HACKATHON 3 (DAY 02)

Q-Commerce Food Marketplace – Technical Documentation

Overview

This platform is designed to revolutionize ultra-fast food delivery services, ensuring seamless order processing, real-time tracking, and efficient logistics. The system integrates a modern frontend, a robust content management backend, and multiple third-party APIs to create a high-performance, scalable, and responsive experience for users.

Frontend – Next.js

The user interface is built with **Next.js**, a powerful React framework that enhances performance through server-side rendering (SSR), static site generation (SSG), and optimized routing.

Key Features

- **Server-Side Rendering (SSR):** Improves SEO and accelerates initial load times.
- **Dynamic Routing:** Enables seamless navigation between pages.
- **API Routes:** Manages server-side logic efficiently.
- **Image Optimization:** Uses Next.js Image component for faster loading and better performance.
- **Responsive Design:** Built with Tailwind CSS for an adaptive and mobile-friendly interface.

Core Components

- **Home Page:** Showcases featured restaurants, trending dishes, and personalized recommendations.
- **Restaurant Listings:** Displays eateries in grid or list views with advanced filtering and sorting options.
- **Menu Page:** Presents detailed menu items with customization features.
- **Cart & Checkout:** Manages order placement, item selection, and secure payments.
- **Order Tracking:** Provides real-time updates on order status and estimated delivery time.
- **User Profile:** Allows users to manage personal details, saved addresses, and order historY

Backend – Sanity CMS

A dynamic and flexible content management system powers the backend, enabling real-time updates and seamless data handling.

Key Features

- **Custom Schemas:** Structured data models for restaurants, menus, orders, and user profiles.
- **Instant Content Updates:** Ensures real-time synchronization across the platform.
- **API for Data Management:** Efficiently retrieves and manipulates stored information.
- **Content Versioning & Rollback:** Allows restoring previous content versions when needed.

WebSocket Server

A dedicated WebSocket server ensures instant communication between the frontend and backend, enabling real-time updates.

Key Features

- **Live Order Status Updates:** Keeps customers informed about their order progress.
- **Real-Time Delivery Tracking:** Ensures accurate monitoring of food deliveries.
- **Dynamic Inventory Management:** Automatically reflects menu item availability.

Third-Party API Integrations

1. Auth0 (Authentication & Authorization)

- Ensures secure user authentication and access control.
- Supports social media logins for a seamless experience.
- Implements token-based authentication for enhanced security.

2. Stripe API (Payment Processing)

- Facilitates secure transactions and payment processing.
- Manages refunds and dispute resolutions.
- Supports multiple payment methods, including credit cards, wallets, and UPI.

3. Google Maps API (Location & Tracking)

- Provides precise restaurant location data.Enables real-time tracking of delivery personnel.
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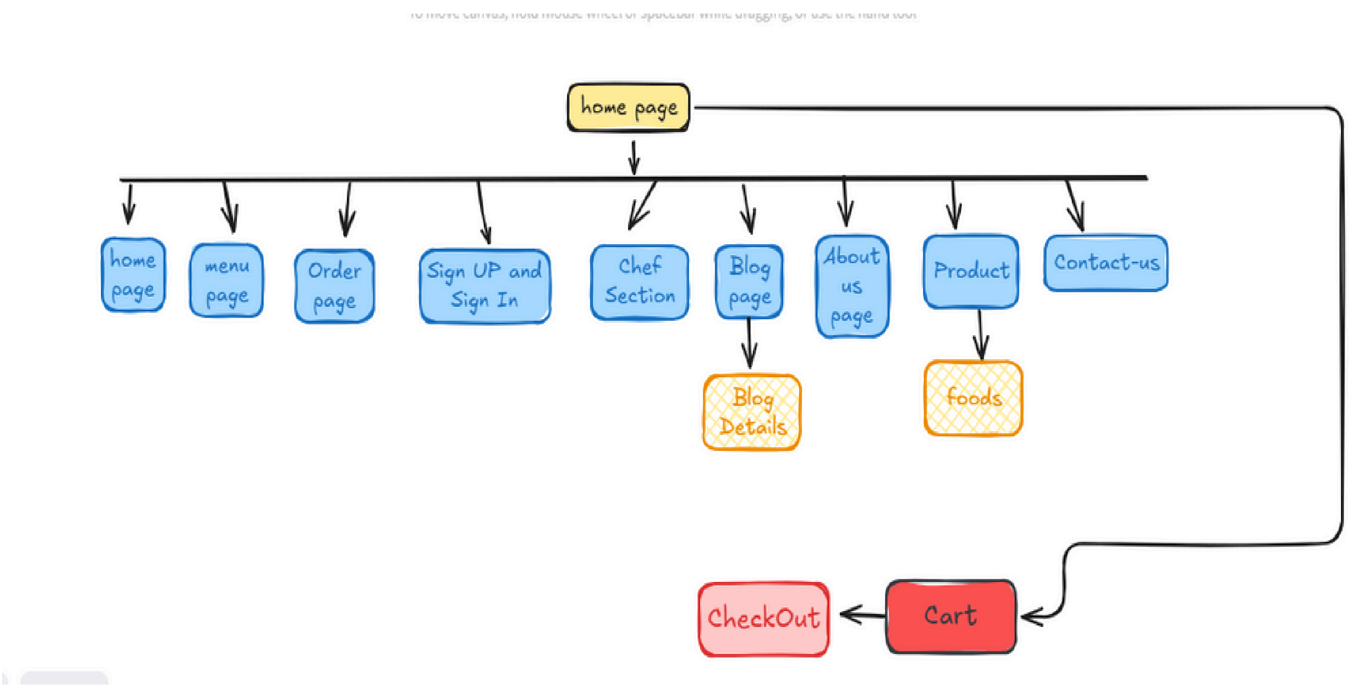
System Architecture


