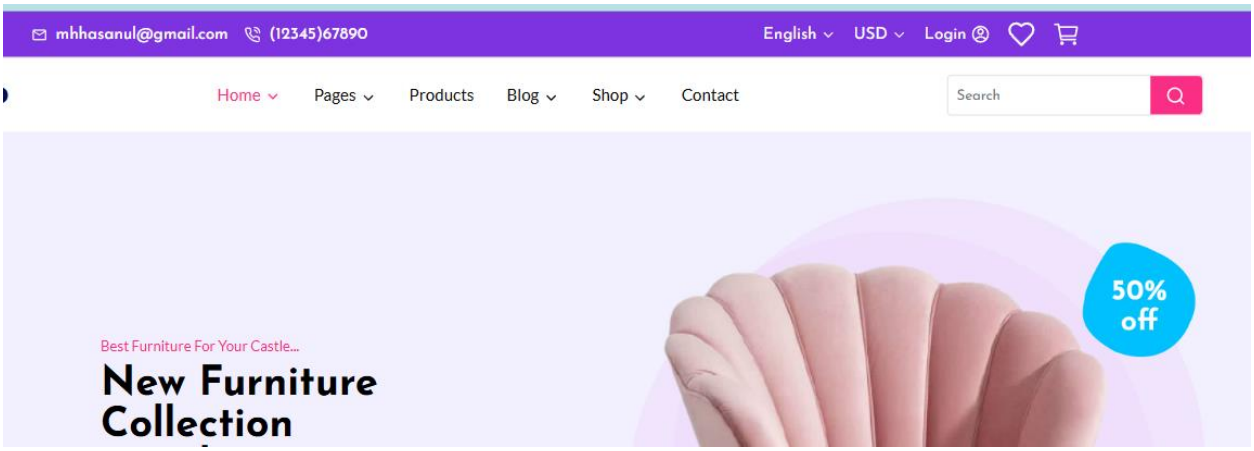
The **Product Page** displays comprehensive information for each item, enhancing the user's shopping experience. Here's a breakdown of the key sections:

1. **Add to Cart**: A prominent button allows users to add the product to their cart with a single click, making the purchasing process seamless.
2. **Description**: This section provides a detailed overview of the product, highlighting its features, benefits, and any other relevant information to help customers make an informed decision.
3. **Stock**: The stock availability is displayed to inform customers whether the product is in stock or out of stock. This section helps in managing customer expectations regarding product availability.
4. **Category**: The category section classifies the product, allowing users to see what category it belongs to, such as "Sofas" or "Chairs," making it easier to browse similar items.
5. **Discount**: If there's any ongoing promotion or discount, it is clearly displayed, showing the reduced price and the original price to encourage purchases.
6. **Price**: The product's price is prominently shown, ensuring transparency and helping customers understand the cost before proceeding with the purchase.

These elements combine to create a complete and engaging product page that caters to the needs of potential buyers, providing them with all the necessary information for a smooth shopping experience.

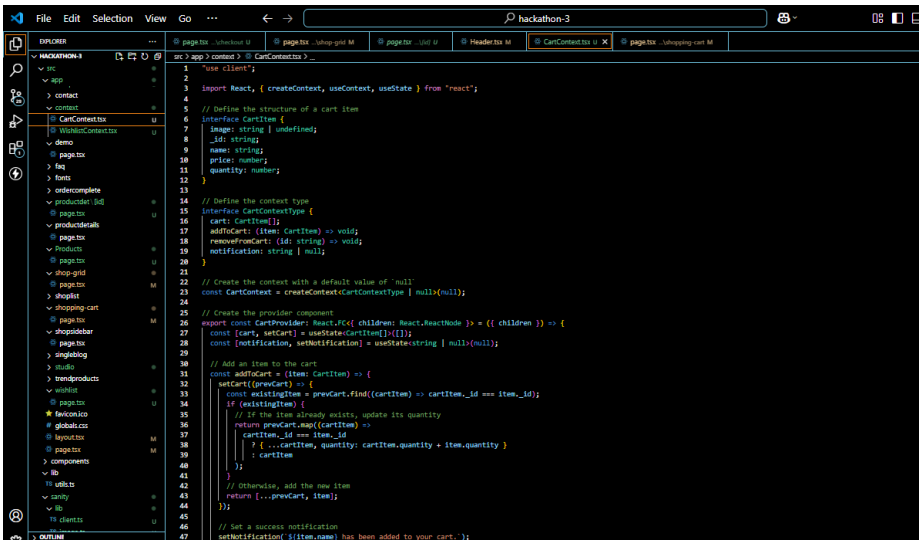
Search Bar:

The **Search Bar** is an essential feature that allows users to quickly find products or content by entering relevant keywords. It provides dynamic suggestions as users type and can be linked with filters like category or price range for more refined results. Integrated with **Sanity CMS**, the search fetches real-time, relevant data, ensuring that users always see up-to-date and accurate results. This feature improves navigation and enhances the overall shopping experience.



