Day 04: Building Dynamic Frontend Components for Marketplace

On Day 4, the development focus was on creating dynamic and reusable frontend components tailored for a robust e-commerce marketplace. Below is an organized breakdown of the key components built:

Key Components to Build

1. Product Listing Component

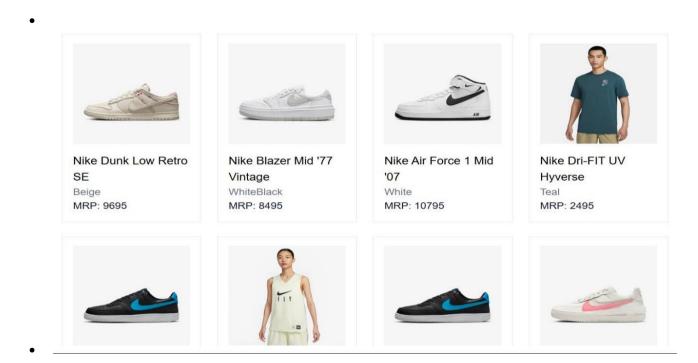
- **Description:** Displays all available products with relevant details such as image, name, price, and discounts.
- Features:
 - Pagination for efficient browsing.
 - Lazy loading to optimize performance.
 - o Integration with backend data through Sanity API.
- Outcome: A responsive grid layout ensuring seamless product display.

```
import React from 'react'
import { useState, useEffect } from "react";
import { client } from "@/sanity/lib/client";
import { BsFillFilterCircleFill } from "react-icons/bs";
import Link from "next/link";

type Product = {
    _id: string;
    productName: string;
    imageUrl: string;
    colors?: string[];
    price: number;
```

```
};
export default function Products() {
      const [isSidebarOpen, setIsSidebarOpen] = useState(false);
      const [products, setProducts] = useState<Product[]>([]);
      const [error, setError] = useState<string | null>(null);
       useEffect(() => {
         const fetchProducts = async () => {
           const query = `
             *[_type == "product"]{
               productName,
               category,
               price,
               inventory,
               colors,
               status,
               "imageUrl": image.asset->url,
               description
           const fetchedProducts = await client.fetch(query);
           setProducts(fetchedProducts);
         };
       fetchProducts();
       }, []);
     useEffect(() => {
        const fetchProducts = async () => {
          try {
            const query = ` *[_type == "product"]{
              _id,
              productName,
              category,
              price,
              inventory,
              colors,
              status,
              "imageUrl": image.asset->url,
              description
            const fetchedProducts = await client.fetch(query);
```

```
setProducts(fetchedProducts); // Update state with fetched
         } catch (error) {
           console.error("Error fetching products:", error); // Log error
           setError("Failed to fetch products. Please try again later.");
       };
       fetchProducts();
     }, [1);
     const toggleSidebar = () => {
       setIsSidebarOpen(!isSidebarOpen);
     };
   </button>
 )}
     <h2 className="text-xl font-semibold">Sort By</h2>
     <button className="text-gray-600">Hide Filters/button>
   </div>
   <div className="grid grid-cols-1 sm:grid-cols-2 md:grid-cols-3</pre>
lg:grid-cols-4 gap-6">
     {/* Map through the products array */}
     {products.map((product: Product) => (
       <Link href={`/Products/${product._id}`} key={product._id}>
       <div className="border p-4">
         <img
           src={product.imageUrl}
           alt={product.productName}
           className="w-full mb-4"
         />
         <h3 className="text-lg font-medium">{product.productName}</h3>
         {product.colors}
         MRP: {product.price}
       </div>
       </Link>
     ))}
   </div>
 </main>
 </>>
```



