Technical Requirements for My Marketplace

1. System Architecture Overview

Frontend

UI Design

- A clean, intuitive user interface with well-organized product categories.
- Fully responsive design optimized for mobile, tablet, and desktop devices.

Core Pages

Home: Showcases featured products and categories.

Blog: Provides insights on home decor and furniture trends.

Shop: Displays product listings with advanced filtering options.

Cart: Allows users to view, modify, or remove selected items.

Checkout: Facilitates secure payment processing and shipping details input.

Contact: Features a contact form, customer support information, and social media links for seamless communication.

2. Backend (Sanity CMS)

Sanity CMS will manage all content, products, and user data efficiently.

Data Models:

1. **Product**
   - Name, description, price, images.
   - Stock availability.

- o Associated category.

2. **Category**

- o Name and hierarchy (e.g., Sofas → Sectionals).
- o Metadata for SEO.

3. **Customer**

- o User details (name, email, phone).
- o Order history.
- o Wishlist & saved items.

4. **Order**

- o Order ID, customer details.
- o Status (Pending, Shipped, Delivered, Cancelled).
- o Payment confirmation.

Tech Stack

- CMS: Sanity.io (Headless CMS for structured data).
- Database: PostgreSQL (for structured data).
- Backend Framework: Node.js (Express/NextJS for API handling).
- Authentication: Firebase Auth / NextAuth.js (Google, Email, Social Logins).

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3. Third-Party API Integrations

1. **Shipment Tracking API**

- o Real-time tracking of orders (e.g., Shippo, AfterShip, EasyPost).
- o Notifications on order status changes.

2. **Payment Gateway API**

- Secure transactions via Stripe, PayPal, Razorpay.

- Support for credit/debit cards, UPI, and digital wallets.

- Multi-currency support.

3. **Delivery Service API**

- Integration with logistics providers (FedEx, UPS, DHL).

- Automated shipping rate calculation.

- Estimated delivery time updates.

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2. System Architecture Diagram
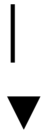
[User Browses Products]

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▼

[Adds to Cart]

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▼

[Proceeds to Checkout]

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▼

[Makes Payment]

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▼

[Order Confirmation]

|

▼

[Shipping & Tracking]

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▼

[Order Delivered]

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[Post-Order Services] (Review, Return, Support)

2. Workflows Diagram

[User Registration]

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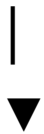**[User Signs Up] → [Data Stored in Sanity] → [Confirmation Sent to User]**

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[Product Browsing]

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▼

[User Views Categories] → [Sanity API Fetches Data] → [Products Displayed on Frontend]

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[Order Placement]

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[User Adds Items to Cart] → [Proceeds to Checkout] → [Order Details Saved in Sanity]

|
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[Shipment Tracking]

|
▼
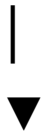
[Order Status Updates Fetched via API] → [Displayed to User]

3. API Requirements for Furniro Marketplace

1. Authentication API

- **Purpose:** User registration, login, and authentication.
- **Endpoints:**
  - POST /register → Register a new user.
  - POST /login → Authenticate user.
  - POST /logout → Log out user.

- GET /user/profile → Retrieve user profile.

  ### 2. Product API

- **Purpose:** Manage and fetch product details.

- **Endpoints:**

  - GET /products → Fetch all products.

  - GET /products/{id} → Fetch product details by ID.

  - POST /products → Add a new product (admin).

  - PUT /products/{id} → Update product details (admin).

  - DELETE /products/{id} → Remove a product (admin).

  ### 3. Cart API

- **Purpose:** Manage shopping cart items.

- **Endpoints:**

  - POST /cart/add → Add item to cart.

  - GET /cart → Retrieve cart contents.

  - DELETE /cart/remove/{id} → Remove item from cart.

  ### 4. Order API

- **Purpose:** Handle order placement and management.

- **Endpoints:**

  - POST /order → Create a new order.

  - GET /order/{id} → Retrieve order details.

  - PUT /order/{id}/status → Update order status (admin).

  ### 5. Payment API (Third-Party Integration: Stripe/PayPal)

- **Purpose:** Secure payment processing.

- **Endpoints:**

- POST /payment/process → Process a payment.
- GET /payment/status/{id} → Retrieve payment status.

6. Shipping API (Third-Party Integration: FedEx, UPS, DHL)

- **Purpose:** Order shipment and tracking.
- **Endpoints:**
  - POST /shipping/calculate → Get shipping cost.
  - GET /shipping/track/{order_id} → Track shipment status.

7. Review API

- **Purpose:** Handle product reviews and ratings.
- **Endpoints:**
  - POST /review/{product_id} → Submit a review.
  - GET /reviews/{product_id} → Fetch product reviews.