Hacakathon 3 Day 2 Planning The Technical Foundation

"Marketplace Technical Foundation – [Ecommerce]"

This document describes the user journey flow for an eCommerce marketplace, focusing on key steps and their technical implementation. It is tailored for building a robust and user-friendly platform.

Flowchart Overview

Below is the complete user journey flow for an eCommerce marketplace:

Home Page:

User lands on the homepage.

Displays featured categories, popular products, and a search bar.

Product Browsing:

User selects a category or uses the search bar.

Products are displayed with options to filter by price, brand, or ratings.

Product Details:

User clicks on a product to view its details.

Page includes product description, price, availability, and user reviews.

Add to Cart:

User adds the product to the cart.

Cart updates dynamically with quantity and price.

Checkout:

User proceeds to the checkout page.

Provides shipping address and selects a delivery option.

Payment:

User enters payment details.
Secure payment gateway processes the transaction.

Order Confirmation:

Order details are displayed and sent via email.

Order status is updated in the backend.

Shipment Tracking:

User visits the "Order History" section.

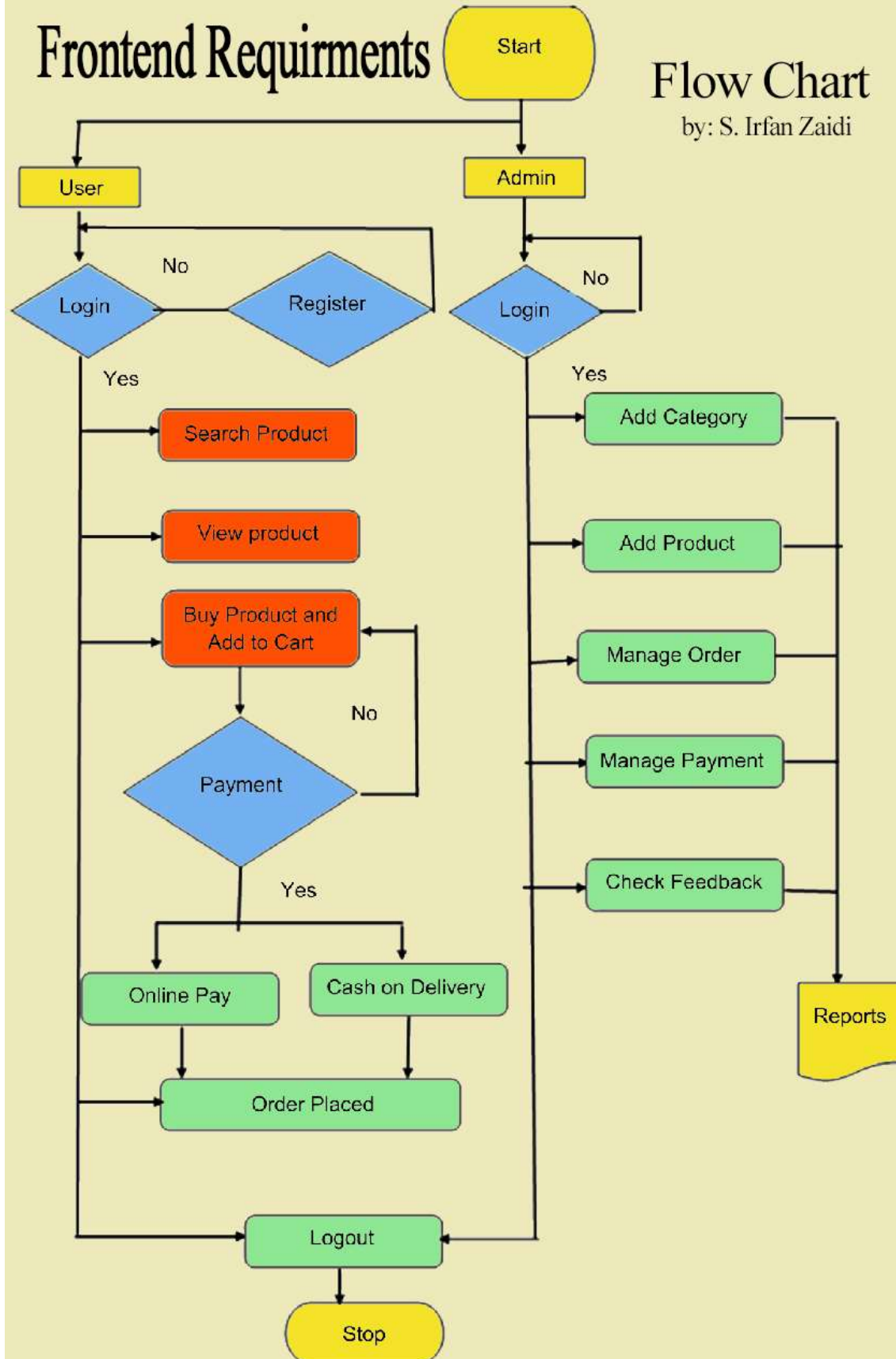Real-time shipment tracking is enabled via API integration.