2. Product Detail Component

- **Description:** Provides a detailed view of an individual product.
- Features:
 - o Dynamic data fetching for product-specific information.
 - o Includes images, descriptions, reviews, and stock status.
 - "Add to Cart" functionality integrated.
- Outcome: Smooth navigation to product detail pages using dynamic routing.

```
"use client";
import { ToastContainer, toast } from "react-toastify";
import "react-toastify/dist/ReactToastify.css";
import { useCart } from "@/components/CartContext";
interface Product {
    _id: string;
    productName: string;
```

```
imageUrl: string;
 colors: string[];
 price: number;
 description: string;
export default function ProductDetailClient({ product }: { product:
Product }) {
 const { addToCart } = useCart();
 const handleAddToCart = () => {
   addToCart({
     id: product._id,
     name: product.productName,
     price: product.price,
     imageUrl: product.imageUrl,
     quantity: 1,
   });
   toast.success(`${product.productName} added to your bag!`, {
     position: "top-right",
     autoClose: 3000,
     hideProgressBar: false,
     closeOnClick: true,
     pauseOnHover: true,
     draggable: true,
     progress: undefined,
   });
  };
 return (
   <div className="p-6">
     <div className="flex flex-col lg:flex-row gap-8">
       <div className="w-full lg:w-1/2">
         <img
           src={product.imageUrl}
           alt={product.productName}
           className="w-full h-96 rounded-lg shadow-md"
         />
       </div>
       <div className="w-full lg:w-1/2">
         <h1 className="text-2xl font-bold mb-</pre>
4">{product.productName}</h1>
         {product.description}
         Price: ₹ {product.price}
```

```
{product.colors && (
            <div className="mb-4">
              <h3 className="font-medium mb-2">Available Colors:</h3>
              <div className="flex gap-2">
                {product.colors.map((color, index) => (
                  <span
                    key={index}
                    className="block w-6 h-6 rounded-full border border-
gray-300"
                    style={{ backgroundColor: color }}
                  ></span>
                ))}
            Add to Cart
          </button>
        </div>
      </div>
      {/* Toastify container */}
      <ToastContainer />
    </div>
  );
```



Nike Standard Issue Basketball Jersey

The Nike Standard Issue Basketball Jersey delivers a lightweight, breathable fit for top performance. Designed for athletes, it combines style and functionality to keep you cool and comfortable on and off the court.

Price: ₹ 2895

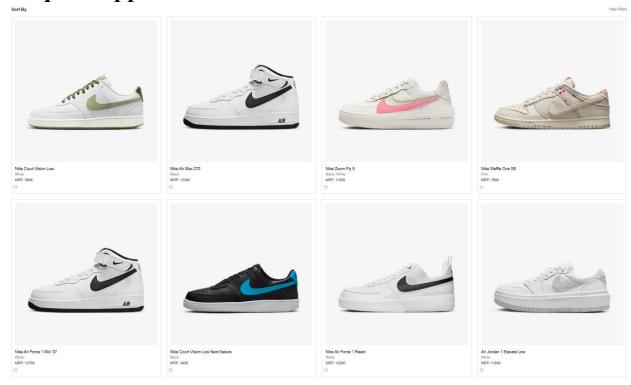
Available Colors:

Add to Cart

3. Category Component

- **Description:** Enables browsing products by specific categories.
- Features:
 - o Dynamic fetching of categories from the backend.
 - o Display of associated products under each category.
 - o Filter options within categories.
- Outcome: Organized category navigation improving the user experience.

```
"use client";
import { usePathname } from 'next/navigation';
import Filter from "@/components/Filter";
import Mens from "@/components/Categories/Mens";
import Womens from "@/components/Categories/Womens";
import Products from '@/components/Products';
import SNKRS from '@/components/Categories/SNKRS';
import Sales from '@/components/Categories/Sales';
import Kids from '@/components/Categories/Kid';
export default function Categories() {
  const pathname = usePathname(); // Get the current URL path
  const renderContent = () => {
    switch (pathname) {
      case "/mens":
        return <Mens />;
      case "/womens":
        return <Womens />;
        case "/kids":
        return <Kids/>;
        case "/sale":
        return <Sales/>;
      case "/SNKRS":
        return <SNKRS />;
      default:
      {/* Sidebar - Filters */}
       <Filter />
      {/* Main Content */}
        {renderContent()}
     </div>
```