CART:

In the **Add to Cart** functionality, we implemented a system that allows users to add products to their cart by clicking the "Add to Cart" button. If a product is already in the cart, its quantity is updated instead of adding a duplicate item. The **Cart Context** was used to manage the cart state, storing the items and their quantities in a global context for easy access across the app. A **notification** was added to show a success message when an item is added to the cart, which disappears after a few seconds. Additionally, the cart item count is displayed on the navbar, giving users a quick overview of how many items they have in their cart.



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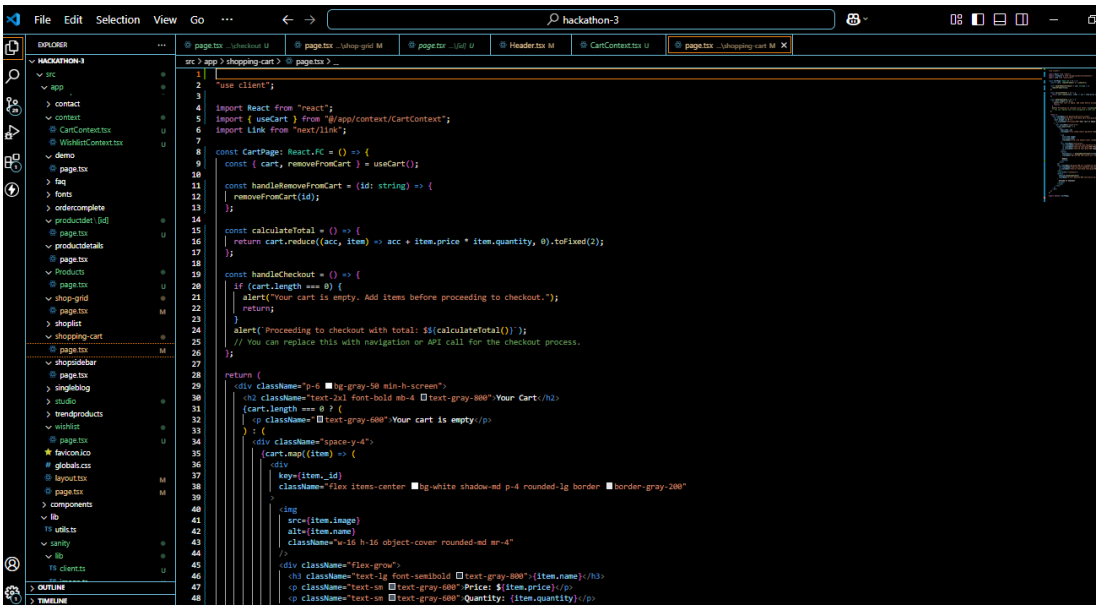
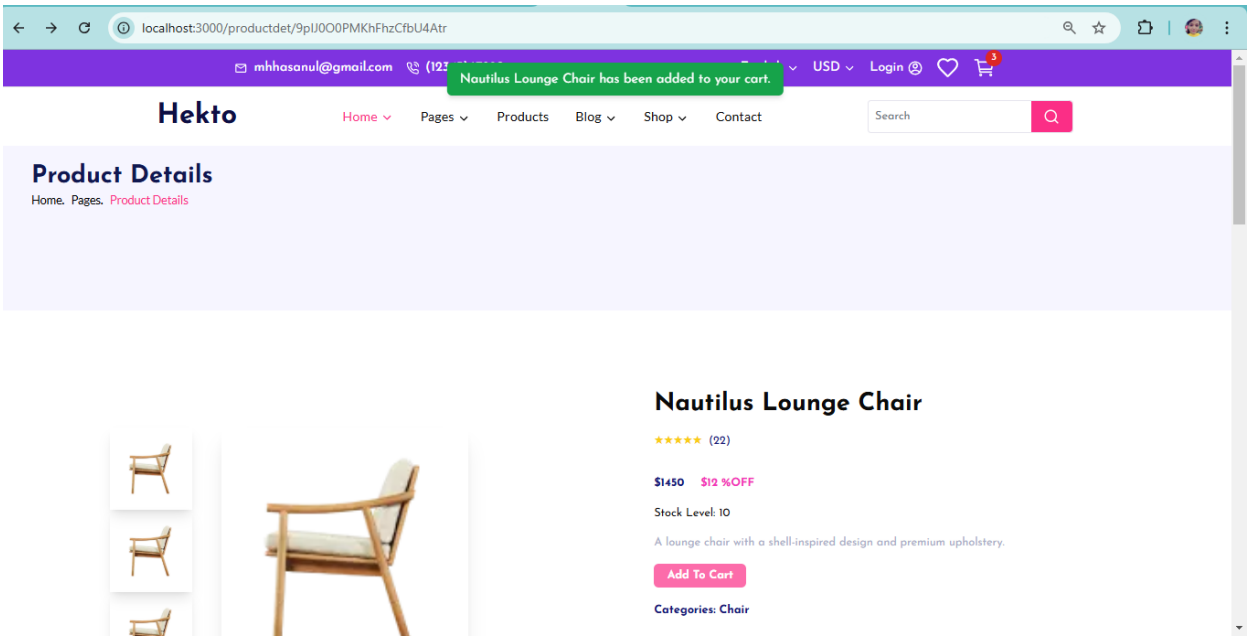