Delivery:

Product is delivered to the user's address.

Frontend Requirments

Flow Chart
by: S. Irfan Zaidi

Start

User

Admin

Login — No — Register

Login — No

Yes

Search Product

View product

Buy Product and Add to Cart

Payment — No

Yes

Online Pay

Cash on Delivery

Order Placed

Add Category

Add Product

Manage Order

Manage Payment

Check Feedback

Reports

Logout

Stop

Frontend Requirements:

User receives a notification and can leave a review.

User-friendly interface for browsing products.

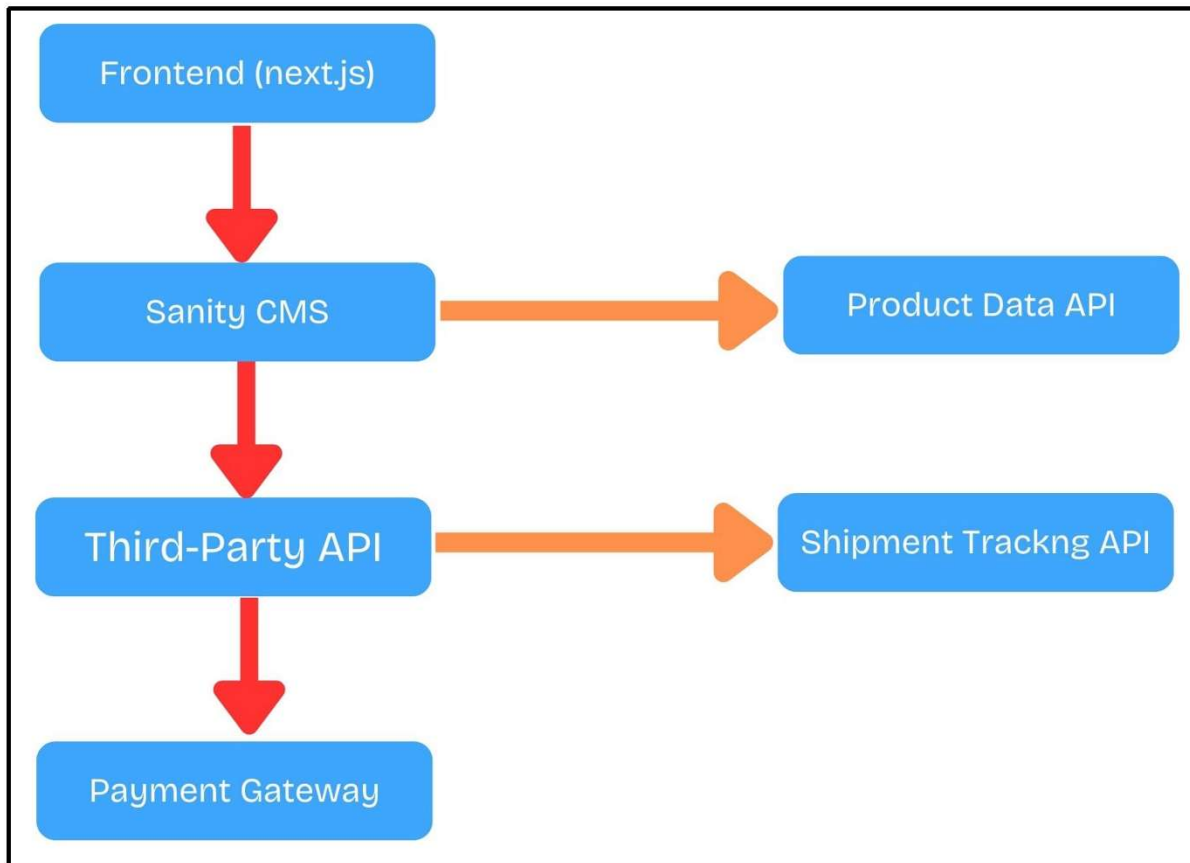Responsive design for mobile and desktop users.

Essential pages: Home, Product Listing, Product Details, Cart, Checkout, and Order Confirmation
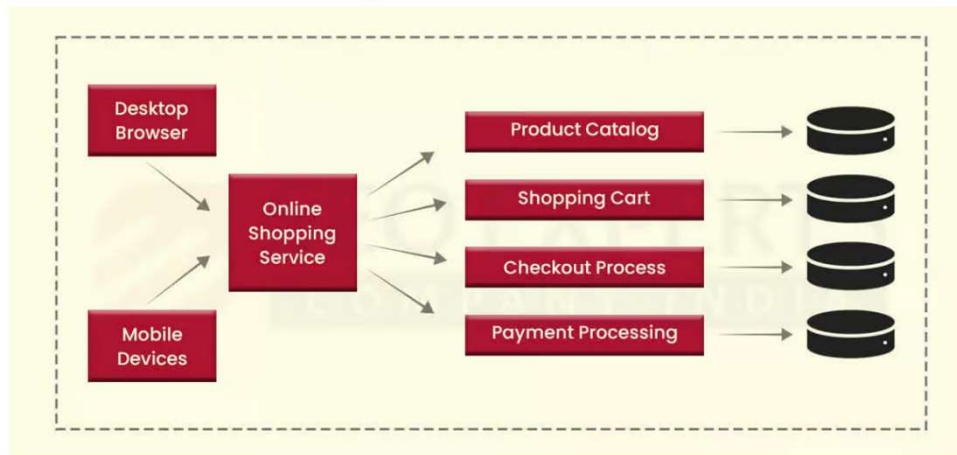
Design System Architecture