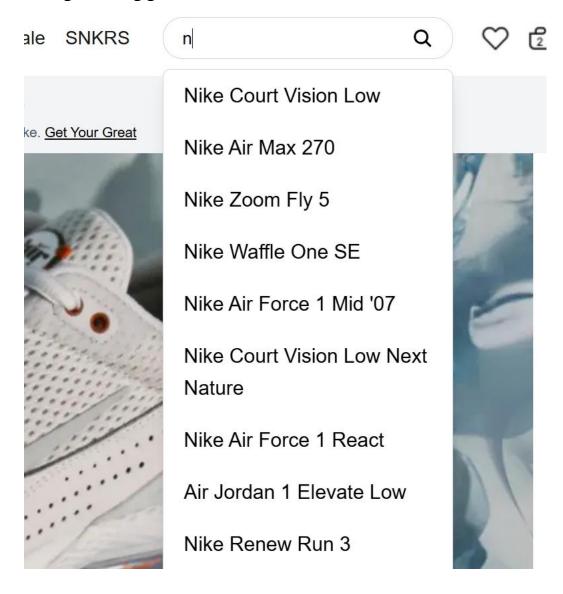


4. Search Bar

- **Description:** Helps users find specific products efficiently.
- Features:
 - o Auto-complete dropdown for matching results.
 - Error handling for invalid or irrelevant search terms.
 - o Optimized to handle large datasets quickly.
- Outcome: Real-time search capability enhancing usability.
- Code snippet:

```
// components/SearchBar.tsx
import { useState } from 'react';
import { client } from '../lib/sanityImage.mjs'; // Sanity client import
interface SearchBarProps {
setQuery: React.Dispatch<React.SetStateAction<string>>;
}
```

```
const SearchBar: React.FC<SearchBarProps> = ({ setQuery }) => {
  const [searchTerm, setSearchTerm] = useState('');
  const [results, setResults] = useState<any[]>([]); // To store search
  const handleSearch = async () => {
    const query = `*[_type == "product" && name match $searchTerm]{
     name,
      price,
      description,
      image
    try {
     const res = await client.fetch(query, { searchTerm:
`*${searchTerm}*` });
      setResults(res);
      console.error('Error fetching products:', error);
  };
  return (
    <div className="flex items-center justify-center my-6">
      <input</pre>
        type="text"
        value={searchTerm}
       onChange={(e) => setSearchTerm(e.target.value)}
      />
          results.map((product) => (
            <div key={product._id} className="border-b py-2">
              <h3>{product.name}</h3>
              {product.price}
              {product.description}
            </div>
          ))
          No results found.
        )}
      </div>
    </div>
  );
};
export default SearchBar;
```



5. Cart Component

- **Description:** Manages selected items and provides an overview of the cart.
- Features:
 - o Dynamic item addition/removal.
 - o Real-time price calculation, including discounts and taxes.

- o Persistent cart data for user convenience.
- Outcome: A user-friendly cart system ensuring smooth checkout preparation.

```
"use client"
import Recommendation from "@/components/Recommendation";
import Link from "next/link";
import { useCart } from "@/components/CartContext";
import Image from "next/image";
export default function Bag() {
  const { cart, removeFromCart, updateCartItemQuantity } = useCart();
  const subtotal = cart.reduce((total, item) => total + item.price *
item.quantity, 0);
    return (
      <div className="min-h-screen bg-[#FFFFFF]">
        {/* Container */}
        <div className="max-w-7xl mx-auto px-4 py-8 grid grid-cols-1</pre>
lg:grid-cols-3 gap-8">
          {/* Bag Section */}
          <div className="lg:col-span-2 bg-[#FFFFFF] p-6">
            {/* Free Delivery Banner */}
            <div className="bg-gray-100 p-4 mb-6 rounded-md text-sm">
              <span>Free Delivery</span> applies to orders of ₹10,000 or
more.{" "}
              <a href="#" className="text-[#111111] underline">
                View details
              </a>
            </div>
            {/* Bag Items */}
            <h2 className="text-lg font-bold mb-2">Your Cart</h2>
            <div className="space-y-8">
            {cart.length === 0 ? (
            <div className="flex w-full items-center justify-center">
                     <Image</pre>
                       src={"/assets/addtocart.jpg"}
                      width={300}
                      height={300}
                      alt={"Your Cart Is Empty"}
                       cLassName="mb-4"
                     />
                  </div>
```

```
<div className="space-y-8">
            {cart.map((item) => (
              <div key={item.id} className="flex gap-4">
                  src={item.imageUrl}
                  alt={item.name}
                  className="w-24 h-24 object-cover rounded-md border"
                <div className="flex-1">
                  <h3 className="font-semibold">{item.name}</h3>
                  Price: ₹{item.price}
                  <div className="flex items-center space-x-4">
                        <button
                          className="px-2 py-1 bg-gray-200 rounded-full
text-black font-semibold"
                          onClick={() => updateCartItemQuantity(item.id,
item.quantity - 1)}
                          disabled={item.quantity <= 1}</pre>
                        </button>
                        Quantity: {item.quantity}
                          className="px-2 py-1 bg-gray-200 rounded-full
text-black font-semibold"
                          onClick={() => updateCartItemQuantity(item.id,
item.quantity + 1)
                        </button>
                      </div>
                  <button
                    className="text-red-500 mt-2"
                    onClick={() => removeFromCart(item.id)}
                    Remove
                  </button>
                </div>
              </div>
            ))}
          </div>
        )}
</div>
```



6. Checkout Flow Component

- **Description:** Handles the entire checkout process, ensuring user satisfaction.
- Features:
 - o Multi-step form for shipping, payment, and confirmation.
 - Validation checks for form inputs.