NOTIFICATION:



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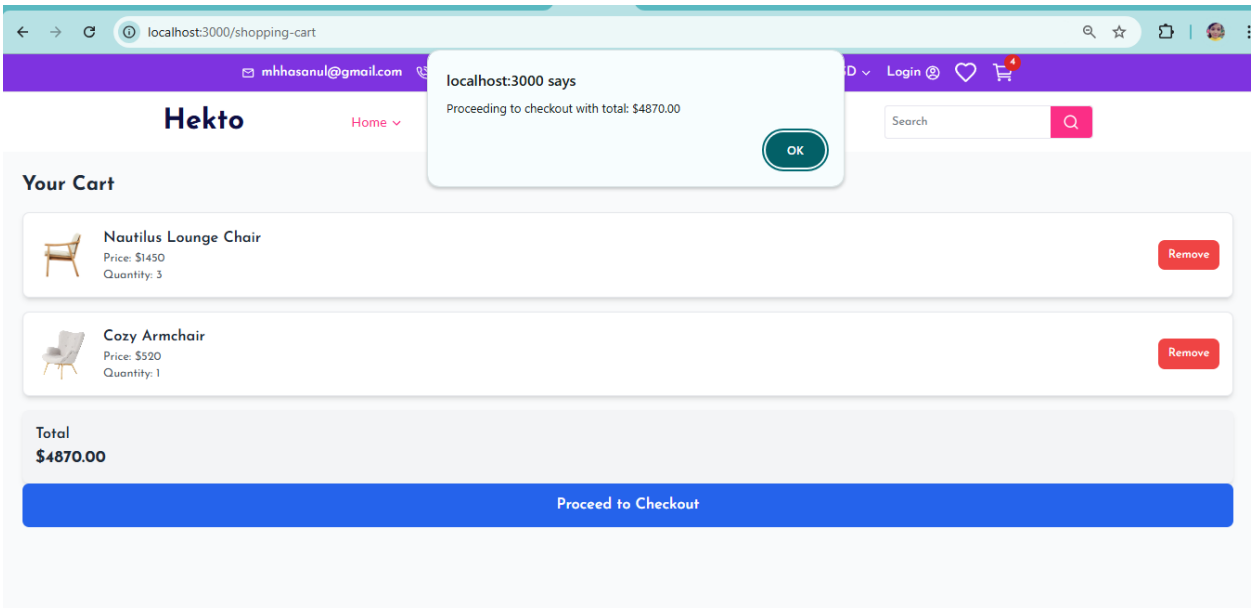
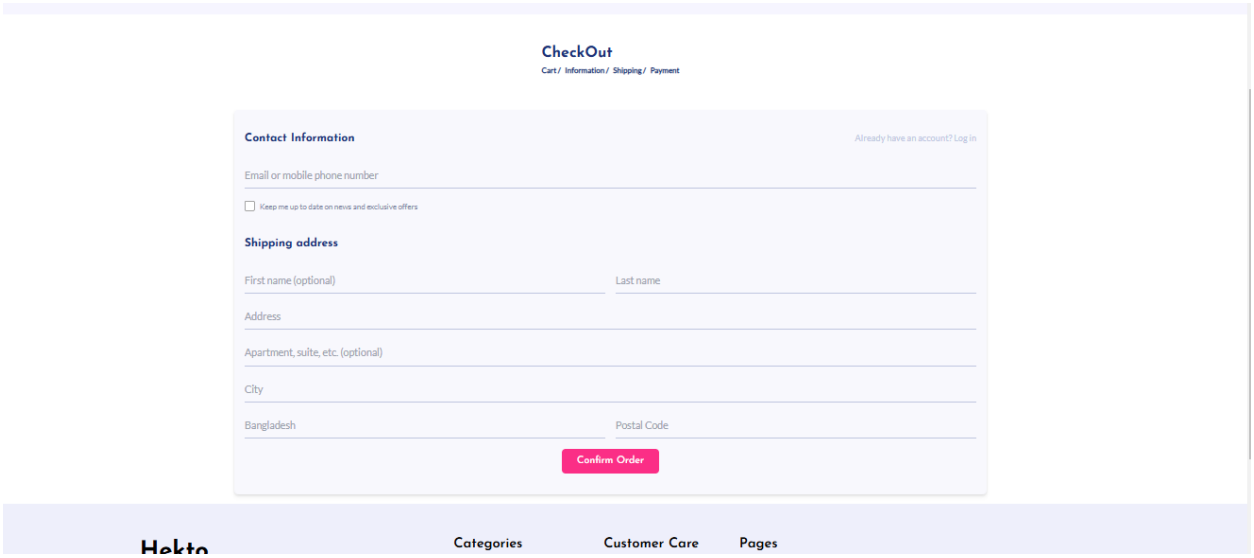
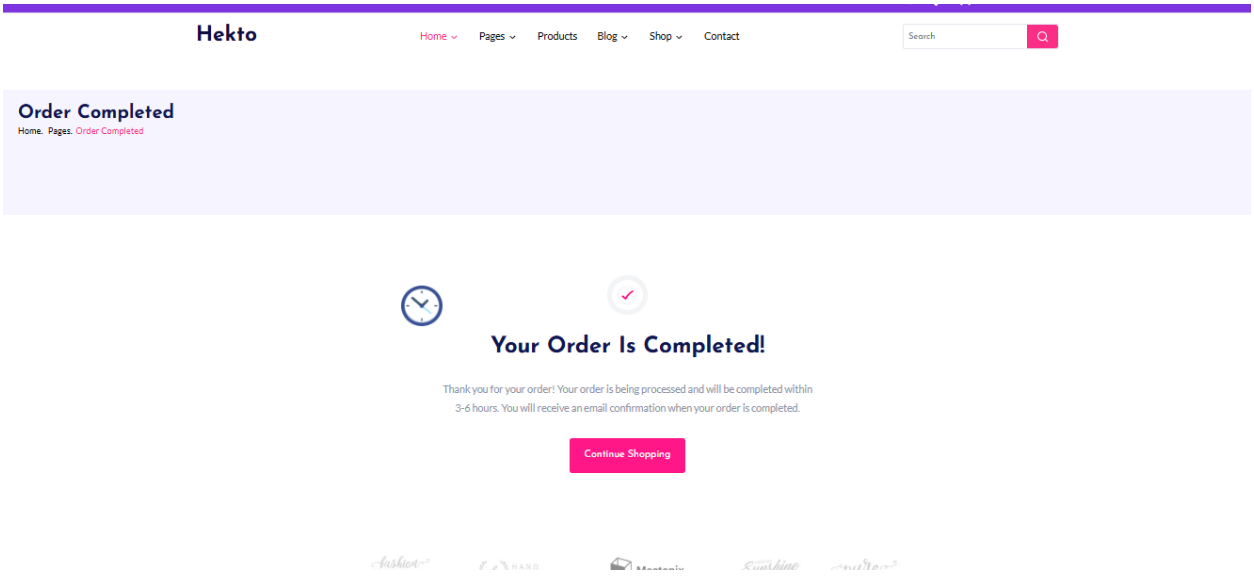


