**Marketplace Builder Hackathon 2025 (Day 2)**

**Customized Car Rental Marketplace Plan**

**Objective**

To design a technical plan for a car rental e-commerce marketplace using modern tools and best practices, ensuring seamless frontend and backend integration, powered by Sanity CMS for managing dynamic content.

**System Architecture**

**Frontend (Next.js)**

* Provides a user-friendly interface.
* Responsive design for mobile and desktop users.

**Sanity CMS**

* Manages car data, customer details, and rental records.
* Acts as the primary database for the marketplace.

**Custom APIs**

* Handles operations like user authentication, car search, rental processing, and payment integration.

**Third-Party APIs**

* Includes payment gateways and shipment/tracking APIs for additional functionality.

**Workflow**

**User Signup:**

* Users register on the platform.
* Credentials are stored securely in the database.

**Car Browsing:**

* Users browse cars fetched dynamically from Sanity CMS.

**Rental Process:**

* Users select rental duration and proceed to checkout.
* Orders are recorded in Sanity CMS.

**Order Tracking:**

* Users can track their rental status using APIs.

**Features & Workflows**

**Frontend Features:**

1. **Authentication:**
   * Secure login and registration system.
2. **Car Browsing:**
   * Browse cars by category, price, or availability.
   * Dynamic car listings powered by Sanity CMS.
3. **Checkout Process:**
   * Add selected cars to the cart.
   * Secure checkout using integrated payment gateways.
4. **Order Tracking:**
   * View and track rental orders in real time.

**Backend Features:**

1. **Sanity Schema:**
   * Defines cars, customers, orders, and rental duration fields.
2. **Custom APIs:**
   * Fetch car details.
   * Handle rental orders.
   * Process payments.
3. **Admin Panel:**
   * Allows admins to add, update, or delete cars.

**Sanity CMS Schema**

**Car Schema**

export default {

name: 'car',

type: 'document',

fields: [

{ name: 'name', type: 'string', title: 'Car Name' },

{ name: 'price', type: 'number', title: 'Rental Price (per day)' },

{ name: 'availability', type: 'boolean', title: 'Available for Rent' },

{ name: 'description', type: 'text', title: 'Car Description' },

{ name: 'image', type: 'image', title: 'Car Image' },

{ name: 'category', type: 'string', title: 'Car Category' },

]

};

**Rental Order Schema**

export default {

name: 'rentalOrder',

type: 'document',

fields: [

{ name: 'car', type: 'reference', to: [{ type: 'car' }], title: 'Car' },

{ name: 'customerName', type: 'string', title: 'Customer Name' },

{ name: 'rentalDuration', type: 'number', title: 'Rental Duration (days)' },

{ name: 'totalPrice', type: 'number', title: 'Total Price' },

{ name: 'status', type: 'string', title: 'Rental Status' },

]

};

**User Schema**

export default {

name: 'user',

type: 'document',

fields: [

{ name: 'username', type: 'string', title: 'Username' },

{ name: 'email', type: 'string', title: 'Email' },

{ name: 'password', type: 'string', title: 'Password Hash' },

]

};

**Summary**

This plan provides a clear structure to develop the rental e-commerce platform, ensuring smooth workflows, scalable features, and a user-friendly interface.