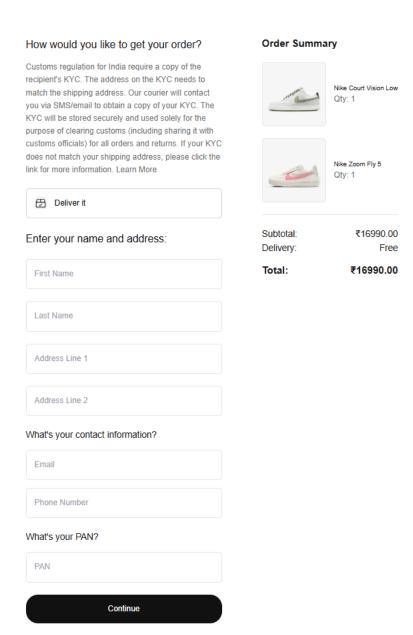
- o Integration with APIs for order placement.
- Outcome: A streamlined checkout process improving conversion rates.

```
"use client";
import React, { useState } from "react";
import { useCart } from "@/components/CartContext";
import { useRouter } from "next/navigation";
import { toast, ToastContainer } from "react-toastify";
import "react-toastify/dist/ReactToastify.css";
import emailjs from "emailjs-com";
export default function CheckOut() {
  const { cart } = useCart();
 const [formData, setFormData] = useState({
   firstName: "",
   lastName: "",
   email: "",
   phone: "",
   pan: "",
   address: "",
  });
  const [orderId, setOrderId] = useState<string | null>(null);
  const [showDialog, setShowDialog] = useState(false);
  const router = useRouter();
  const handleInputChange = (e: React.ChangeEvent<HTMLInputElement>) => {
   const { name, value } = e.target;
   setFormData({ ...formData, [name]: value });
  };
  const handleFormSubmit = (e: React.FormEvent) => {
   e.preventDefault();
   if (
      !formData.firstName ||
      !formData.lastName ||
      !formData.email ||
      !formData.phone
      !formData.pan ||
```

```
!formData.address
    toast.error("Please fill in all the required fields.");
    return;
 if (cart.length === 0) {
    toast.error("Your cart is empty. Please add items to your cart.");
    return;
 const generatedOrderId = `ORD-${Math.floor(Math.random() * 1000000)}`;
  console.log("Email Content:", emailContent);
 emailjs
    .send(
     process.env.NEXT_PUBLIC_YOUR_SERVICE_ID!,
     process.env.NEXT PUBLIC YOUR TEMPLATE ID!,
      emailContent,
      process.env.NEXT PUBLIC YOUR USER ID!
    .then((response) => {
     console.log("Email sent successfully:", response);
      toast.success("Order confirmation sent to your email!");
    })
    .catch((error) => {
      console.error("Email send error:", error);
      toast.error("Failed to send confirmation email.");
   });
};
const handleTrackOrder = () => {
 router.push(`/Order-Tracking/${orderId}`);
};
return (
  <div className="min-h-screen bg-[#FFFFFF] p-6">
```

```
className="p-4 border rounded-md w-full"
     />
   </div>
   <div className="grid grid-cols-1 gap-4">
     name="address"
     value={formData.address}
     onChange={handleInputChange}
     className="p-4 border rounded-md w-full"
   />
   <div>
     <h2 className="text-lg font-medium mb-4">
       What's your PAN?
     </h2>
     <input</pre>
       type="text"
       placeholder="PAN"
       name="pan"
       value={formData.pan}
       onChange={handleInputChange}
       className="p-4 border rounded-md w-full"
     />
   </div>
   {/* Continue Button */}
   <button className="w-full p-4 bg-[#111111] text-white rounded-3x1">
     Continue
   </button>
 </form>
</div>
{/* Right Section: Order Summary */}
<div className="bg-white w-full lg:w-[320px] h-auto lg:h-[721px] p-6">
 <h2 className="text-xl font-bold mb-6">Order Summary</h2>
 {cart.map((item) => (
     <img
         src={item.imageUrl}
         alt={item.name}
         className="w-[128px] h-[128px] rounded-md border mr-4"
```

```
/>
                      <div>
                         {item.name}
                         Qty: {item.quantity}
        {/* Dialog Box */}
        {showDialog && orderId && (
           <div className="fixed inset-0 flex items-center justify-center bg-black">div className="fixed inset-0 flex items-center justify-center bg-black"
bg-opacity-50">
              <div className="bg-white p-6 rounded-md w-[400px]">
                 <h2 className="text-lg font-medium mb-4">
                    Your Order ID: {orderId}
                 </h2>
                 We have received your order! A confirmation email has been sent
to{" "}
                    {formData.email}.
                 <button
                   onClick={handleTrackOrder}
                   className="w-full p-4 bg-[#111111] text-white rounded-3x1"
                    Track Order
                 </button>
              </div>
           </div>
        )}
        <ToastContainer />
     </div>
   );
```