Proceed to Checkout:

By clicking proceed to checkout we route to checkout page.

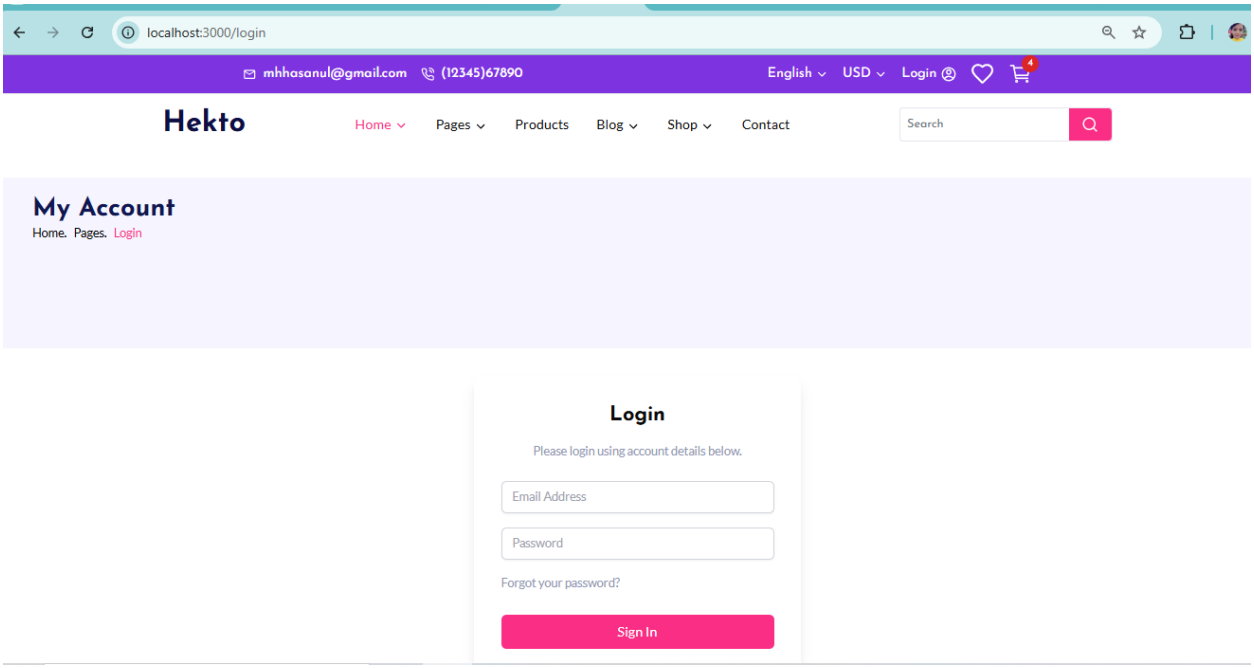


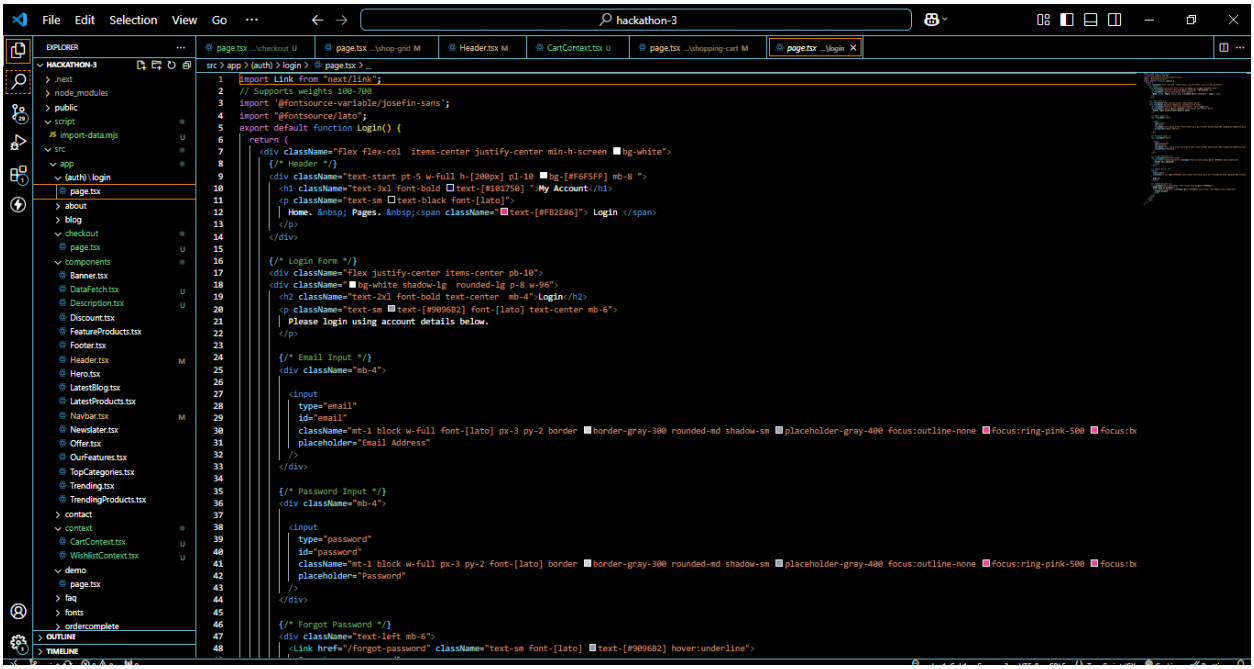
After confirming order:



LOGIN PAGE:

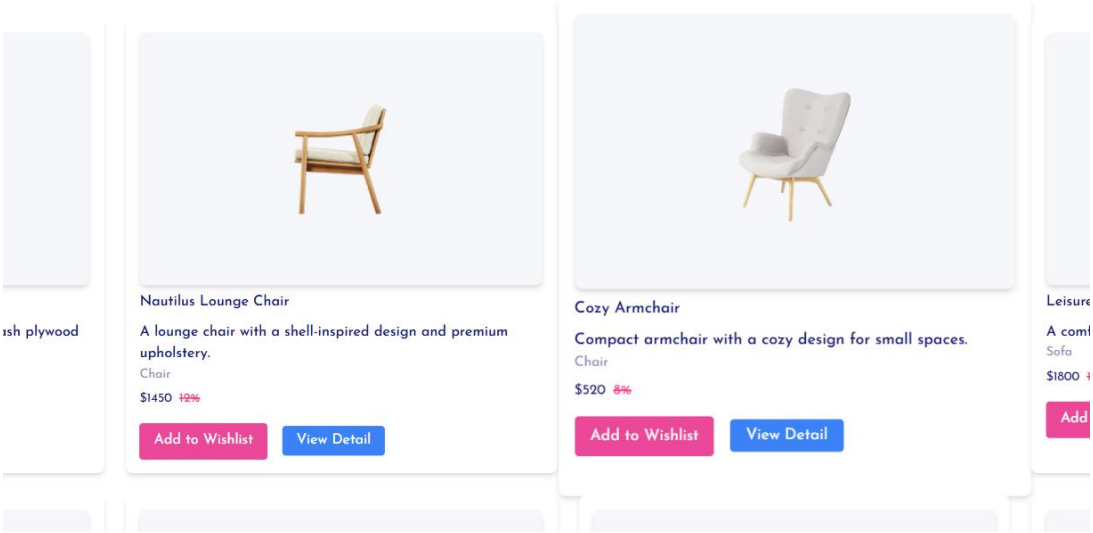
The **Login Page** allows users to securely sign in to their accounts using their email and password. It provides a straightforward and user-friendly interface, ensuring easy access to personalized content and features on the website.





