

Planning The Technical Foundation for Your E-Commerce Website

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Objective

Transition from business planning to technical preparation, ensuring a robust foundation for your marketplace. Key goals:

1. Define technical requirements
2. Design system architecture.
3. Plan API endpoints.
4. Structure technical documentation.

Technical Requirements

Frontend Features:

- Responsive, user-friendly design for mobile and desktop.
- Essential Pages: Home, categories, Product Listing, Details, cart, checkout, order confirmation.
- Order Tracking: Real-time order status and location update.
- Enhanced UX/UI: Intuitive navigation and appealing visual.

data.

1. Real-time inventory and order status updates.

API Integrations:

2. Clerk: User authentication.
3. Stripe: Secure payments.
4. Shipo: Shipment tracking.
- Local Payments: Jazz Cash, EasyPaisa, and bank transfers.

System Architecture

Overview:

Components:

1. Frontend (Next.js): For dynamic user interactions.
2. Backend (Sanity CMS): Data management.
3. APIs: Authentication, Payments and shipment tracking.

Workflow:

1. User browses products.
2. Data fetched from Sanity CMS.
3. Order placed and recorded.
4. Shipment details displayed via Shipo.

Payments processed through Stripe or local options.

API Planning

Key Endpoints:

/Products (GET): Fetch product details.

- Response: { "id": 1
"name": "Product A"
"Price": 100
"Stock": 20 }

/Orders (POST): Create a new order

- Payload: { "customerId": 123
"ProductDetails": [{ "id": 1, "quantity": 2 }],
"PaymentStatus": "Paid" }

/Shipment (GET): Get shipment status.

- Response: { "shipmentId": 456
"Status": "In Transit"
"ETA": "2 days" }

/User (POST): User registration/login.

- Payload: { "email": "example@example.com"
"Password": "password123" }

/Payment (POST): Process payments.

1. Payload: {"orderId": 789
2. "amount": 200
3. "status": "Paid"}
- 4.

Documentation

System Architecture: Diagram showing component interactions.

Workflow Descriptions:

- Browsing products.
- Adding items to cart and placing orders.
- Tracking orders post-purchase.

API Specifications: Endpoint details with methods and responses.

Collaboration and Feedback

- Peer and mentor reviews for refining architecture and APIs.
- Discussions to address challenges and enhance solutions.