

Day 2 Activity: Marketplace Technical Planning

By Shaista Jawed (00461445)

1. Frontend Requirements

1. Develop a user-friendly, responsive website.
2. Showcase a variety of general eCommerce products suitable for all genders.
3. Include essential pages like Home, About, Shop, Team, etc.
4. Use **Next.js** as the primary framework due to its Server-Side Rendering (SSR) capabilities, which improve website speed and SEO performance.

2. Backend with Sanity CMS

1. Utilize Sanity CMS to dynamically manage product data, user information, and order details.
2. Implement GROQ queries to fetch and display data on the frontend, while also handling orders and user data efficiently.

3. API Integration (Third-Party)

1. Incorporate APIs for shipment tracking, payment gateways, and other backend operations.
2. Fetch external data using APIs, integrate it with Sanity CMS, and render it on the user interface.
3. Example: An API containing data like {name: anyName, title: anyTitle, description: anyDescription} can be fetched, stored in Sanity, and queried in the code to display on the UI.

4. Dynamic Routing

1. Set up dynamic routing to create individual product pages using slugs. For instance, a product titled "Black Trouser For Men" will have a URL like /black-trouser-for-men.
2. Alternatively, IDs or names can be used (e.g., /productdetails/1 or /productdetails/blacktrouser).
3. **Preferred Method:** Slugs are ideal as they enhance SEO by acting like tags, increasing visibility and search rankings.

5. General eCommerce Example

- **Endpoint:** /shop
- **Functionality:** Accessing /shop fetches product data from APIs or Sanity CMS.
- **Response:** Data is displayed using fields like {product.name}, {product.id}, etc., retrieved from the source.

6. Data Schema

- Define schemas within the Sanity folder, even when using APIs.
- Examples:
 - **Customer/Order Schema:** {userId, userName, userPhone, userEmail}
 - **Product/Details Schema:** {productId, productName, productDesc, productQuantity, productImage, productPrice}

7. API Endpoints

1. **/products** (GET): Fetches all product data from Sanity CMS. Example: {id, name, description, price, quantity, sizes, colors}.
2. **/orders** (POST): Creates user orders in Sanity CMS. Example: {customerInfo, id, name, phone}.
3. **/shipment** (GET): Tracks product shipment via a third-party API. Example: {shipmentId, orderId, status, expectedDeliveryDate}.

8. Payment Methods

1. **Global:** Integrate payment gateways like Stripe and PayPal.
2. **Pakistan:** Use region-specific options such as Alfa Payment Gateway, HBL Pay, JazzCash Merchant, and EasyPaisa Merchant.

9. Authentication (Sign In & Sign Up)

- Authentication is not yet implemented as we have not learnt it in class yet