To move canvas, hold mouse wheel or spacebar while dragging, or use the hand tool
home page
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Order page
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Chef Section
Blog page
About us page
Product
Contact-us
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foods
CheckOut
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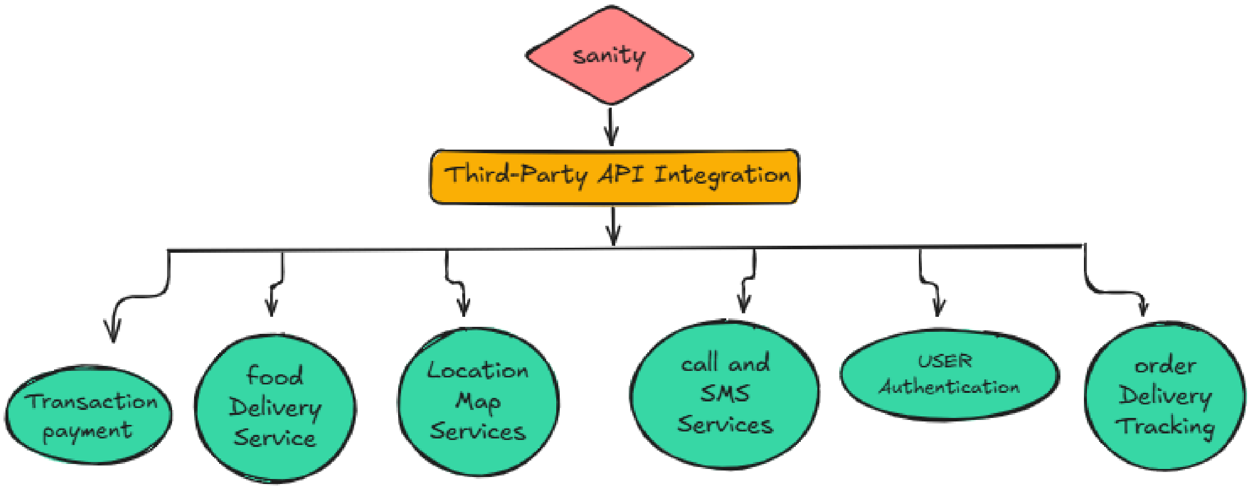
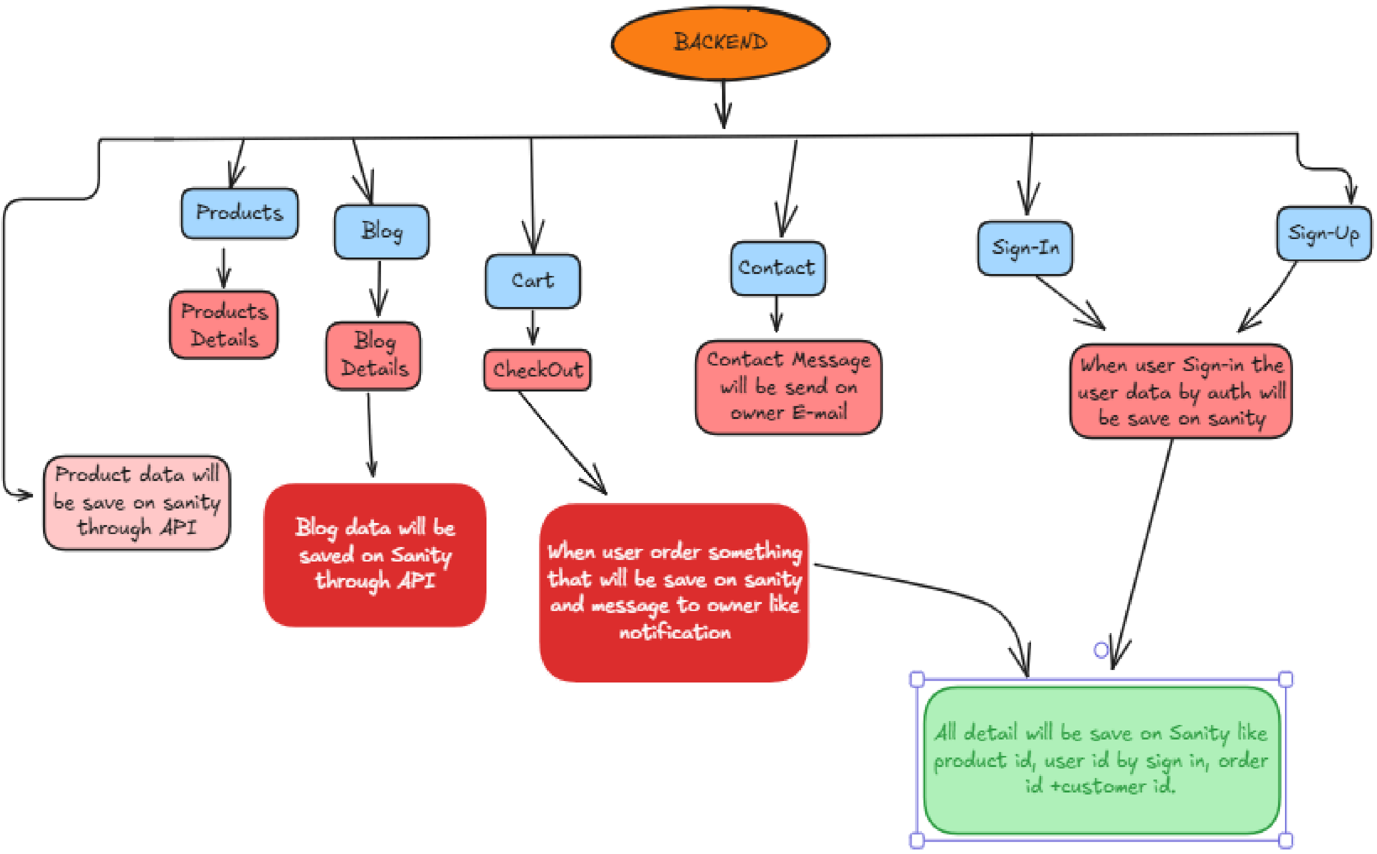

sanity
Third-Party API Integration
Transaction payment
food Delivery Service
Location Map Services
call and SMS Services
USER Authentication
order Delivery Tracking


BACKEND
Products
Products Details
Blog
Blog Details
Cart
CheckOut
Contact
Contact Message will be send on owner E-mail
Sign-In
Sign-Up
When user Sign-in the user data by auth will be save on sanity
Product data will be save on sanity through API
Blog data will be saved on Sanity through API
When user order something that will be save on sanity and message to owner like notification
All detail will be save on Sanity like product id, user id by sign in, order id +customer id.

Key Workflows

1. User Registration
• User signs up with name, email, and password.
• Data stored in **Sanity CMS**.
• Verification email/SMS sent.
• After verification, user can log in.
2. Product Browsing
• User views food categories.
• Frontend fetches product data from **Sanity API**.
• Products displayed with filters (price, category, restaurant).
3. Order Placement
• User adds items to the cart.

• Proceeds to checkout and enters details.
• Payment processed via **third-party API**.
• Order saved in **Sanity CMS**, confirmation sent.
4. Shipment Tracking
• Order status updated by restaurant.
• Real-time tracking via **third-party API**.
• User can view delivery status & estimated time.