Architecture for Stone E-Commerce Platform

Hackathon Project

Objective: Provide a platform for collectors, decorators, and jewelry makers to buy, explore, and learn about unique stones.

Features:

1. Product catalog with detailed descriptions.

2. Secure checkout system.

3. User reviews and ratings.

4. Category and search functionality.

Technology Stack:

Frontend: React.js, Nextjs, Tailwind CSS.

Backend: Node.js,Sanity CMS for content management

Database: MongoDB or MySQL.

Hosting: Vercel

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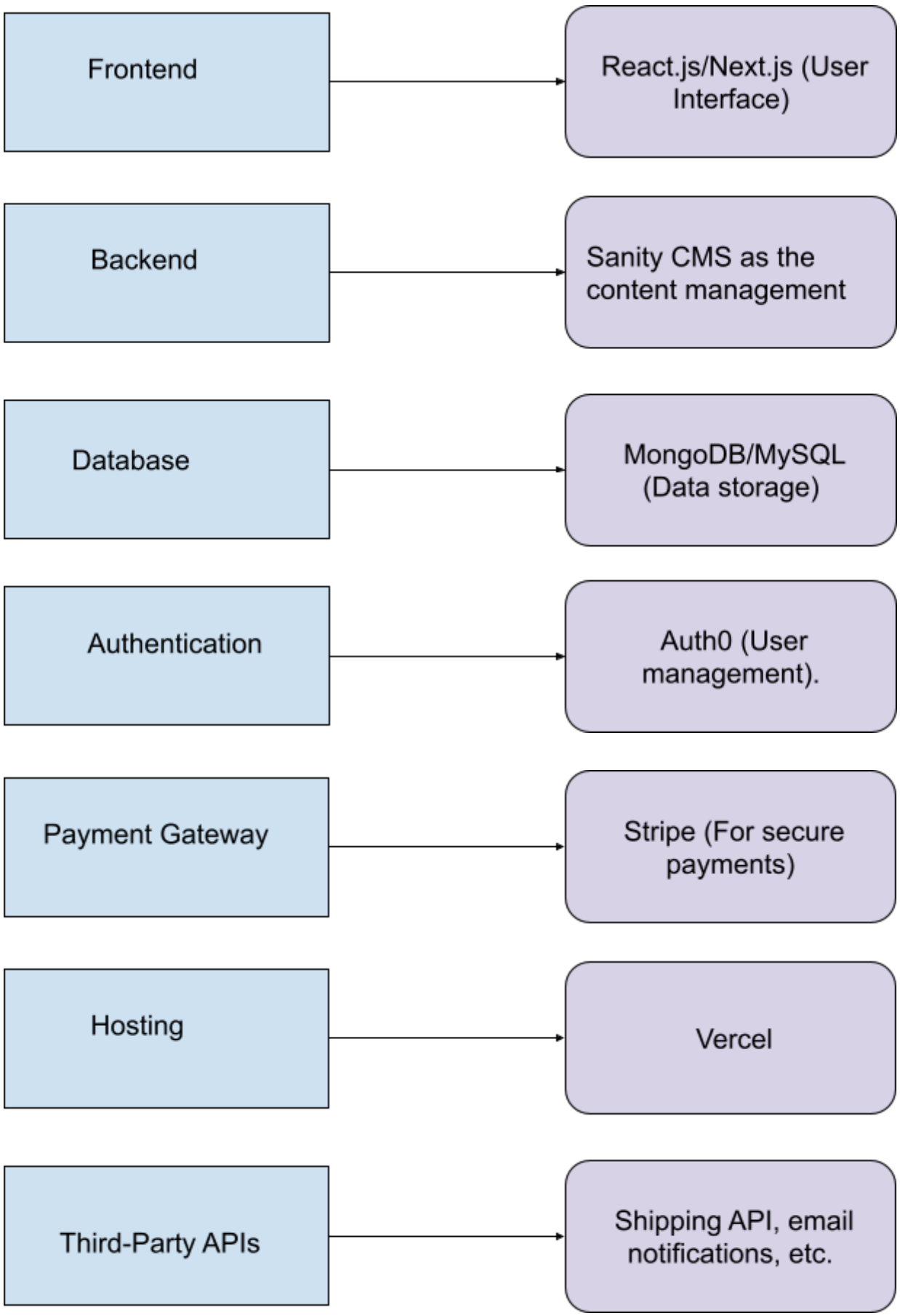
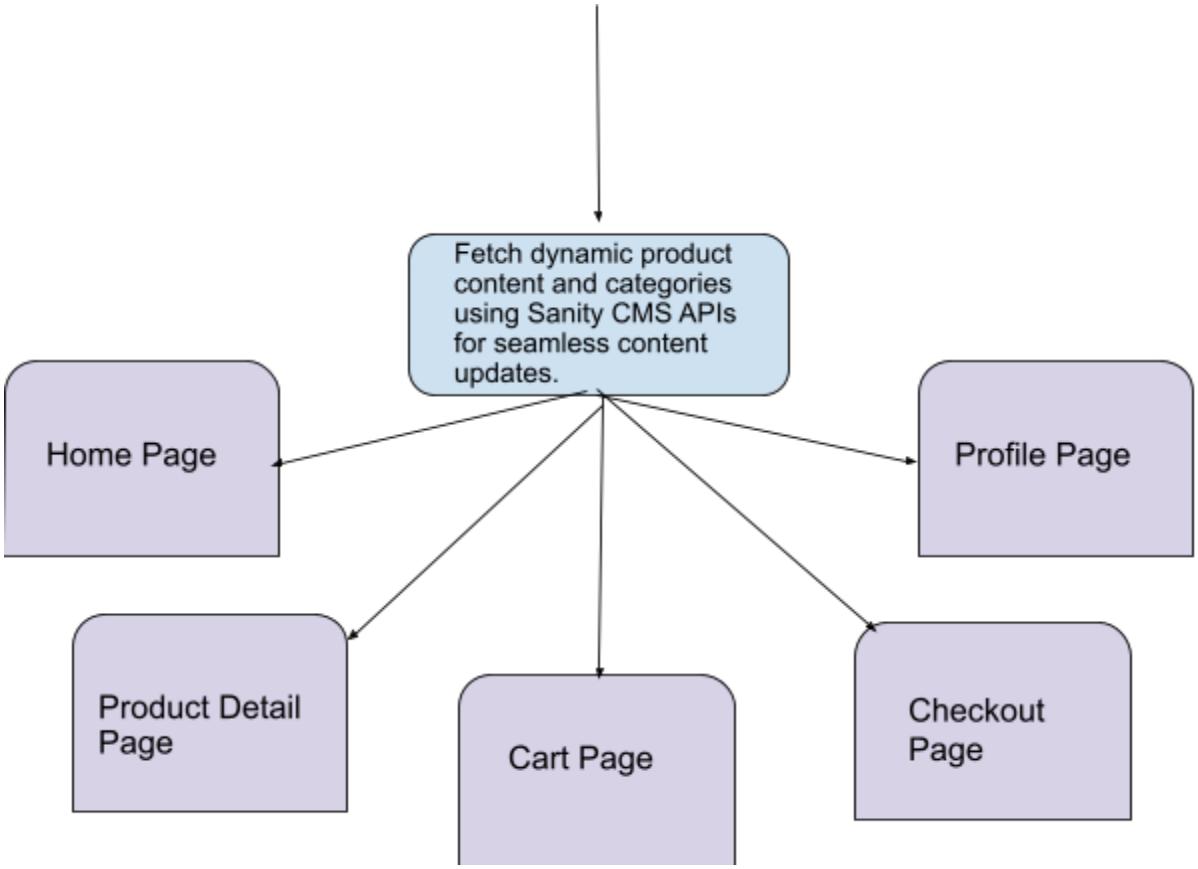
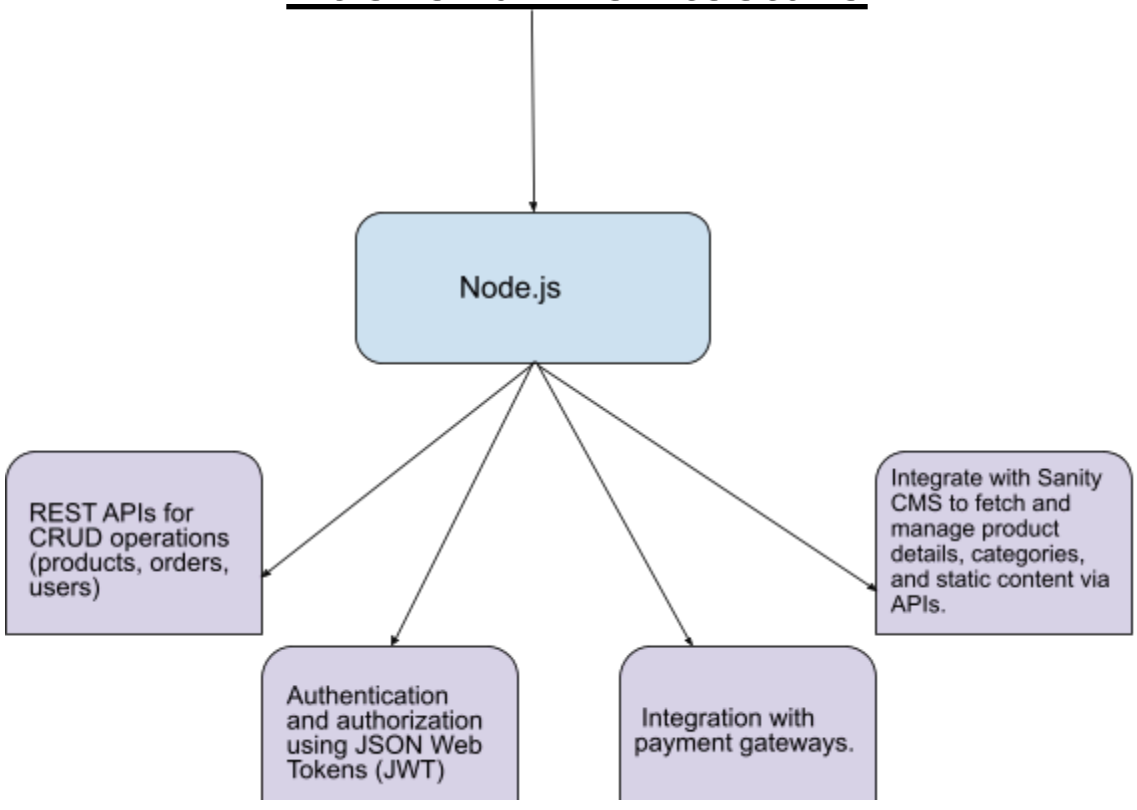
System Architecture Diagram



Frontend Architecture



Backend Architecture



API Design

Endpoints:

GET	/products: Fetch all products.
GET	/products/:id: Fetch product by ID.
POST	/orders: Place an order.
GET	/orders/:id: Fetch order details.
POST	/reviews: Add a review for a product.

Database Schema

"Sanity CMS will handle content-related data like product descriptions, images, and additional metadata, complementing the relational database for transactional data."

Users

user_id
name
email
address
phone_number
order_history

Products (Stones)

product_id
name
type (gemstone, decor, collector)
price
description
origin
image_url
stock

Orders

order_id
user_id
product_id
quantity
total_price
order_date
status (pending, shipped, delivered)

Categories

category_id

category_name
description

Reviews

review_id
product_id
user_id
comment
rating