WISHLIST:

In the **Wishlist** feature, we implemented functionality that allows users to save products for future reference. When a user clicks on the "Add to Wishlist" button, the product is added to their wishlist, which is stored in the app's global state using **React Context**. Users can view their saved items anytime and easily move them to the cart when ready to purchase. This provides a convenient way to track and revisit preferred products without losing them from sight.



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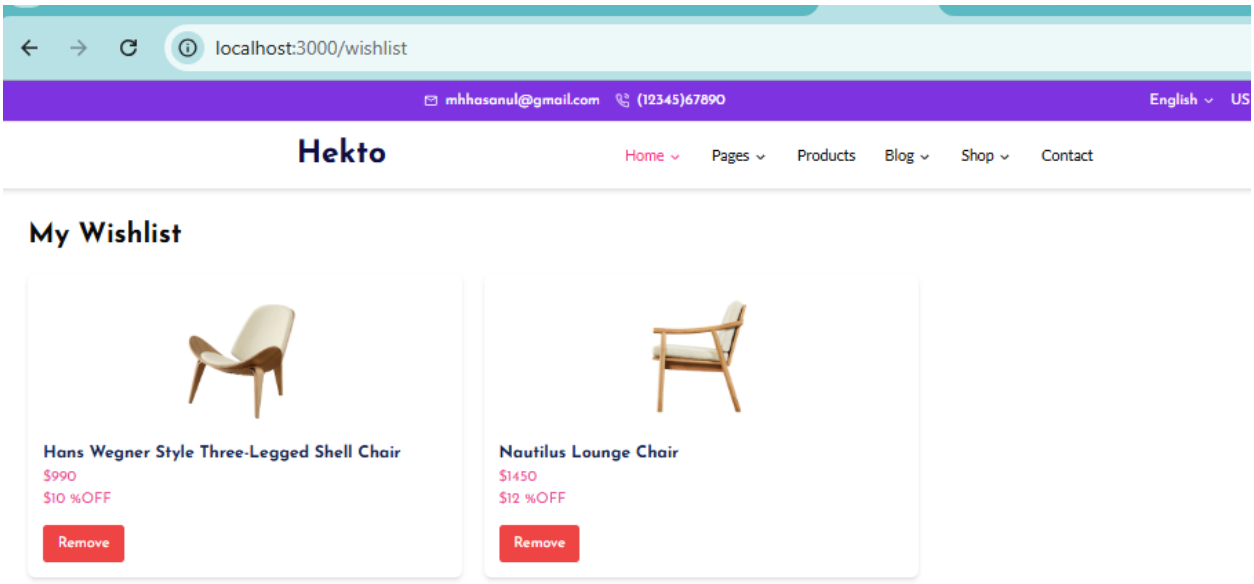

