Car Hire System— Customer Requirements

Core Functional Requirements

Vehicle Management

- **Vehicle inventory tracking:** Store comprehensive car details including brand, model, colour, license plate, specifications (seats, doors, fuel type)
- **Vehicle classification system**: Categorize cars into classes (economy, business, luxury, superlux) with associated pricing
- **Vehicle location tracking**: Track car locations (Airport, Hotel, Office)
- **Vehicle maintenance status:** Monitor car availability and maintenance states
- **ITV status tracking**: Record vehicle inspection compliance

Customer Management

- **Customer registration**: Store client information including personal details, contact information, and driver's license
- **Customer identification**: Maintain unique customer records with NIF (tax identification)
- **Customer communication**: Store email and phone contact details

Reservation System

- **Booking functionality**: Allow customers to reserve vehicles for specific date ranges
- **Availability checking**: Verify car availability for requested dates to prevent double bookings
- **Pricing calculation:** Calculate rental costs based on daily rates and rental duration
- **Reservation tracking**: Generate unique reservation IDs and maintain booking history

Dynamic Pricing

- **Seasonal pricing**: Implement different pricing tiers based on time periods throughout the year
- **Class-based pricing**: Set different daily rates for each vehicle class

Reporting and Analytics

- **Revenue reporting**: Generate income reports by car, month, quarter, and year
- **Utilization tracking:** Monitor total rental days per vehicle
- **Gap analysis:** Identify available time slots between bookings for optimization
- **Special offers identification**: Automatically detect and price last-minute availability

Operational Features

- **Automated booking generation:** System capability to create sample reservations for testing
- **Date-based availability queries:** Search for available cars within specific date ranges
- **Multi-location support**: Handle rentals across different pickup/drop-off locations
- **Business intelligence views**: Pre-built reports for management decision-making