Prepared by
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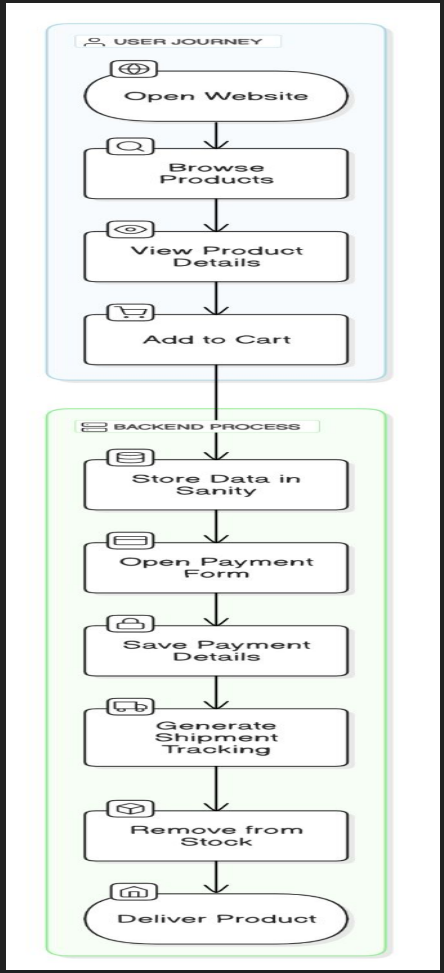
Hackathon Day 2

The Technical Foundation Planning

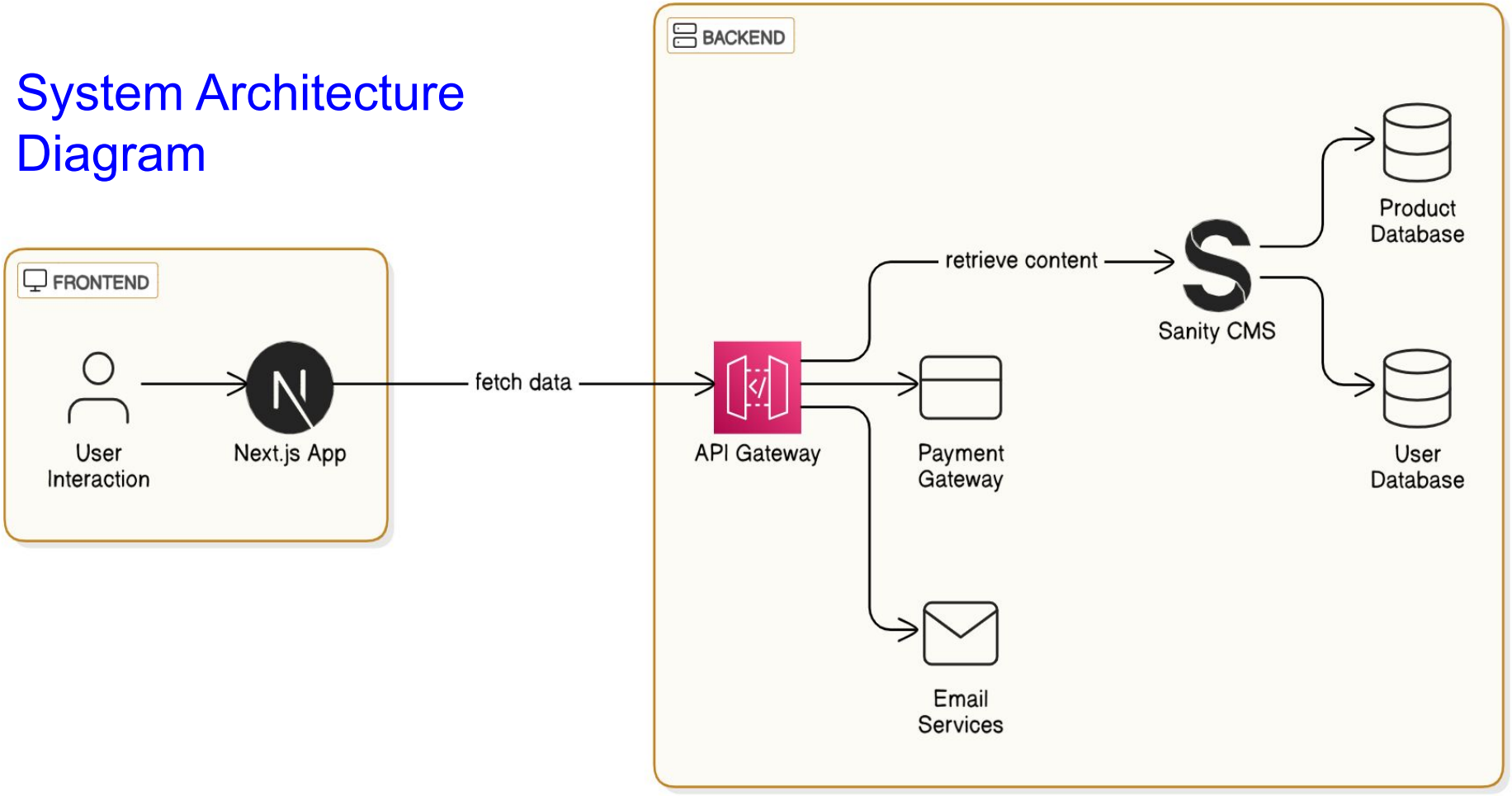
Overview

My Marketplace Clothing Website

- System Architecture Diagram
- Shopping Website Overview
- Frontend Development Plan
- Backend Development Plan
- **Backend System Flowchart**
- Key Workflows