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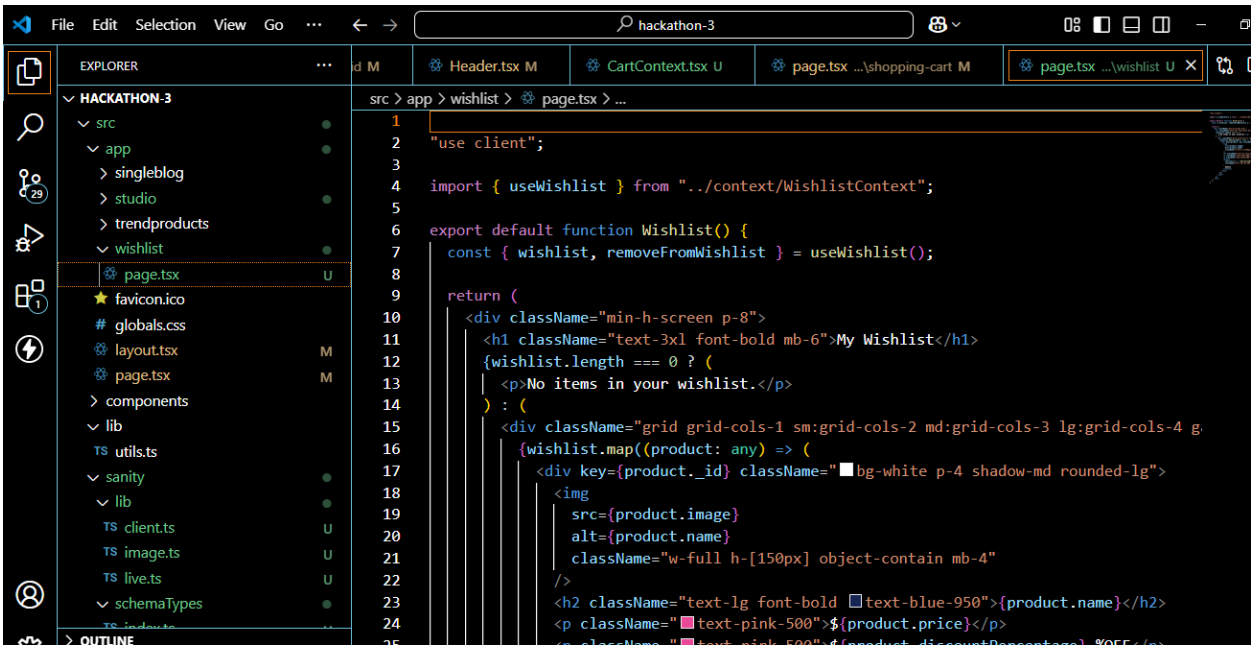
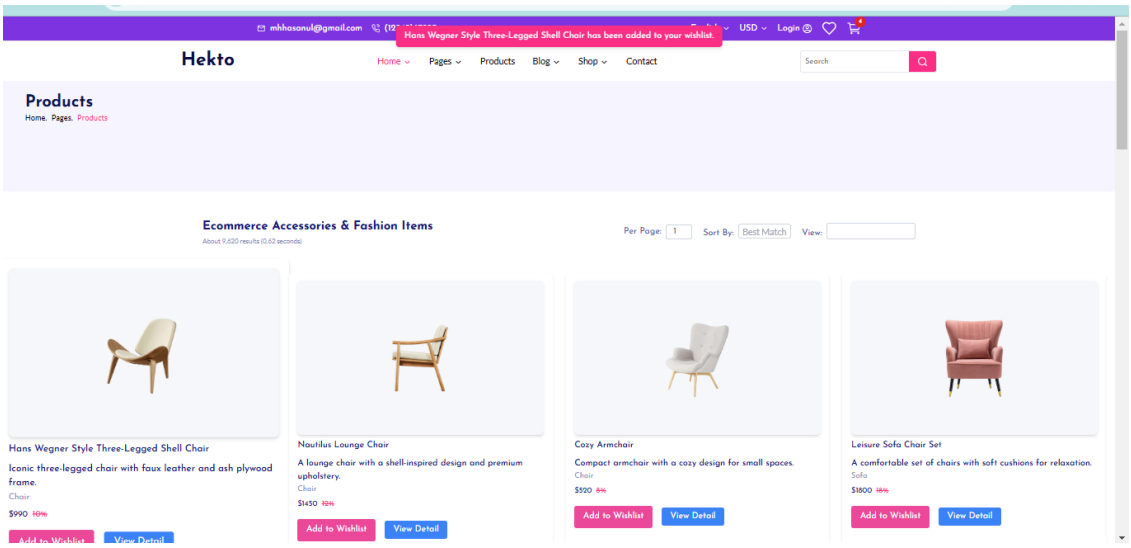


NOTIFICATION:

In the **Add to Wishlist** feature, we added notifications to improve the user experience. When a user adds an item to their wishlist, a message appears saying "Item has been added to your wishlist," confirming the action. If the item is already in the wishlist, the message displayed is "This product is already in your wishlist," preventing duplicates. This helps users stay informed and manage their wishlist effectively, ensuring a smooth and intuitive shopping experience.



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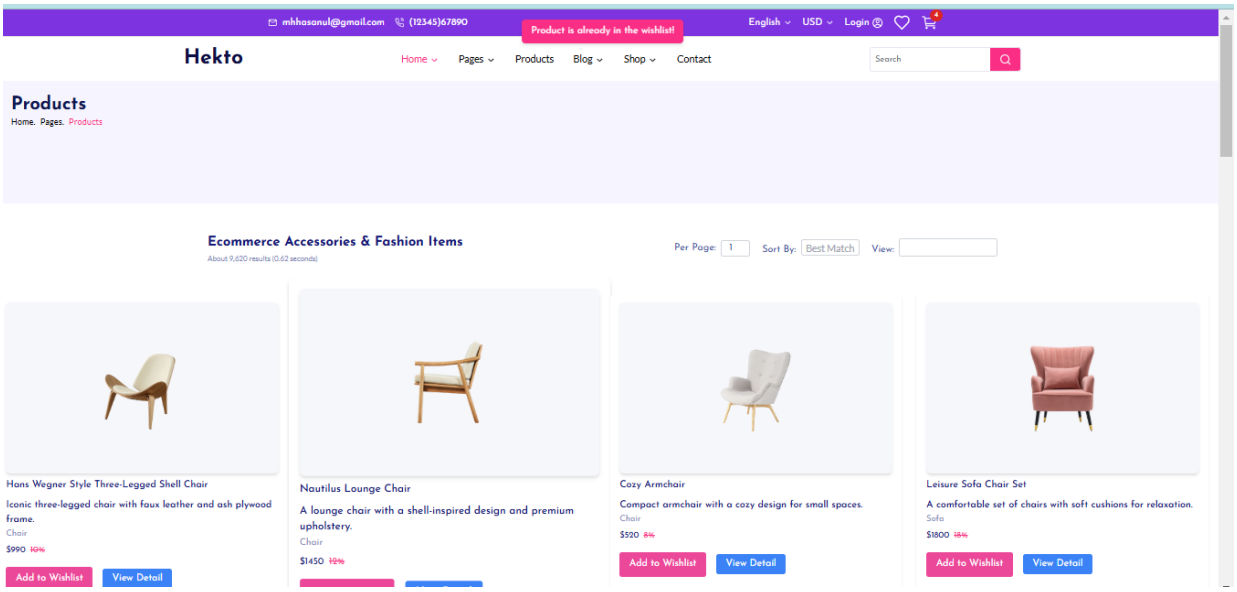