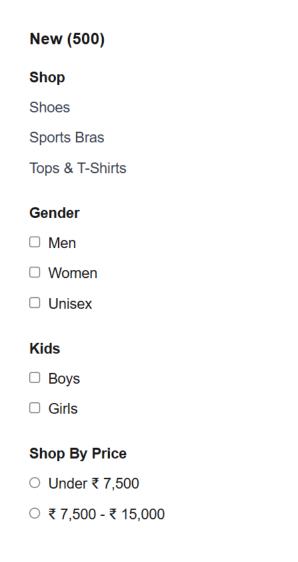


7. Filter Panel Component

- **Description:** Enables users to refine product searches.
- Features:
 - o Filters for price range, ratings, and availability.
 - o Dynamic updates without page reloads.
 - o Integration with search and category components.
- Outcome: Precise and quick product filtering.
- By: Asma Yaseen

```
"use client";
import { useState } from "react";
export default function Filter(){
     const [isSidebarOpen, setIsSidebarOpen] = useState(false);
     const toggleSidebar = () => {
       setIsSidebarOpen(!isSidebarOpen);
     };
   return(
       <aside
       cLassName={`fixed top-0 left-0 h-full bg-[#FFFFFF] p-4 pl-12 z-40
transition-transform duration-300 ease-in-out transform ${
         isSidebarOpen ? "translate-x-0" : "-translate-x-full"
       } lg:relative lg:translate-x-0 lg:w-1/4`}
       <button
         className="lg:hidden absolute top-4 right-4 text-gray-600 text-
x1"
         onClick={toggleSidebar}
         X
       </button>
       <h2 className="text-lg font-semibold mb-4">New (500)</h2>
         <div className="mb-6">
           <h3 className="font-semibold mb-2">Shop</h3>
           <a href="#" className="text-gray-700">Shoes</a>
             <a href="#" className="text-gray-700">Sports</a>
Bras</a>
             <a href="#" className="text-gray-700">Tops & T-
Shirts</a>
            {/* Add more categories here */}
           </div>
         <div className="mb-6">
           <h3 className="font-semibold mb-2">Gender</h3>
           <label><input type="checkbox" className="mr-2 accent-</pre>
black" />Men</label>
             <label><input type="checkbox" className="mr-2 accent-</pre>
black" />Women</label>
             <label><input type="checkbox" className="mr-2 accent-</pre>
black" />Unisex</label>
```

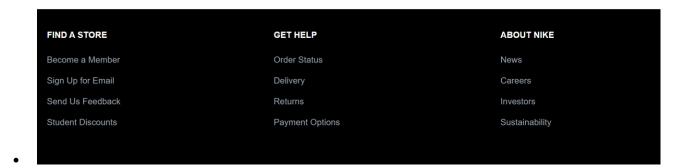
```
</div>
        <div className="mb-6">
          <h3 className="font-semibold mb-2">Kids</h3>
          <label><input type="checkbox" className="mr-2 accent-</pre>
black" />Boys</label>
            <label><input type="checkbox" className="mr-2 accent-</pre>
black" />Girls</label>
          </div>
        <div>
          <h3 className="font-semibold mb-2">Shop By Price</h3>
          <label><input type="radio" name="price" className="mr-2</pre>
accent-black" />Under ₹ 7,500</label>
            <label><input type="radio" name="price" className="mr-2</pre>
accent-black" />₹ 7,500 - ₹ 15,000</label>
          </div>
      </aside>
```



