Marketplace Technical Foundation - Elite Market

Day 2: Planning the Technical Foundation

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1. Objective for Day 2

- ➢ Transition from business goals (Day 1) to **technical planning** for Elite Market.
- ➢ Build a **scalable and structured technical foundation** aligned with the business objectives.
- ➢ Focus on creating **system architecture**, defining **workflows**, and planning **API requirements** to ensure smooth development and scalability.

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2. System Architecture Design

Overview:

Our system architecture is designed to integrate the **frontend, backend, and APIs** seamlessly for Elite Market.

1. Frontend (User Interface):

- ➢ Built with **Next.js** for dynamic, responsive, and user-friendly design.
- ➢ **Key Pages:**

  - ▪ Home
  - ▪ Product Listing
  - ▪ Product Details
  - ▪ Shopping Cart
  - ▪ Checkout
  - ▪ Order Confirmation

2. Backend (Content and Data Management):

- ➢ **Sanity CMS:** Manages product data, customer information, and order records.
- ➢ Custom schemas for products, orders, and customers ensure flexibility and ease of updates.

3. Third-Party Integrations:

APIs for external services like:

> - **Shipment Tracking**: Real-time updates on deliveries.
> - **Notifications**: SMS/email updates for customers.
> - **Future Integration**: Payment gateways like Stripe or PayPal.

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3. Workflow Planning

Key Workflows for Elite Market:

1. Product Browsing:

> - User visits the homepage or searches for products.
> - Product details (name, price, stock, and images) are fetched from Sanity CMS and displayed dynamically.

2. Order Placement:

> - User selects items, adds them to the cart, and proceeds to checkout.
> - Upon checkout, the order details are recorded in Sanity CMS.

3. Shipment Tracking:

> - Order status (e.g., In Transit, Delivered) is updated via third-party APIs and displayed to the user.

4. Future Enhancements:

> - Integration with payment gateways and personalized user recommendations.

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4. API Requirements

Endpoint	Method	Purpose	Example Response
`/products`	GET	Fetch all product details.	`{ "id": 1, "name": "Chair", "price": 2000, "stock": 50 }`
`/orders`	POST	Record a new order.	`{ "orderId": 123, "status": "Order Confirmed" }`
`/shipment`	GET	Track order delivery status.	`{ "orderId": 123, "status": "In Transit", "ETA": "2 days" }`

Sanity CMS Schema Example (Products):

```
export default {
  name: 'product',
  type: 'document',
  fields: [
    { name: 'name', type: 'string', title: 'Product Name' },
    { name: 'price', type: 'number', title: 'Price' },
    { name: 'stock', type: 'number', title: 'Stock Level' },
    { name: 'category', type: 'string', title: 'Category' },
    { name: 'description', type: 'text', title: 'Description' },
    { name: 'image', type: 'image', title: 'Product Image' }
  ]
};
```

5. Benefits of This Approach

1. Scalability:

The use of Sanity CMS and modular architecture allows easy expansion of features and data.

2. Efficiency:

Centralized content management and external APIs simplify backend operations.

3. User-Focused Design:

Responsive and intuitive interfaces enhance customer experience.

4. Future-Ready:

Flexibility to integrate authentication, payments, and other advanced features as the platform grows.

6. Industry Best Practices

1. Plan Before Development:

➢ Use clear roadmaps and diagrams to avoid misaligned goals.

2. Leverage Tools:

➢ Sanity CMS reduces backend complexity by managing content with real-time updates.

3. Collaborate Effectively:

➢ Share plans with peers or mentors for feedback and refine as necessary.

4. Prioritize User Experience:

➢ Ensure workflows and interfaces are designed for ease and convenience.

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7. Conclusion

Elite Market is set to become a leading General E-Commerce platform in Pakistan by offering:

- A wide range of high-quality products.
- A seamless shopping experience with intuitive workflows and responsive designs.
- A scalable, efficient, and future-ready technical foundation.

This structured technical plan ensures the successful development and launch of **Elite Market**.

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