CAR RENTAL SERVICE

1. Color (color\_id)

2. Make (make\_id, name)

3. Model (model\_id, name, make\_id)

4.Vehicle(vehicle\_id,license\_plate,model\_id, daily\_rate)

5. VehicleType(vehicle\_type\_id, description, daily\_rate\_factor, base\_rate)

6. Customer(customer\_id, name, email, phone, address)

7. Location(location\_id, address, city, state, zip)

8. Rental(rental\_id, customer\_id, vehicle\_id, start\_date, end\_date, pick\_up\_location, drop\_off\_location)

9. Payment(payment\_id, rental\_id, amount, payment\_date, payment\_method)

10.Maintenance(maintenance\_id, vehicle\_id, maintenance\_type, maintenance\_date, cost, description)

11.Employee(employee\_id, name, email, phone, role, manager\_id)

12. Reservation(reservation\_id, customer\_id, vehicle\_type\_id, start\_date, end\_date, location\_id)

13.Insurance(insurance\_id, insurance\_provider, coverage\_details, daily\_rate)

Relationships:

1. One-to-One Relationship: A \*\*Rental\*\* is associated with one \*\*Vehicle\*\*.Car to Color: One car can have one color. Employee to Location: One employee can be assigned to one location.

2. One-to-Many Relationships:- A Make can have multiple Models - A Model can be associated with multiple Vehicles.- A Customer can have multiple Rentals and Reservations.A Vehicle can have multiple Maintenance records.A Location can have multiple Rentals and Reservations.A VehicleType can have multiple Vehicles and Reservations .An Employee can manage multiple Employees(representing a management hierarchy).

3. Many-to-Many Relationships:- A Rental can have multiple Payments and Insurance policies.

4. Unary Relationship:- An Employee can manage other Employees (representing a management hierarchy).

5. Binary Relationship:- A \*\*Maintenance\*\* record is associated with a \*\*Vehicle\*\*.

6. Ternary Relationship: A \*\*Reservation\*\* is associated with a \*\*Customer\*\*, a \*\*VehicleType\*\*, and a \*\*Location\*\*.

**Primary Keys**

-\*\*Color\*\*(color\_id)

-\*\*Make\*\*(make\_id)

-\*\*Model\*\*(model\_id)

-\*\*Vehicle\*\*(vehicle\_id)

-\*\*VehicleType\*\*(vehicle\_type\_id)

- \*\*Customer\*\* (customer\_id)

- \*\*Location\*\* (location\_id)

- \*\*Rental\*\* (rental\_id)

- \*\*Payment\*\* (payment\_id)

- \*\*Maintenance\*\* (maintenance\_id)

- \*\*Employee\*\* (employee\_id)

- \*\*Reservation\*\* (reservation\_id)

- \*\*Insurance\*\* (insurance\_id)

**Foreign Keys:**

- \*\*Model\*\* (make\_id) references \*\*Make\*\* (make\_id)

- \*\*Vehicle\*\* (model\_id) references \*\*Model\*\* (model\_id)

- \*\*Rental\*\* (customer\_id) references \*\*Customer\*\* (customer\_id)

- \*\*Rental\*\* (vehicle\_id) references \*\*Vehicle\*\* (vehicle\_id)

- \*\*Rental\*\* (pick\_up\_location) references \*\*Location\*\* (location\_id)

- \*\*Rental\*\* (drop\_off\_location) references \*\*Location\*\* (location\_id)

- \*\*Payment\*\* (rental\_id) references \*\*Rental\*\* (rental\_id)

- \*\*Maintenance\*\* (vehicle\_id) references \*\*Vehicle\*\* (vehicle\_id)

- \*\*Reservation\*\* (customer\_id) references \*\*Customer\*\* (customer\_id)

- \*\*Reservation\*\* (vehicle\_type\_id) references \*\*VehicleType\*\* (vehicle\_type\_id)

- \*\*Reservation\*\* (location\_id) references \*\*Location\*\* (location\_id)

- \*\*Employee\*\* (manager\_id) references \*\*Employee\*\* (employee\_id)