

Hackathon: Day 2

Technical Plan For E-Commerce (Furniture) Website

1: Technical Requirements

1. Core Functional Requirements

(a) Frontend Requirements

- User Authentication
- Product Catalog
- Product Details Page
- Shopping Cart
- Checkout Process
- Seller Functionality
- Search and Filtering
- Wishlist
- Admin Panel

2. Other Technical Requirements

These cover the technologies and tools you'll need to implement the marketplace:

a) Frameworks & Libraries

- **React.js** or **Next.js** for fast and dynamic user interfaces.
- **Tailwind CSS** or **Material-UI** for styling.
- **React Router** for navigation and routing.

b) State Management

- Use **Redux**, **Context API** for managing global states like user data, cart, etc.

c) API Integration

- Connect with backend APIs for product data, authentication, and payment processing.

d) Responsive Design

- Ensure the website works seamlessly on desktop, tablet, and mobile devices.

e) Security

- Implement HTTPS for secure communication.

f) Payment Integration

- Support multiple payment gateways (jazz cash , easypaisa)

2. Use of Sanity CMS for E-Commerce

- **Real-time Content Editing:** Sanity Studio allows content editors to update product descriptions, images, and blog posts in real time.
- **Customizable Schemas:** You can define custom schemas for products, categories, and other content types.
- **Scalability:** Sanity handles large data sets, making it suitable for growing e-commerce platforms.
- **API-Driven:** Sanity provides a Graph QL or REST API to fetch data, which integrates seamlessly with frontend frameworks like React, Next.js, or Vue.js.
- **Collaboration:** Built-in tools for managing editorial workflows and collaboration.

3. Third Party APIs

1. Payment Gateways

Handle secure online transaction.

2. Shipping and Logistics

Automate shipping rates, label generation, and tracking.

3. Product Search and Recommendations

Improve search experience and suggest products.

4. Customer Communication

Engage users with chat, SMS, or email.

5. Authentication

Secure user login and management.

6. Analytics

Monitor user activity and platform performance.

7. Currency and Tax

Handle international pricing and compliance.

8. Social Media

Integrate marketing and social proof.

- **Instagram Graph API:** Display tagged photos and stories.
- **Facebook Marketing API:** Manage ads and retarget customers.

