

# Marketplace Technical Foundation - Q-Commerce (Medicos Store)

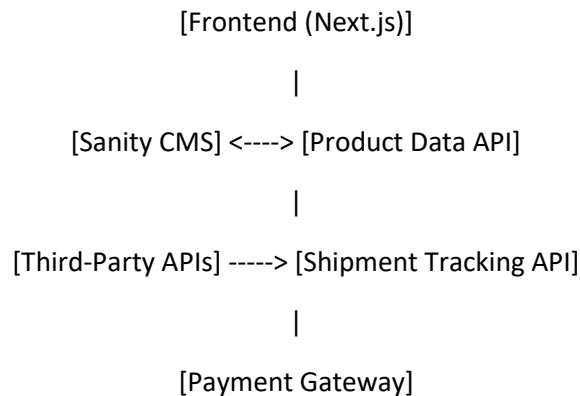
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## 1. System Architecture:

Diagram:

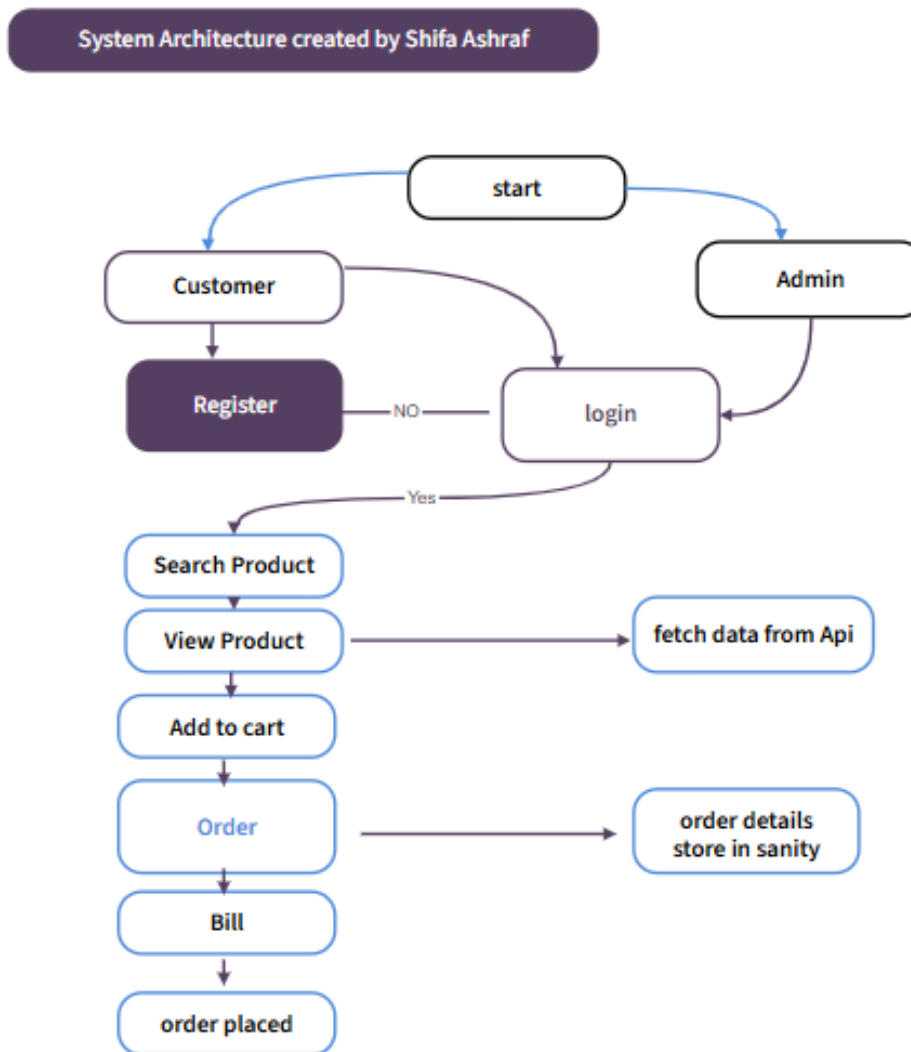


### Description of Components:

- **Frontend (Next.js):** A user-friendly interface allowing users to browse medicine products, add items to the cart, and place orders. Responsive for both mobile and desktop users.
- **Sanity CMS:** Acts as the backend for managing product data, customer records, and order history.

