

HACKATHON # 03

DAY # 02

PLANNING THE TECHNICAL FOUNDATION

Technical Foundation for Spices Marketplace (Q-Commerce)

1. Define Technical Requirements

The goal for today is to start planning the technical side of my marketplace. Here's what we need to do:

Frontend Requirements:

- **UI (User Interface):** Design should be simple and easy to use, so people can easily browse and buy spices.
- **Responsive Design:** The site should work well on both desktop and mobile devices.
- **Pages to include:**
 - ❖ **Home Page:** Show popular spices and offers.
 - ❖ **Product Listing:** Display a list of spices in categories like "Organic Spices" or "Premium Masalas."
 - ❖ **Product Details:** Show information about each spice, including price, description, and ingredients.
 - ❖ **Cart:** Users can see what they have added to their cart.
 - ❖ **Checkout:** A page for payment and delivery details.
 - ❖ **Order Confirmation:** A page to confirm that the order has been placed successfully.

Backend with Sanity CMS:

- **Sanity CMS:** Sanity will store your spice product data, customer details, and orders.
 - **Product Schema:** Fields for product name, description, price, image, and stock.
 - **Order Schema:** Details about the order, customer information, and status.
 - **Customer Schema:** Customer's name, address, and contact details for delivery.

Third-Party APIs:

- **Payment Gateway API:** For secure payments (e.g., Stripe or PayPal).

- **Shipping API:** To track orders and deliveries .
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2. Design System Architecture

I will design how different parts of the system will work together.






- **Frontend (User Interface):** This is the part users see. They will browse products, add items to the cart, and checkout through next.js.
- **Backend (Sanity CMS):** Sanity will manage all product and order data.

System Flow:

1. **User Browses Products:** The user looks at the available spices.
 2. **Cart Management:** The user adds items to the cart.
 3. **Checkout:** The user enters payment details and shipping address.
 4. **Payment Processing:** After payment, the system confirms the order.
 5. **Shipping:** The system uses the shipping API to track the delivery.
 6. **Order Confirmation:** The user gets an order confirmation with shipping details.
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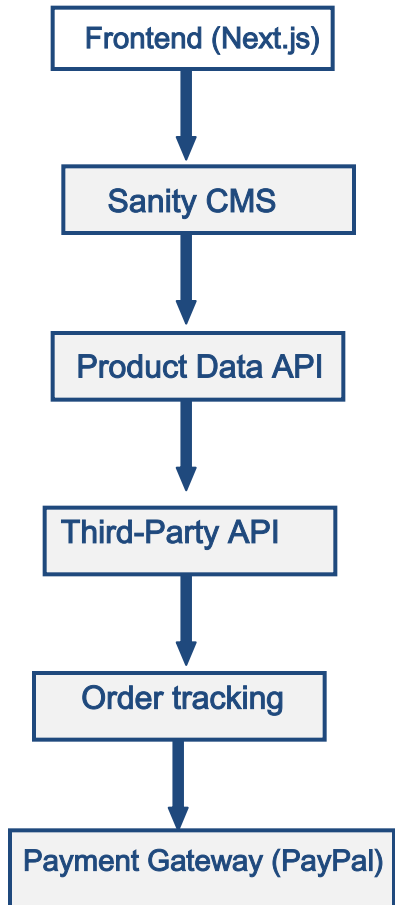
3. Workflow Diagram

Here's a simple overview of the steps a user takes when buying spices from your marketplace:

1. **Browse Products:** Users look at spices on the homepage and product listing page.

2. **Add to Cart:** Users add their selected spices to the cart.

3. **Checkout:** Users enter payment and shipping details.

4. **Payment Processing:** The system connects to the payment API to process the payment.

5. **Order Confirmation:** Once payment is successful, the user gets an order confirmation.


6. **Shipping:** The system uses the shipping API to provide tracking details for the order.

4. Data Flow



5. Data Schema

PRODUCT

```
{ name: 'product',
  type: 'document',
  fields: [
    {
      name: 'spice',
      type: 'string',
    },
    {
      name: 'description', // Description of
      type: 'text',         the product
    },
    {
      name: '150',
      type: 'number',
    },
    {
      name: 'category',
      type: 'string',
    },
  ],
}
```

One to many



CUSTOMER

```
name: 'customer'
fields: [
  {
    name: 'firstName'
    type: 'string',
  },
  {
    name: 'lastName',
    type: 'string',
  },
  {
    name: 'email',
    type: 'string',
  },
  {
    name: 'phone',
    type: 'string',
  },
]
```