System Architecture Diagram



Shopping Website Overview

Frontend Plan

1. **User-Friendly Interface:**
    - A clean and intuitive design that is easy to navigate for all user groups.
    - Categories and filters to help users quickly find products.
2. **Responsive Design:**
    - Fully optimized layout for both mobile and desktop users.
    - Lightweight and modern styling using Tailwind CSS.
3. **Essential Pages:**
    - **Home Page:** Showcasing eye-catching banners and trending products.
    - **Product Listing Page:** Displays products by category with filter and sorting options.
    - **Product Details Page:** Includes full product details, images, reviews, and an "Add to Cart" option.
    - **Cart Page:** An overview of selected items with the total cost displayed.
    - **Checkout Page:** A secure and fast checkout process with multiple payment options.
    - **Order Confirmation Page:** Displays order details and tracking information.

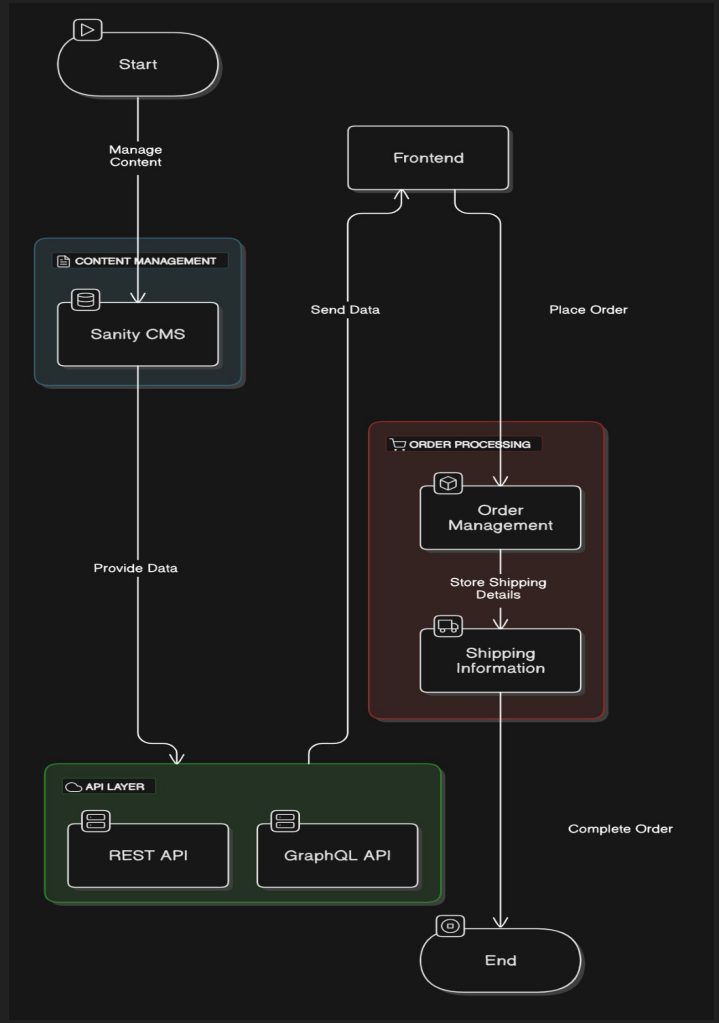
Sanity CMS as Backend

1. **Data Management:**
    - **Products Schema:** Schema designed to manage product titles, descriptions, prices, categories, and images.
    - **Customer Details:** Schema for storing registered users' and guest customers' information.
    - **Order Records:** Schema to store order history and track the status of ongoing orders.
2. **Flexibility:**
    - Sanity CMS allows easy scalability and management of the backend.
    - Dynamic updates to content without requiring deployment.

Third-Party APIs Integration

1. **Shipment Tracking API:**
    - Integrating shipment tracking services to provide real-time updates on order delivery.
2. **Payment Gateways:**
    - Secure and reliable payment processing using popular gateways like Stripe or PayPal.
3. **Other Backend Services:**
    - Transactional email services like SendGrid for email notifications.
    - Real-time updates using Webhooks for order status changes.

Backend System Flowchart



Key Workflows

Workflow 1: User Browses Products

1. **User Visits the Website:**
   - The user opens the website, landing on the homepage or the product listing page.
2. **Frontend Fetches Product Data:**
   - The frontend sends a request to the `/products` API endpoint to retrieve product information.
3. **Sanity CMS Provides Product Details:**
   - Sanity CMS responds with the required product details, including unique ID, name, price, stock availability, and image URLs.
4. **Products Displayed in a Responsive Grid:**
   - The frontend dynamically renders the products in a visually appealing, responsive grid layout optimized for both desktop and mobile devices.

Workflow 2: User Places an Order

1. User adds products to the cart.
2. Frontend sends a POST request to `/orders` with customer details, product info, and payment status.
3. Sanity CMS records the order.
4. Payment gateway processes the transaction.
5. A confirmation email is sent to the user.

Workflow 3: User Tracks Shipment

1. User visits the "Track Order" page.
2. Frontend sends a GET request to `/shipment` with the order ID.
3. Shipment API responds with shipment ID, status, and expected delivery date.
4. Frontend displays the tracking information.

Thank You!

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