

Planning The E-Commerce Workflow

This planning document explains the step-by-step workflow of setting up and managing an e-commerce system using APIs, Sanity CMS, and frontend integration.

Step 1: My Website

Home Page: The user lands on the home page of the website.

Product Listing Page:

- Displays a list of available products.
- Fetches product data dynamically from the backend.
- Includes search, sort, and filter options to enhance user experience.

Step 2: Product Detail Page

Displays detailed information about a selected product.

Data includes:

- Product Name
- Price
- Description
- Images
- Additional features or specifications (if any).
- Fetches product data using an API or CMS (Sanity).

Step 3:API Integration

API Purpose: To fetch product details from a backend server.

Example API Structure:

```
{  
  "id": 1,  
  "name": "Chair",  
  "price": 120,  
  "description": "Comfortable wooden chair",  
  "image": "chair.jpg"  
}
```

API Endpoint Example:

- GET `/api/products` - Fetches a list of products.
- GET `/api/products/:id` - Fetches details of a single product.

Step 4:Sanity CMS

Integration: Import product data into Sanity CMS for content management.

Steps:

1. Use the API to fetch product data.
2. Import the fetched data into Sanity CMS.
3. Update or edit the product details within Sanity Studio.

Step 5: Define Schema

- Sanity uses schemas to define the structure of data.
- Example Schema for Product:

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

```
    title: 'Stock' },  
    { name: 'category',  
      type: 'string',  
      title: 'Category' }  
  ]};
```

Step 6:Sanity Studio

Sanity Studio is used to manage product data.

Interface includes fields to:

- Add or update product names, prices, descriptions, and images.
- Manage stock and product categories.
- Data is now ready to be accessed from the frontend.

Step 7:Frontend Integration

Goal: Fetch products from Sanity and display them on the website.

Process:

1. Use GROQ queries to fetch data from Sanity.
2. Dynamically populate the product listing and detail pages.
3. Handle pagination, search, and filters in the frontend.

Step 8:Product Display

- Display product information fetched from Sanity:
- Image, name, price, description, stock, and category.

- Includes an "Add to Cart" button for each product.

Step 9:Cart Page

- Functionality:
- Displays items added to the cart.
- Shows a summary of the selected products with total cost.
- Includes a "Checkout" button to proceed to payment.

Step 10:Checkout Page

- Features:
- Form to collect customer information:
 - Name
 - Address
 - Contact details
 - Payment information
- "Pay" button to complete the purchase.

Step 11:Success Pag

- Confirms that the payment was successful.
- Includes a "Track Shipment" button.

Step 12:Shipment Tracking

- API is called to track the shipment of the order.
- Example Endpoint:
- POST `/api/shipment` - Generates a tracking label.
- Includes details like estimated delivery time and courier service.

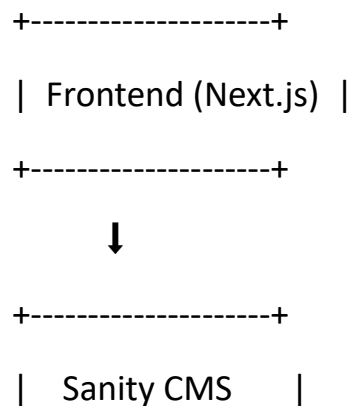
Step 13: Label Generation

- Final Step: Generate the shipment label through the API.
- This label can be shared with the customer for tracking their order.

Step 14: Final Features

- Admin Panel: Allows management of orders, inventory, and tracking.
- Email Notifications: Sends order confirmation and shipping updates to customers.
- Responsive Design: Ensures the website is mobile-friendly for better user experience.

Simply:



| (Product Data, etc.)|

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| Payment API | Shipment API | Email API |

| (Stripe/PayPal) | (ShipEngine) | (SendGrid) |

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| Database (Sanity) |

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| Analytics (Tools) |

| (Google Analytics, |

| Mixpanel, etc.) |

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| User Feedback |

| (Surveys, Reviews) |

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| Admin Dashboard |

| (Manage Content, |

| Monitor Activity) |

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--- Summary---

This workflow outlines the entire process from displaying products on the website to managing them using Sanity CMS and completing the customer's purchase journey with shipment tracking. Each step integrates backend APIs, Sanity CMS, and frontend to ensure a seamless e-commerce experience. It also includes advanced features like stock management, admin panel, and email notifications to improve functionality.

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