

Market Place Hackathon Day 2

Marketplace Technical Foundation - [Avion]

Goal:

To create a furniture ecommerce website “Avion” which is scalable and user-friendly with the following features.

- Product data management with Sanity CMS
- Authorize users with Clerk
- Track orders with ShipEngine or Shippo
- Secure payments with Stripe
- Use React Redux for cart functionality

Features

Frontend

1. User Authentication (Clerk):

- Integrate Clerk’s pre-built authentication components for a hassle-free user login and signup experience.
- Handle user sessions on the frontend without persisting authentication data in Sanity CMS, ensuring separation of concerns.

2. Product Browsing:

- Use GROQ queries to fetch product data from Sanity CMS and display it dynamically on the frontend.
- Provide users with an intuitive product browsing experience, including product details and stock availability.

3. Cart Management:

- Implement global cart state management using `useContext` for efficient state sharing across components.
- Allow users to add or remove items from the cart while dynamically updating the total price in real-time.

4. Checkout Process:

- Facilitate payment processing using Stripe-hosted checkout, ensuring secure and smooth transactions.
- Capture user details during checkout and display a confirmation screen upon successful payment completion.

5. Order Tracking:

- Utilize ShipEngine to generate unique shipping label IDs for all orders.
- Allow users to track their orders by providing real-time shipment updates linked to the label ID.

Backend

1. Sanity CMS:

- Sanity Studio is the central hub for managing all product and order data.
- Admins can use the studio to add new products, update stock, and monitor order details in real-time.

2. Custom APIs:

- **/api/products**: Handles requests for retrieving product details from the CMS and sends structured data to the frontend.
- **/api/shipping-label**: Communicates with the ShipEngine API to create unique shipping labels for orders.
- **/api/track-order**: Provides tracking updates by connecting to ShipEngine and returning current shipment statuses.
- **/api/checkout**: Manages payment processing via Stripe, securely handling transactions during checkout.

3. Admin Panel:

- Administrators rely on Sanity Studio to insert, edit, and remove product details effortlessly.
- The panel also enables the review and management of customer orders, ensuring a smooth backend workflow.

Key Libraries:

- **Authentication:** Clerk
- **Content management:** Sanity CMS
- **Shipping and tracking:** ShipEngine API
- **Payment gateway:** Stripe
- **Cart functionality:** React Redux