Day 2 - Marketplace Technical Foundation – Tech Store PK

To start building the Tech Store PK website, we will use Next.js for the frontend, ensuring fast, dynamic, and responsive design for both mobile and desktop users. Sanity CMS will be used as the backend to manage product data, customer information, and orders, allowing easy updates and scalability. The frontend will fetch product listings and details from Sanity CMS and display them dynamically. We will integrate third-party APIs, such as ShipEngine for real-time shipment tracking and secure payment gateways for processing transactions. The website will allow users to browse products, place orders, track shipments, and complete secure payments, all while ensuring a smooth and user-friendly experience.

1. System Architecture Overview:

• Frontend Requirements:

- Using Next.js for the frontend and Sanity CMS for content management. A diagram workflow illustrates user interactions and data handling via APIs.

- Responsive design ensures simplicity and clarity for both mobile and desktop users, with branded colors to attract attention and highlight price discounts.

- **Essential pages:** Home, Product Listing, Product Details, FAQ, Account/Login Page, Cart, Checkout, Order Confirmation, About us, Contact us, Privacy Policy, Terms and Conditions.

• Sanity CMS as Backend:

- Use Sanity CMS to manage products, customer details, and orders. It works as the database for website.

- Sanity makes it easy to update and organize data anytime. Sanity is a scalable solution.

• Third-Party APIs:

- Use Ship Engine API for shipment tracking, along with other APIs for payment gateways and backend services.
- Ensure these APIs, including Sanity for fetching data, provide everything for my frontend needs.

2. Design System Architecture:

- A user visits the marketplace to browse products.
- The frontend fetches product data from Sanity CMS and displays it dynamically.
- When an order is placed, details are saved in Sanity CMS via an API.
- Shipment tracking is updated in real-time using a Third-Party API.
- Payments are processed securely through a Payment Gateway, with confirmations saved in Sanity CMS.

3. APIs Requirements:

General ecommerce Example:

- Endpoint Name: /products
- Method: GET
- Description: Fetch all product details
  .
- Response Example: { "id": 001, "name": "Product A", “image” : “image1.png” "price": 100, “stock”: 100, “description”: “ABCD…”, “discount”: 20%, “rating”: 4.5 }

Endpoint Name: /products

- Method: GET
- Description: Fetch all available products from Sanity.
- Response: Product details (ID, name, description, price, stock, image, discount, rating).

Endpoint Name: /order

- Method: POST
- Description: Create a new order in Sanity.
- Payload: name, email, phone, address, order quantity.

Conclusion:

Once the development of the Tech Store PK website is complete, we will deploy it on Vercel for live production. Vercel seamless integration with Next.js will ensure fast performance, easy scaling, and reliable hosting. This deployment will make the website accessible to users, allowing them to browse products, place orders, track shipments, and make secure payments in real-time. With everything set up, the website will be live, providing an optimal user experience and ready for customers to start shopping.