Hackathon Marketplace Builder: Day 2 Progress Update!

I’m thrilled to share that on Day 2 of my journey, I’ve made significant strides in creating documentation for our marketplace! 📚✨

Here’s what I’ve achieved:

🔧 Innovative Schema Design: I crafted a robust schema using Sanity, setting the foundation for more efficient data management and improving user experience. This is a key step forward for the project!

⚡ Dynamic API Endpoints: I integrated state-of-the-art API endpoints to ensure quick and

seamless communication between the frontend and backend, making data retrieval and updates faster and smoother!

📄 Frontend Requirements: I outlined essential frontend data handling needs, ensuring smooth UI integration with the backend. This will give our developers the tools to create a fluid, responsive user interface.

⚙ Overcoming Challenges: I faced some tricky issues with data validation and integration, but each hurdle has been a valuable learning experience! 💡

I’m super excited for what’s to come next! 🚀 Stay tuned as I continue building the Hackathon Marketplace!

Technical Requirements for Furniture Marketplace

1. **User Accounts:**
    - User registration and login (via email or social media).
    - User profiles for buyers and sellers.
    - Password encryption for security.
2. **Product Management:**
    - Sellers can easily add and edit furniture listings (name, description, images, price, dimensions).
    - Categories for furniture (e.g., sofas, tables, chairs).
    - Option for buyers to view detailed product pages.
3. **Search and Filters:**
    - Search bar for quick product discovery.
    - Basic filters for price, category, material, and size.
    - Sorting options like "Newest" or "Price Low to High."
4. **Payment System:**
    - Integration with payment gateways (e.g., PayPal, credit cards).
    - Simple checkout process for buyers.
    - Order tracking for customers.
5. **Order Management:**
    - Buyers can view their order status (processing, shipped, delivered).
    - Sellers receive notifications for new orders.
6. **Ratings and Reviews:**
    - Customers can leave ratings and reviews on products.

- Sellers can respond to customer reviews.

7. **Mobile Friendly:**
   - The marketplace should be mobile-responsive for easy browsing on smartphones and
   - tablets.

sanity CMS and Backend:

Sanity CMS is a flexible, real-time content management system that allows easy creation and management of structured content, such as product listings and categories. The backend integrates with Sanity's API to fetch and display data dynamically on the frontend. It handles tasks like user authentication, order processing, and product management. The backend ensures secure and efficient data storage and retrieval, using databases like MongoDB or PostgreSQL. It also supports custom API endpoints for specific features, such as real-time product updates and order tracking

API Requirements for Furniture Marketplace

1. User Authentication & Authorization:

- **POST /auth/register**: Register a new user (buyer or seller).
- **POST /auth/login**: Login with email and password.
- **GET /auth/profile**: Retrieve user profile details.

- **PUT /auth/profile**: Update user profile information.
- **POST /auth/logout**: Log the user out.

2. **Product Management:**
   - **POST /products**: Add a new product (for sellers).
   - **GET /products**: Fetch a list of all products (with optional filters like price, category, etc.).
   - **GET /products/:id**: Fetch details of a single product.
   - **PUT /products/:id**: Update an existing product (for sellers).
   - **DELETE /products/:id**: Remove a product (for sellers).
3. **Order Management:**
   - **POST /orders**: Create a new order (when a buyer places an order).

- **GET /orders/:id**: Fetch order details.
- **GET /orders**: Fetch all orders for a user (buyer or seller).
- **PUT /orders/:id**: Update order status (e.g., processing, shipped, delivered).

4. **Search & Filtering:**
   - **GET /search/products**: Search for products based on query (e.g., name, category, brand).
   - **GET /filters**: Fetch available filters for products (e.g., categories, price range).
5. **Reviews & Ratings:**
   - **POST /reviews/:productId**: Submit a review for a product.
   - **GET /reviews/:productId**: Fetch reviews for a specific product.

- **GET /reviews**: Fetch all reviews written by the user.

Technical Documentation for Furniture Marketplace API

Overview

This API is designed to support the operations of a **Furniture Marketplace**, enabling users to register, manage products, place orders, search and filter furniture, and submit reviews. The API integrates with **Sanity CMS** for content management, ensuring easy updates and flexibility for product data

System Architecture Overview for Furniture Marketplace

The **Furniture Marketplace** is designed to facilitate seamless interactions between buyers and sellers, leveraging **Sanity CMS** for content management and a **backend API** to handle user authentication, product management, order processing, and more. Below is an overview of the system architecture, highlighting key components and their interactions.

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1. Overview of Architecture

The system is based on a **microservices architecture**, where each service is responsible for specific functionality, such as managing user accounts, handling products, managing orders, etc. The architecture is **scalable**, **modular**, and **secure**.

1. User Registration and Authentication Flow

Flow:

Frontend (Client) sends user registration or login request to the Backend API.

The Backend API:

Validates the request (e.g., checks for valid email/password).

If registration, it stores user credentials in the Database (encrypted).

If login, the Backend generates a JWT (JSON Web Token) and sends it back to the Frontend for secure session management.

The Frontend stores the token and uses it for subsequent authenticated requests.

Interaction:

Frontend ↔ Backend API (for user registration, login).

Backend API ↔ Database (for storing user data).

Frontend ↔ Backend API (for JWT token management).

2. Product Management and Display Flow

Flow:

Seller (Frontend) creates a new product listing and submits it to the Backend API.

The Backend API:

Validates the product data (e.g., price, description).

Creates the product entry in the Sanity CMS via the Sanity API.

Optionally stores product-related metadata in the Database for quicker access.

Frontend (Client) fetches product data via the Backend API.