# Hackathon Marketplace Technical Foundation – Rental-Commerce

## Technical Foundation Plan for Vehicle Rental Marketplace

### 1. System Architecture Overview:

To ensure scalability, reliability, and a seamless user experience, the following technology stack will be used:

- **Frontend**:
  - **Framework**: React.js (for dynamic, interactive, and responsive UI).
  - **Styling**: Tailwind CSS (for rapid styling and responsive design).
  - **State Management**: Redux or Context API (for managing application state).
  - **Pages Requirements**: Home Page, Vehicles Listing Pages, Vehicle Details Page, Booking Cart Page, Check Out Page, User Dashboard, Sign In/ Sign-up Page, About Us Page, Contact Us Page
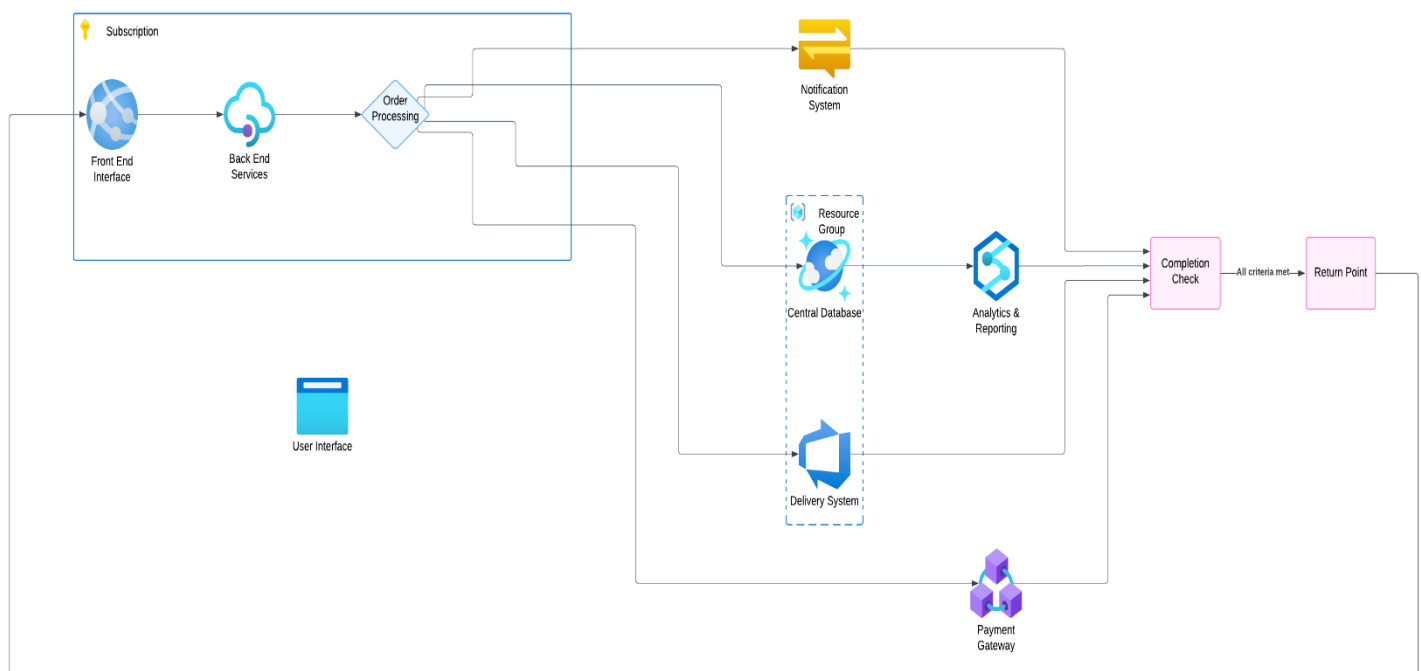- **Backend**:
  - **Content Management**: Sanity CMS (for schema-based, flexible content management).
- **Third-Party Integrations**:
  - Payment Gateway: Pay Fast, Jazz cash or easy paisa (for secure online transactions).
  - Mapping Service: Google Maps API (for delivery zones and pick-up/drop-off locations).
  - Notification Service: Twilio (for SMS notifications).

### 2. System Architecture Overview (Diagram):

### 3. Key Workflows Include:

• **User Management Service**: Handles user registration, login, profile updates, and loyalty rewards.

• **Vehicle Management Service**: Manages the catalog of vehicles, including categories, availability, and features.

• **Order Management Service**: Handles order placement, status updates, and history tracking.

• **Payment Processing Service**: Manages transactions, refunds, and payment confirmations.

• **Delivery Management Service**: Tracks vehicle pick-up and drop-off locations, shipment status, and assigned drivers.