- **Product Data API:** Fetches product details from the CMS to display on the frontend dynamically.
- **Third-Party APIs:** Facilitates real-time shipment tracking and integration with external delivery services.
- **Payment Gateway:** Manages secure online payments and ensures transaction success.

## 2 Key Workflows:



### Workflow 1: User Registration

1. User visits the site and signs up.
2. Registration details are sent to Sanity CMS.
3. Sanity CMS stores user data and sends confirmation to the user.

Workflow 2: Product Browsing

- 1. User views product categories or searches for a specific medicine.
- 2. Frontend fetches product data via the Sanity API.
- 3. Products are displayed with details like name, price, and stock status.

Workflow 3: Order Placement

- 1. User adds medicines to the cart and proceeds to checkout.
- 2. Order details are sent to Sanity CMS for storage.
- 3. Payment is processed via a payment gateway.
- 4. Order confirmation is displayed to the user.

Workflow 4: Shipment Tracking

- 1. User checks the status of an order.
- 2. Frontend calls the shipment tracking API.
- 3. Real-time delivery updates (e.g., “In Transit,” “Delivered”) are displayed.

3. Category-Specific Instructions for Q-Commerce

Focus Areas

- 1. **Real-Time Inventory Updates:** Automatically update stock levels in Sanity CMS when orders are placed.
- 2. **Delivery SLA Tracking:** Monitor delivery timelines to ensure express delivery.
- 3. **Express Delivery Workflow:** Provide real-time updates using endpoints like `/express-delivery-status`.

4. API Specification Document

Table of API Endpoints

| Endpoint  | Method | Purpose                                       | Response Example  |
|-----------|--------|---|---|
| /products | GET    | Fetch all available products from Sanity CMS. | { "id": 1, "name": "Paracetamol", "price": 50, "stock": 100, "image": "url" } |
| /orders   | POST   | Save new order details in Sanity CMS.         | { "orderId": 101, "status": "Success" }                                       |

| Endpoint  | Method | Purpose                           | Response Example   |
|-----------|--------|-----------------------------------|--|
| /shipment | GET    | Track real-time shipment updates. | { "orderId": 101, "status": "In Transit", "ETA": "15 mins" } |
| /payment  | POST   | Process user payment securely.    | { "transactionId": "abc123", "status": "Completed" }         |

## 6 Data Schema Design

### Sanity Schema: Product

Typescript

```
export default {
  name: 'product',
  type: 'document',
  fields: [
    { name: 'name', type: 'string', title: 'Product Name' },
    { name: 'price', type: 'number', title: 'Price' },
    { name: 'stock', type: 'number', title: 'Stock Level' },
    { name: 'category', type: 'string', title: 'Category' },
    { name: 'description', type: 'text', title: 'Description' },
    { name: 'image', type: 'image', title: 'Product Image' },
  ],
};
```

### Sanity Schema: Orders

Typescript

```
export default {
  name: 'order',
  type: 'document',
  fields: [
    { name: 'orderId', type: 'number', title: 'Order ID' },
    { name: 'customer', type: 'reference', to: [{ type: 'customer' }], title: 'Customer' },
    { name: 'products', type: 'array', of: [{ type: 'reference', to: [{ type: 'product' } ]}], title: 'Products' },
    { name: 'totalAmount', type: 'number', title: 'Total Amount' },
    { name: 'status', type: 'string', title: 'Order Status' },
    { name: 'createdAt', type: 'datetime', title: 'Created At' },
  ],
};
```

### Sanity Schema: Customer

Typescript

```
export default {
  name: 'customer',
  type: 'document',
  fields: [
    { name: 'name', type: 'string', title: 'Name' },
  ],
};
```

```
{ name: 'email', type: 'string', title: 'Email' },  
{ name: 'phone', type: 'string', title: 'Phone Number' },  
{ name: 'address', type: 'text', title: 'Address' },  
],  
};
```

## 7. Workflow Diagram

```
[User] -----> Registers -----> [Sanity CMS: Stores User Data]  
  
[User] -----> Browses Products -----> [Sanity CMS: Fetch Product Data] ----->  
[Frontend: Display Products]  
  
[User] -----> Places Order -----> [Sanity CMS: Store Order Details] ----->  
[Payment Gateway: Process Payment]  
  
[User] -----> Tracks Shipment -----> [Third-Party API: Fetch Status] ----->  
[Frontend: Display Status]
```