

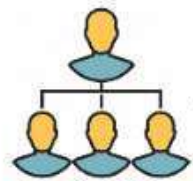
Users



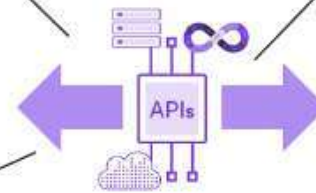
Frontend (Next.js)



Sanity as Backend



Order Data



Shipment and tracking



Delivery



Payment Methods

Marketplace Technical Foundation for Kolachi.pk

1. System Architecture Overview

This section provides an overview of how the different components of your e-commerce platform interact.

Frontend:

- **Technology:** Next.js
- **Features:**
 - Responsive and user-friendly design.
 - **Core pages:**
 - **Home:** Show featured products and categories.
 - **Product Listing:** Display all products in a category.
 - **Product Details:** Details of a specific product with reviews and ratings.
 - **Cart and Checkout:** Add/remove products, view total price, and finalize orders.
 - **Order Confirmation:** Display order success and tracking information.

Backend:

- **Technology:** Sanity CMS
- **Purpose:** Manage all content and data:
 - Products, orders, customers, and shipment details.

Third-Party APIs:

- **ShipEngine:** Track shipments, assign riders, and fetch delivery zone coverage.
- **Payment Gateway:** JazzCash/Stripe for secure payments.
- **Notification API:** Twilio/Firebase for SMS/email updates about orders.

Product Schema

- **ID:** Unique identifier for the product
 - **Name:** Name of the product
 - **Price:** Price of the product
 - **Stock:** Number of items available in stock
 - **Images:** Array of image URLs
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Order Schema

- **Order ID:** Unique identifier for the order
- **Customer ID:** ID of the customer who placed the order
- **Products:**
 - **Product ID:** ID of the product
 - **Quantity:** Quantity ordered
- **Status:** Current status of the order (e.g., Pending, Shipped, Delivered)
- **Payment Status:** Status of payment (e.g., Paid, Unpaid)
- **Delivery Address:** Address for order delivery

Customer Schema

- **Customer ID:** Unique identifier for the customer
 - **Name:** Name of the customer
 - **Contact Info:** Contact information of the customer (e.g., phone, email)
 - **Purchase History:** Array of order IDs representing the purchase history
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Shipment Schema

- **Shipment ID:** Unique identifier for the shipment
 - **Order ID:** Associated order ID
 - **Zone Name:** Name of the delivery zone
 - **Coverage Area:** Area covered by the delivery zone
 - **Status:** Current status of the shipment (e.g., In Transit, Delivered)
 - **Assigned Rider:** Name of the rider assigned for delivery
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Delivery Schema

- **Delivery ID:** Unique identifier for the delivery
- **Order ID:** Associated order ID
- **Assigned Rider:** Name or ID of the rider responsible for delivery
- **Delivery Status:** Current status of the delivery (e.g., Dispatched, Out for Delivery, Delivered)
- **Expected Delivery Time:** Estimated delivery time or date
- **Actual Delivery Time:** Timestamp of when the delivery was completed
- **Delivery Notes:** Optional notes about the delivery (e.g., "Left at the doorstep")

4. Key Backend Features

1. Order Management:
 - Handle order creation, status updates, and cancellations.
 - Payment integration for COD and online payments.
 2. Inventory Management:
 - Update stock levels based on orders.
 - Alerts for low stock levels.
 3. Returns and Refunds:
 - Simplify returns with easy-to-use workflows.
 - Automate refund processes.
 4. Customer Reviews:
 - Enable uploading of photos and real feedback.
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5. Security

- Authentication: Use JWT for login/signup processes.
 - Encryption: HTTPS for secure communication.
 - Validation: Sanitize inputs to prevent SQL injection or XSS attacks.
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6. Deployment and Monitoring

1. Hosting:
 - Deploy frontend on Vercel.
 - Host backend (Sanity CMS) on Sanity.io.
 2. Monitoring Tools:
 - Use LogRocket or Sentry for performance monitoring.
 - Enable Google Analytics to track user engagement.
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