

# Design System Architecture

## 1. User Interaction (Frontend)

- **Scenario:** A user visits your marketplace frontend built in **Next.js**.
- **Actions:**
  1. Browsing products:
    - Frontend sends a GET request to the `/products` API.
    - API fetches product details from **Sanity CMS** using GROQ queries.
    - Products are displayed dynamically on the frontend.
  2. Viewing a product detail page:
    - Frontend sends a GET request to `/products/:id`.
    - API fetches the specific product details from **Sanity CMS**.
    - Product details are rendered on the page.

## 2. User Action (Add to Cart, Proceed to Checkout)

### 2.1 Add to Cart:

- **User Action:** User adds a product to the cart.
- **Data Flow:**
  - Frontend sends a POST request to `/cart`.
  - The `/cart` API stores the cart details in the **context state (using Context API)** or **local storage** (depending on implementation).

### 2.2 Proceed to Checkout:

- **User Action:** User initiates checkout.
- **Data Flow:**
  - Frontend sends a POST request to `/orders`.
  - The `/orders` API processes the order details.
  - **Sanity CMS** is updated via its API:
    - Records the order details (user info, cart items, total amount).
    - Stores order status as "Pending."

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## 3. Third-Party Integrations

### 3.1 Payment Gateway Integration:

- **Scenario:** After checkout, payment is processed.
- **Data Flow:**
  - `/orders` API communicates with the **Payment Gateway API** to process the payment.
  - Payment Gateway returns a response:

- On success: /orders API updates the payment status to "Completed" in **Sanity CMS**.
- On failure: /orders API updates the payment status to "Failed" in **Sanity CMS**.

### 3.2 Shipment Tracking Integration:

- **Scenario:** After payment confirmation, shipment details are fetched.
  - **Data Flow:**
    - /shipment API communicates with the **Third-Party Shipment API**.
    - Shipment details (tracking ID, estimated delivery date) are fetched.
    - /shipment API updates the **Sanity CMS** with shipment information.
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### 4. Order Confirmation (Frontend)

- **Scenario:** After all actions are processed, the user receives confirmation.
- **Data Flow:**
  - Frontend sends a GET request to /orders/:id.
  - API fetches order details (order status, payment status, shipment tracking) from **Sanity CMS**.
  - The order confirmation page displays this information to the user.