

Hackathon: 3

Day 2

(16th January 2025)



PLANNING THE
TECHNICAL
FOUNDATION

[Day2_Planning_the_Technical_Foundation.pdf](#)

System Architecture Diagram

Client (User)

(Web Browser)



Frontend (Next.js)

(UI + Client Side)



API Gateway

(Handles requests to Backend)



Backend (Server Side)

(Handles Business Logic)

Database (Sanity CMS)

(Product Catalog, Orders)



Payment Gateway

(Processing Payments)



Delivery Service

(Shipping & Tracking Info)

API Workflow:

- 1. **Product Fetching:**
 - **Endpoint:** `/api/products`
 - **Response:** List of all available products.
 -
- 2. **Order Creation:**
 - **Endpoint:** `/api/orders`
 - **Payload:** Product details, customer info, and order status.
 - **Response:** Order confirmation.
 -
- 3. **Track Delivery:**
 - **Endpoint:** `/api/track-delivery`
 - **Response:** Shipment status, estimated delivery time.

System Workflow Diagram:

Frontend UI	API Calls
Fetch Products	<code>/api/products</code>
Create an Order	<code>/api/orders</code>
Track Shipment	<code>/api/track-delivery</code>

```
1 // Sanity Schema for Products
2 export default {
3   name: 'product',
4   type: 'document',
5   title: 'Product',
6   fields: [
7     {
8       name: 'name',
9       type: 'string',
10      title: 'Product Name'
11    },
12    {
13      name: 'price',
14      type: 'number',
15      title: 'Price'
16    },
17    {
18      name: 'stock',
19      type: 'number',
20      title: 'Stock Level'
21    },
22    {
23      name: 'category',
24      type: 'string',
25      title: 'Category'
26    },
27    {
28      name: 'image',
29      type: 'image',
30      title: 'Product Image',
31      options: {
32        hotspot: true
33      }
34    },
35  ],
36  };

```

```
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2 export default {
3   name: 'product',
4   type: 'document',
5   title: 'Product',
6   fields: [
7     {
8       name: 'name',
9       type: 'string',
10      title: 'Product Name'
11    },
12    {
13      name: 'price',
14      type: 'number',
15      title: 'Price'
16    },
17    {
18      name: 'stock',
19      type: 'number',
20      title: 'Stock Level'
21    },
22    {
23      name: 'category',
24      type: 'string',
25      title: 'Category'
26    },
27    {
28      name: 'image',
29      type: 'image',
30      title: 'Product Image',
31      options: {
32        hotspot: true
33      }
34    },
35  ],
36  };

```

[Frontend (Next.js with Tailwind CSS)]



[Sanity CMS]

[3rd Party APIs]

[Product Data API]

[Shipment Tracking API]

[Payment Gateway]

Tech Stack

Frontend (Next.js with Tailwind CSS): User interface with SSR and responsive design.

Sanity CMS: Manages product and order data.

3rd Party APIs: Handle shipment tracking and payment processing.