STEPS FOR IMPLEMENTATION:

SETUP:

The integration of **Next.js**, **Sanity CMS**, and the **API** is running smoothly, allowing us to efficiently manage and display dynamic content. **Next.js** is handling server-side rendering and dynamic routing, ensuring fast load times and SEO optimization for the site. **Sanity CMS** is serving as the content management system, providing an easy way to update product information, blog posts, and other content. The **API** is used to fetch real-time data from Sanity, enabling the application to dynamically display the latest content without the need for manual updates. This seamless integration ensures that the site is always up-to-date and performs optimally.

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COMPONENT BUILDING:

I implemented a **reusable design system** using **Tailwind CSS**, making the project more efficient and scalable. With Tailwind's utility-first approach, I was able to quickly style components without writing custom CSS, ensuring consistency across the design. The use of reusable components makes it much easier to maintain and update the project, while keeping the design flexible and responsive on all devices.

STATE MANAGEMENT:

I have used **useState**, **useEffect**, and **useContext** in my project.

- **useState** is used to manage the state, such as cart items, user authentication status, etc.
- **useEffect** is used to handle side effects like making API calls or fetching data when the component mounts.
- **useContext** is used to manage global state, allowing me to share data like cart items and the wishlist across different components.

By using these hooks, I've made my application more interactive and efficient.

BACKEND DEVELOPMENT:

For authentication, I have integrated **GitHub** and **Google** sign-in options. This allows users to quickly log in without the need to create a new account, providing a faster and more convenient experience. By using these services, users benefit from a secure, trusted authentication process, reducing the risk of managing passwords while enhancing the overall ease of access to the platform.

PAYMENT GATEWAY:

For payment processing, I have integrated multiple **payment gateways** to offer users a variety of secure options. These include **PayPal** and **Stripe**, which provide easy and secure online payments internationally. Additionally, local payment methods like **Easypaisa**, **JazzCash**, and **Bank Account Transfer** are available to cater to Pakistani users, ensuring flexibility and convenience for all customers. These integrations ensure smooth and reliable transactions, making it easier for users to complete their purchases with confidence.

CAMPONENT INTEGERATION:

Here are the key **components** I have integrated into the project:

1. **Cart Component**: Manages the user's cart, allowing them to view, add, and remove items. It also updates the cart count on the navbar and displays the total price.
2. **Product Component**: Displays individual product details, including the name, price, description, stock, and add-to-cart functionality.
3. **Wishlist Component**: Allows users to save products for later, with notifications showing when an item is added or already in the wishlist.
4. **Navbar Component**: Contains navigation links and shows the cart item count in a badge, allowing users to quickly access their cart.
5. **Checkout Component**: Manages the checkout process, including payment options such as **JazzCash**, **Easypaisa**, and **Bank Transfer**.
6. **Login Component**: Handles user authentication, allowing users to log in to their accounts.

These components are all integrated using **React hooks** like useState, useEffect, and useContext to manage the application state and ensure smooth user interaction.

CONCLUSION:

In conclusion, this website is **user-friendly** due to its intuitive design and seamless navigation. With features like easy-to-use **product pages**, a dynamic **search bar**, **wishlist** functionality, and an efficient **cart system**, users can quickly find and manage their desired products. The integration of **multiple payment gateways** such as **JazzCash**, **Easypaisa**, and **Bank Transfer** provides flexible and secure payment options, catering to a wide range of preferences.

Looking ahead, the website is built for **scalability** and **future growth**. The use of **Next.js**, **Sanity CMS**, and reusable components ensures that the platform can easily adapt to new features, content, and products. The site's architecture is optimized for performance, making it reliable and fast, which is crucial as the user base grows. This combination of user-centric design and future-proof technology makes the website a solid foundation for long-term success.