8. Header and Footer Components

- **Description:** Consistent elements providing site navigation and essential links.
- Features:
 - o Sticky header with navigation options and a mini-cart.
 - \circ $\;$ Footer with links to FAQs, contact, social media, and legal information.
- Outcome: Enhanced navigation and accessibility.
- Output snippet:





9. FAQ and Help Center Component

- **Description:** Centralized location for user queries and support.
- Features:
 - Accordion layout for question categorization.
 - Searchable FAQs.
 - o Integration with contact support for unresolved issues.
- Outcome: Reduced customer inquiries via direct answers.

10. Social Media Sharing Component

- **Description:** Allows users to share products or pages on social platforms.
- Features:
 - o Integration with platforms like Facebook, Twitter, and Instagram.
 - Custom share messages and preview images.
- Outcome: Increased visibility and user engagement.
- Code snippet:

```
    import React from "react";
    import { FaFacebook, FaInstagram, FaTwitter } from "react-icons/fa";
    export default function Social_Media() {
    return (
    <div className="w-full mt-6">
    <div className="border-t border-gray-700 pt-6 flex justify-between items-center text-sm text-gray-400">
    0 2023 Nike, Inc. All Rights Reserved
```



API Integration

- Sanity API:
 - o Setup for efficient data fetching from the Sanity backend.
 - o Client configuration placed in the lib folder for global usage.

Dynamic Routing

- Implementation:
 - o Routes like /Products/:id dynamically handle individual product pages.
 - Simplifies navigation while supporting SEO best practices.
 - By: Asma Yaseen

Get Product Data Dynamically:



Nike Dri-FIT UV Hyverse

The Nike Dri-FIT UV Hyverse graphic top offers comfort and UV protection in style. Made from soft, breathable fabric, this fitness top keeps you cool and dry during workouts or casual outings.

Price: ₹ 2495

Available Colors:

Add to Cart

Wishlist Component

- **Description:** Allows users to save and manage their favorite products for later viewing or purchasing, enhancing user engagement and retention.
- Features:

0

0

o Add/remove items to/from the wishlist with a single click.

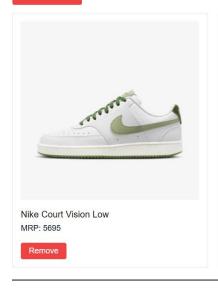
- o Display of product details like image, name, price, discount, and stock status.
- o Persistent wishlist using local storage or user account integration.
- o Option to move items from the wishlist to the cart.
- o Notification if a wishlist item goes on sale or is back in stock.
- Outcome: Increased user interaction and potential conversions by allowing users to revisit their preferred products easily.

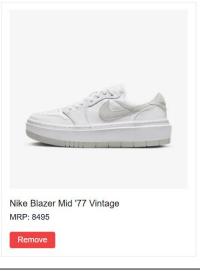
```
"use client"
import React, { createContext, useContext, useState, ReactNode } from "react";
type WishListItem = {
 id: string;
 name: string;
 price: number;
 imageUrl: string;
};
type WishListContextType = {
 wishList: WishListItem[];
  addToWishList: (item: WishListItem) => void;
 removeFromWishList: (id: string) => void;
  clearWishList: () => void;
};
const WishListContext = createContext<WishListContextType |</pre>
undefined>(undefined);
export const WishListProvider = ({ children }: { children: ReactNode }) => {
  const [wishList, setWishList] = useState<WishListItem[]>([]);
  const addToWishList = (item: WishListItem) => {
    setWishList((prevList) => {
      const existingItem = prevList.find((listItem) => listItem.id === item.id);
      if (existingItem) return prevList;
      return [...prevList, item];
    });
```

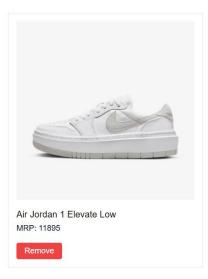
```
const removeFromWishList = (id: string) => {
    setWishList((prevList) => prevList.filter((item) => item.id !== id));
  };
  const clearWishList = () => setWishList([]);
  return (
    <WishListContext.Provider value={{ wishList, addToWishList,</pre>
removeFromWishList, clearWishList }}>
      {children}
    </WishListContext.Provider>
  );
};
export const useWishList = () => {
  const context = useContext(WishListContext);
  if (!context) {
    throw new Error("useWishList must be used within a WishListProvider");
  return context;
```

