

CAR RENTAL DATABASE

Project # 2

CSE 5330 Database Systems

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Honor Code

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I promise that I will submit only work that I personally create or that I contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

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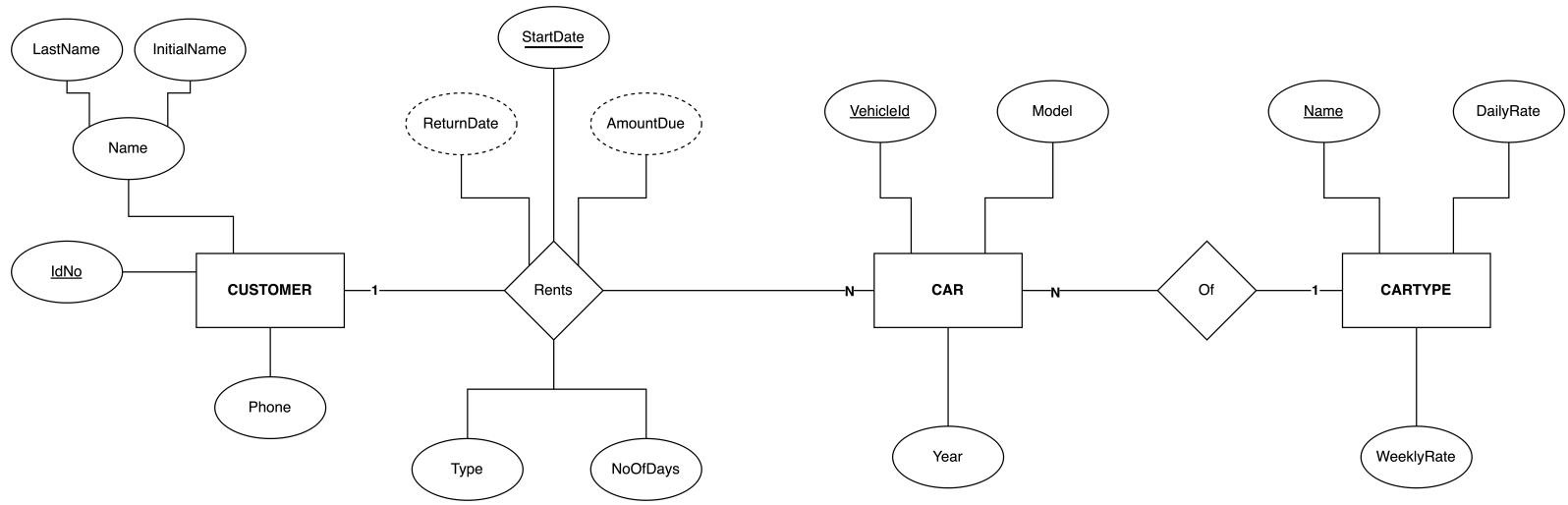
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Introduction