Create a high-level diagram showing how your system components interact. Use tools like pen and paper or software like Lucidchart, Figma or Excalidraw. For example, a more detailed architecture might include workflows such as:

System Architecture Overview
Diagram:

System Architecture

Components and Roles:

Frontend (Next.js):

1. Displays the user interface for browsing products, managing the cart, and placing orders.
2. Handles user interactions and communicates with backend services via APIs.

Sanity CMS:

1. Acts as the primary backend to manage product data, customer details, and order records.
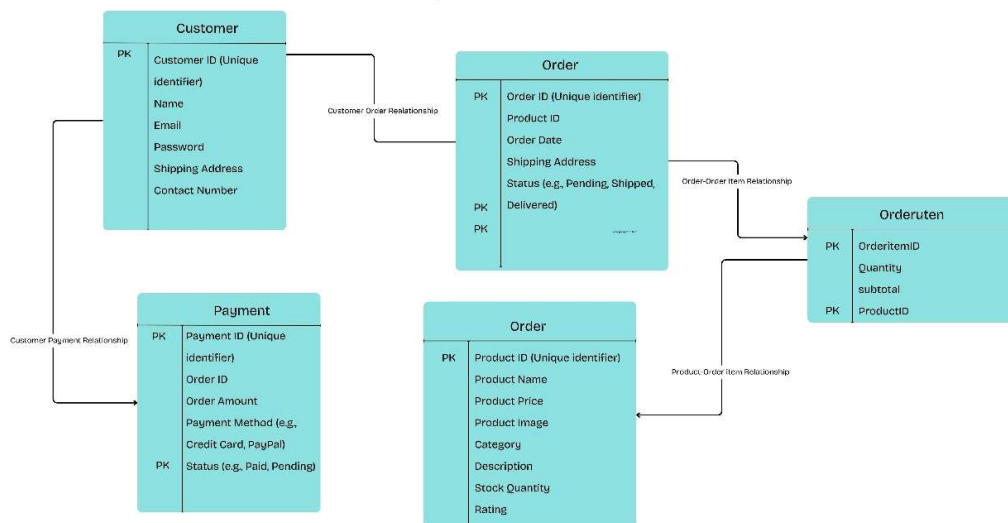2. Provides APIs for the frontend to fetch and update data.

Product Data API:

Provides endpoints to fetch product listings, details, and inventory status.

Third-Party APIs:

Integrates services like shipment tracking and payment processing.

ER Diagram

API Endpoints

Endpoint	Method	Purpose	Response Example
/products	GET	Fetch all product details	[{ "name": "Product Name", "slug": "product-slug", "price": 100 }]
/order	POST	Submit new order details	{ "orderId": 123, "status": "success" }
/shipment-tracking	GET	Fetch real-time tracking updates	{ "trackingId": "AB123", "status": "In Transit" }
/delivery-status	GET	Fetch express delivery information	{ "orderId": 456, "deliveryTime": "30 mins" }
/inventory	GET	Fetch real-time stock levels	{ "productId": 789, "stock": 50 }
/cart	POST	Add product to cart	{ "cartId": 101, "items": [...] }

Sanity Schema.js

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Featuring a straight-leg cut, they provide a comfortable, flattering fit for various body types. Crafted from
```

durable denim, these jeans are both stylish and practical, perfect for both casual outings and semi-formal occasions. The clean, dark black color adds a sleek and sophisticated touch, making them easy to pair with any top, from t-shirts to shirts or hoodies. With their classic design and premium fit, these black jeans are a must-have staple for any wardrobe.",

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Whether you're lounging at home or heading out for a casual outing, these joggers are versatile enough
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perfect for any occasion. Crafted from premium-quality fabric, it offers a soft, breathable, and
```

comfortable fit that lasts all day. Featuring a stylish collar, button placket, and short sleeves, this versatile polo blends elegance with a casual touch.\n\nKey features:\n\nMade with durable and lightweight material\nAvailable in a variety of colors and sizes\nEasy to pair with jeans, chinos, or shorts for a polished look\nIdeal for work, casual outings, or weekend wear\nStay effortlessly stylish with this must-have polo shirt!"

   }

]

Workflow Diagram

Visit Home Page → Browses Products → Views Product Details

Page

Add Product to Car → Proceed to Checkout → Completes Profile

and Payment Details

Order Confirmation → Tracks Shipment

↓

Receives Delivery At Home