**Project Scope for Cruize Control Car Rentals**

**Project Title:** Cruize Control Car Rentals System

**Objective:**

To create an all-inclusive car rental management system with smooth, automated features for users and managers. For guaranteed budget compliance before reservation, the system will manage online automobile reservations, payments, user verification, invoicing, and integration of client salary validation. Payments are made in person at the pickup location.

**Key Components of the System:**

1. **Customer Management**:

* Registration and Account Login: Users can register and sign in to their accounts.
* Profile Management: You can manage your profile to view past rentals, track reservations, and change personal information.

1. **Car Rental Management**:

* Car Selection: The system allows users to browse available cars, categorized by type, price, and availability.
* Pricing: Rental prices will be automatically fetched from the database based on the car selected by the customer. No manual price entry is allowed.
* Reservation: Customers can reserve a car within their budget (based on salary). Once reserved, the system prevents the vehicle from being double-booked.

1. **Payment Management**:

* In-person Payment at Pickup Point: Customers will use the system to confirm their reservation and make in-person payments when they pick up the vehicle instead of paying online.
* Payment Verification: Before approving the reservation, the system verifies that the rental fee is within the customer's budget.
* Invoice Generation: Following payment processing, an invoice will be accessible from the system.

1. **Invoice Generation**:

* The system will generate a PDF invoice with rental details, car information, customer name, and amount paid.
* The invoice will be available for download from the system.

1. **Administration Portal**:

* Admins can manage car inventory, monitor reservations, and update car availability.
* Admins can modify pricing, car descriptions, and rental policies.

**Scope of Work:**

1. **Frontend Development**:

* Web-based User Interface: An easy-to-use and adaptable interface for administrators and customers.
* Car Selection and Reservation: A pricing display is combined with a car selection module.
* Payment and Salary Verification: Customers fill out a front-end form to confirm their car rental eligibility and submit their wages.

1. **Backend Development**:

* Car Inventory Management: Ability to manage cars, specifications, and prices inside the system's database.
* Payment Processing Simulation: The system will manage the payment verification and processing simulation.
* Reservation Logic: Ensure that car reservations are only made if the client's income falls within the acceptable range.

1. **Database Integration**:

* **Car Database**: Keep track of vehicle information (make, model, price, availability).
* **Customer database**: Keep account details, rental history, salary, and customer data.
* **Reservation Data**: Maintain records on both current and past reservations.

1. **Validation**:

* Salary Validation: Verify that the rental cost of the chosen vehicle is within 30% of the client's monthly income.
* Input Validation: Every field that a consumer enters will have its data accuracy validated (e.g., valid email and numeric salary).

1. **Security**:

* User authentication: Password encryption is used in a secure login process.
* Data protection: Put policies in place to guarantee the safety of private data and authorized access to invoices.

**Deliverables:**

1. **Fully Functional System**:

* An online car rental management system accessible to administrators and clients.
* The modules for choosing a car, verifying the budget, and making reservations.

1. **Invoice System**:

* Emailing and creating invoices automatically.
* Accessible in the system is the PDF invoice.

1. **Database Schema**:

* The database schema was created and implemented to manage users, vehicles, bookings, and payments.

1. **Testing & Debugging**:

* Comprehensive testing is done to ensure the system is error-free, especially in payment verification, reservation logic, and email notification features.

**Project Phases**:

1. Gathering Requirements (Completed):

* High-level requirements were completed in the first FAST phases.

1. System Design (Current Phase):

* Modifying the design of the system considering more precise requirements.
* The system includes budget validation logic to ensure the system satisfies the requirements of the rental procedure.

1. Development:

* Introducing dynamic vehicle pricing that is determined by database values.
* Creating logic for user salary validation.

1. Testing:

* Confirming the reservation procedure within financial limitations.
* Ensuring flawless operation of the invoice creation feature.

1. Deployment:

* Set up the web-based system and ensure it works in a real-world setting.

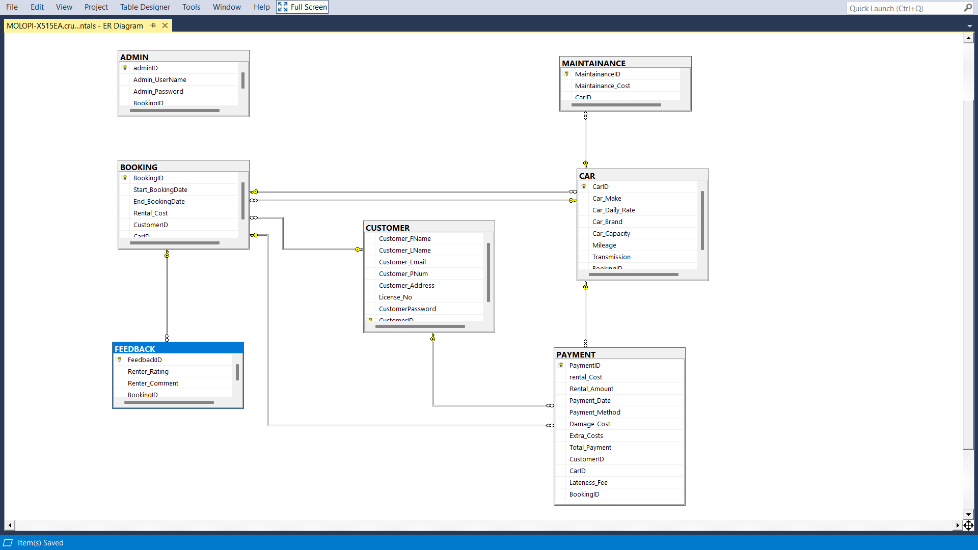
1. Maintenance:

* Post-deployment assistance to address any problems or glitches that may arise.

**Constraints:**

* Budget: Payment validation needs to consider customer salary constraints. Renting a car should only happen if the cost fits the customer's budget.
* Payment Processing: At this time, payments can only be processed in person at the location where the car is collected.
* Scalability: Ensure the system can expand to accommodate the incorporation of online payment gateways in the future.

**Screen print of database schema created according to physical data model in DBMS**

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