9. Reviews and Ratings

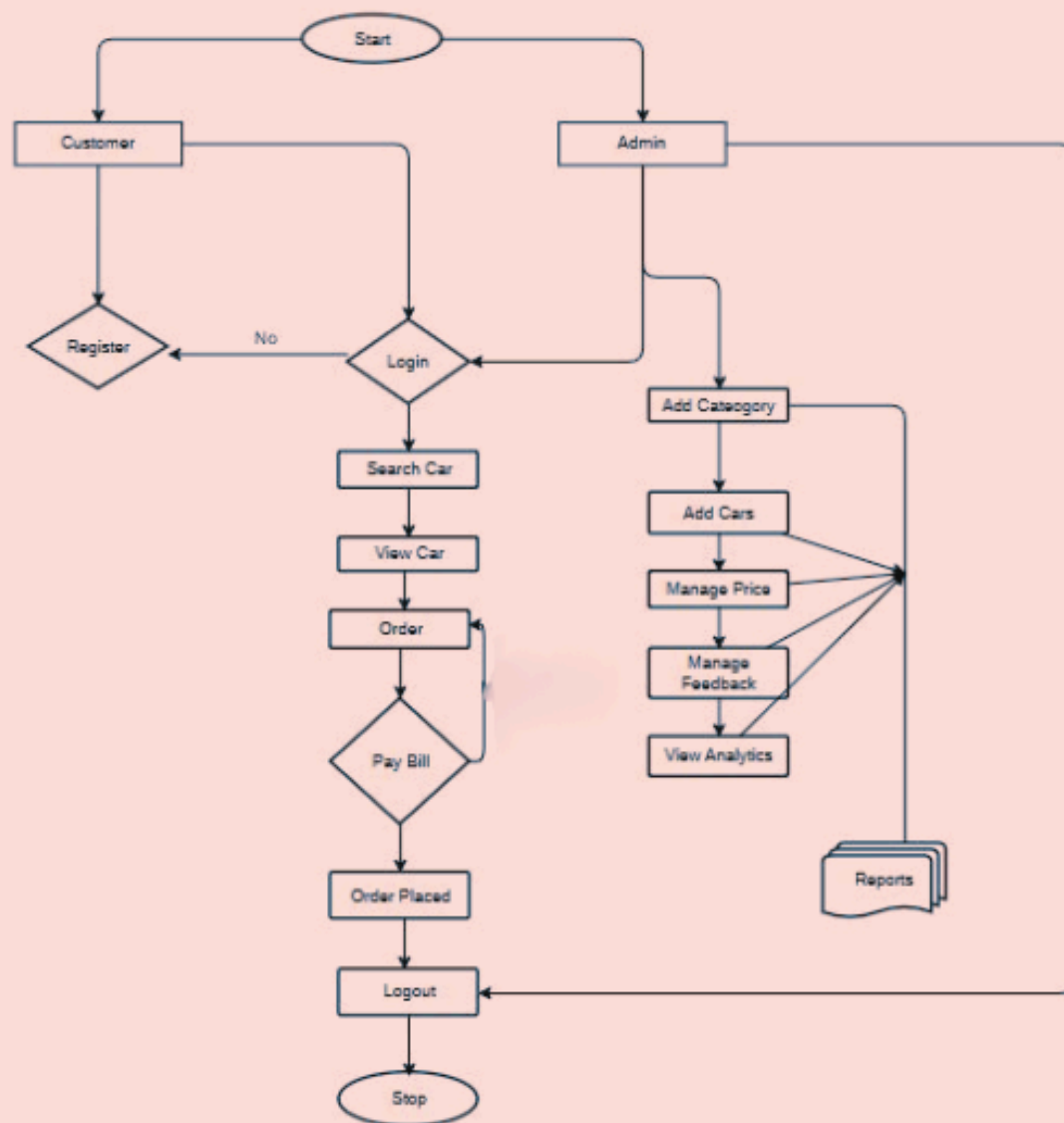
Build trust through customer feedback.

Benefits of Third-Party APIs:

- Saves time and development effort.
- Offers scalability and reliability.
- Provides specialized functionalities (e.g., secure payments, real-time shipping).

By using third-party APIs, you can focus on your core business while leveraging proven tools for enhanced functionality and user experience.

2- System Architecture Diagram



3- API End Points

End Points	Method	Description
/Products	Get	Fetches all Products
/Products/Id	Get	Fetches a specific Product
/Orders	Post	Create a new Order
/Orders/Id	Get	Fetches a specific Product
/Blogs-posts	Get	Fetches all Blogs Posts
/shipment/tracking/id	Get	Tracks Shipment Status

4- Sanity Schema

```

export default {
  name: 'product',
  title: 'Product',
  type: 'document',
  fields: [
    {
      name: 'id',
      title: 'ID',
      type: 'string',
    },
    {
      name: 'name',
      title: 'Name',

```

```
type: 'string',
```

```
},
```

```
{
```

```
name: 'image',
```

```
title: 'Image',
```

```
type: 'image',
```

```
},
```

```
{
```

```
name: 'imagePath',
```

```
title: 'Image Path',
```

```
type: 'url',
```

```
},
```

```
{
```

```
name: 'price',
```

```
title: 'Price',
```

```
type: 'number',
```

```
},
```

```
{
```

```
name: 'description',
```

```
title: 'Description',
```

```
type: 'text',
```

```
},
```

```
{
```

```
name: 'discountPercentage',
```

```
title: 'Discount Percentage',
```

```
type: 'number',
```

```
},
```

```
{  
  name: 'isFeaturedProduct',  
  title: 'Is Featured Product',  
  type: 'boolean',  
},  
{  
  name: 'stockLevel',  
  title: 'Stock Level',  
  type: 'number',  
},  
{  
  name: 'category',  
  title: 'Category',  
  type: 'string',  
},  
],  
};
```

Ended

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