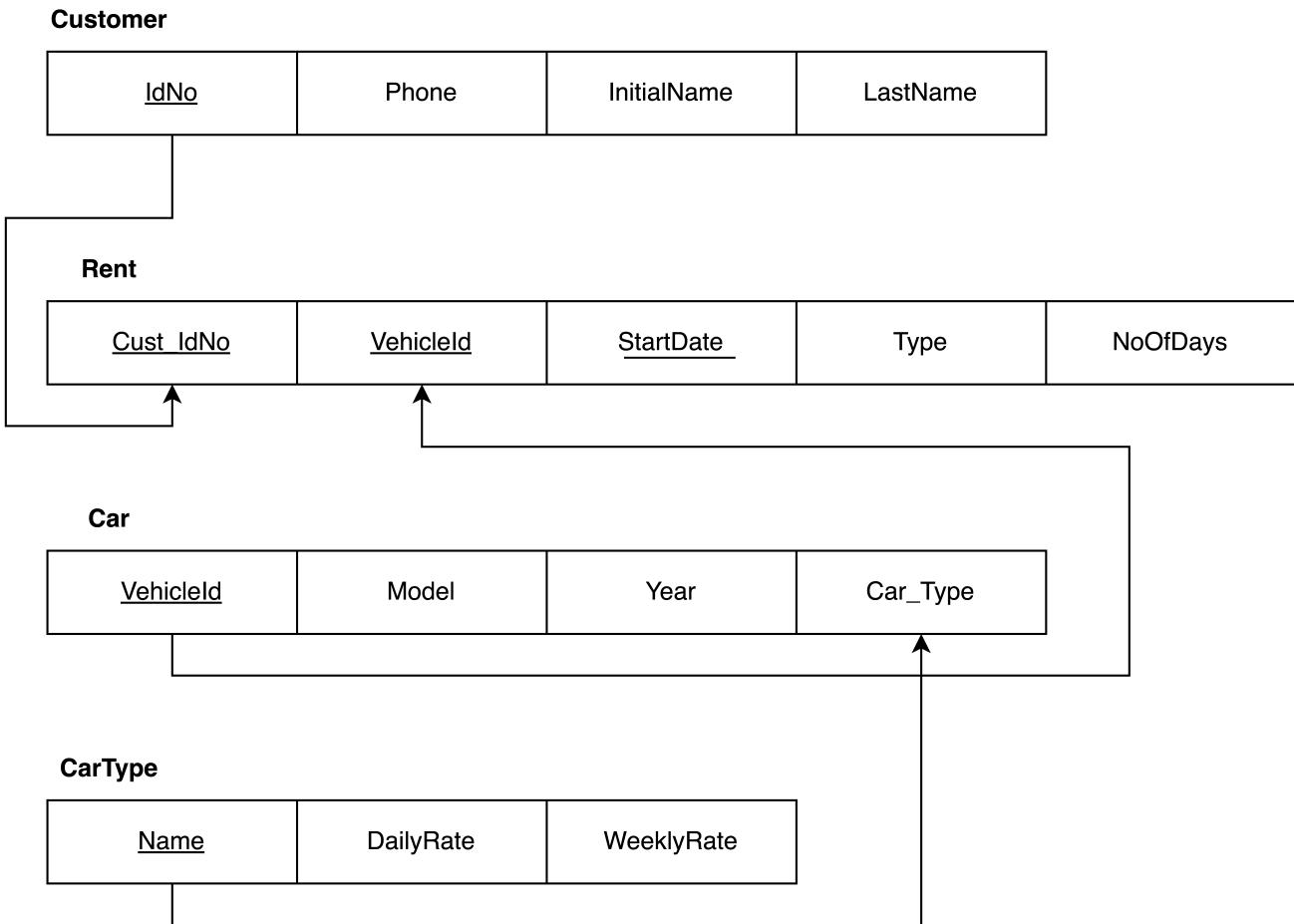
An automobile rental firm would like to go online since the usage of technology has grown. In order to achieve the goal, the company wants a database for tracking all bookings. So, this project focuses on the implementation of a database for tracking information about car rental company.

The database keeps track of CARs available for rental, which are categorized based on their type with six main types: compact, medium, large, SUV, truck, and van. Each type of car has its own daily rate and weekly rates. The database will keep track of the current rental as well as the scheduled rental of each vehicle. The customer can rent a car on a daily basis or weekly basis. For each daily rental, the information kept will include the specific CAR and customer, as well as the number of days the car is booked, start Date, and return Date. For each weekly rental, the information kept will include the specific car and customer as well as the number of weeks the car is booked. However, return dates can be determined from the start date and the number of weeks. Each rental will also have the amount due for the rental. The database will also keep track of which CARs are available for rental during which periods.

ERD



Relational Database Schema



Assumptions:

1. Creating a table for the “Rents” relationship and storing information on the relationship itself.
 1. In this, instead of storing “NoOfDays” for daily rentals and “NoOfWeeks” for weekly rentals, we are storing only “NoOfDays” for both weekly and daily rentals. Using “NoOfDays” and “Type”, we will calculate everything.
 2. “Type” attribute stores whether it is “daily” or “weekly”.
 3. Using the “Type” attribute, we are gonna calculate “ReturnDate” and “AmountDue”, making use of CARTYPE’s “DailyRate” or “WeeklyRate”.
2. “Rents” table has Primary Key as (Cust_IdNo, VehicleId, StartDate). Including StartDate is crucial because if the same customer gets the same vehicle next time, we have to identify each row uniquely.