My Wish List

Clear Wish List





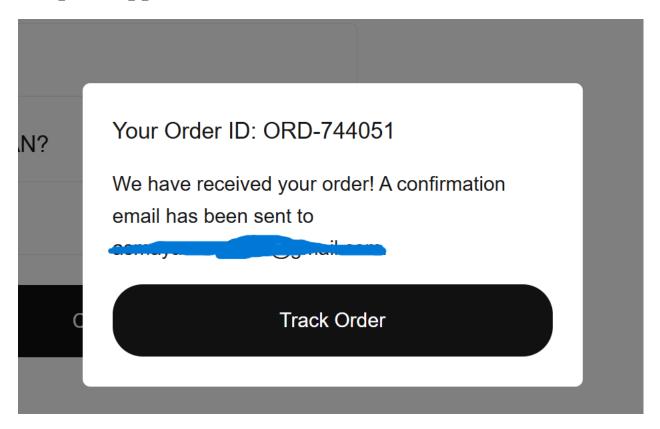


Order Tracking Component

- **Description**: Enables users to track the status of their orders post-purchase, fostering trust and transparency.
- Features:
- o Order status updates (e.g., Confirmed, Packed, Shipped, Out for Delivery, Delivered).
- o Display of estimated delivery date and real-time shipment tracking via API integration.
- o Order history with details like order ID, product list, total price, and delivery address.
- o Option to download invoices and report issues with an order.
- o Push/email notifications for significant status changes.
- **Outcome:** Enhanced post-purchase experience, improving customer satisfaction and loyalty.

```
"use client";
import { useState, useEffect } from "react";
import { toast, ToastContainer } from "react-toastify"; // Import toastify
import "react-toastify/dist/ReactToastify.css"; // Import the required CSS
const OrderTracking = () => {
 const [orderIdInput, setOrderIdInput] = useState<string>(""); // State to
 const [orderDetails, setOrderDetails] = useState<any | null>(null);
 const [isModalOpen, setIsModalOpen] = useState(false); // State to manage
  const [isTracking, setIsTracking] = useState(false); // State to manage
  const handleOrderIdChange = (e: React.ChangeEvent<HTMLInputElement>) => {
   setOrderIdInput(e.target.value); // Update input value
  };
  const handleTrackOrder = () => {
    setIsTracking(true); // Start tracking order when the button is clicked
 };
 useEffect(() => {
   if (isTracking) {
      const savedOrderDetails = sessionStorage.getItem("orderDetails");
      if (savedOrderDetails) {
       const { formData, cart, orderId } = JSON.parse(savedOrderDetails);
       if (orderId === orderIdInput) {
         setOrderDetails({ formData, cart, orderId });
```

```
setIsModalOpen(true); // Open the modal with order details
       } else {
         setOrderDetails(null); // Reset if no matching order
         toast.error("Order ID not found! Please check and try again."); // Sh
             <h3 className="font-bold text-xl mb-4">Order Details</h3>
             <strong>Name:</strong> {orderDetails?.formData.firstName}
{orderDetails?.formData.lastName}
             <strong>Address:</strong> {orderDetails?.formData.address}
             <strong>Order Items:</strong>
               {orderDetails?.cart.map((item: any, index: number) => (
                 key={index}>
                   {item.name} (x{item.quantity}) - Rs {item.price *
item.quantity}
                 ))}
             <strong>Total: Rs{orderDetails?.cart.reduce(
                 (total: number, item: any) => total + item.price *
item.quantity,
               )}</strong>
             <div className="mt-4 text-center">
               <button</pre>
                 onClick={closeModal}
                 className="w-full p-4 bg-red-600 text-white rounded-3x1"
                 Close
               </button>
             </div>
           </div>
         </div>
       )}
     </div>
     {/* Toast Container */}
     <ToastContainer />
   </div>
  );
export default OrderTracking;
```





Enter your Order ID

Track Order

Final Output

The components built during this phase are reusable, scalable, and optimized for performance. These elements lay the foundation for an engaging and user-friendly marketplace platform.

Final CheckList:

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