2. 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:**

  o Frontend sends a POST request to /cart.

  o 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:**

  o Frontend sends a POST request to /orders.

  o The /orders API processes the order details.

  o **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:**

  o /orders API communicates with the **Payment Gateway API** to process the payment.

  o 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.