

## **Milestone 1: Database Design and Implementation Project**

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A car rental company wants to stand out from its competition by implementing an information system to schedule and to keep track of each car's maintenance requirements. This would enhance the services to the product (the rental car) so that the company might spend less time and money repairing cars, increasing the margin. For this task, the company might need to employ a database. Data needs to be tracked for each individual car and note its characteristics such as: make, model, year, color, gas/electric, quality of parts, etc. There must also be categories of rental cars depending upon its size in the form of sedans, SUVs, minivans, trucks, etc. Each customer must be assigned to a car, but not every car has to be assigned to a customer depending on the demand.

The following business rules must be represented:

1. A customer in the system needs to be in possession of the car he or she paid to rent for the period of time.
2. A car cannot be in use if it is in need of maintenance or poses a potential danger to the driver.
3. If a customer damages, destroys, or tampers with the car, it must be immediately reported to the company .
4. Customers will give the business their name, date of birth, email address, phone number, driver's license number, debit or credit card number, pick-up, and drop-off addresses, and other personal information.
5. Customers will be charged a deposit fee which will be refundable upon return of the vehicle.

6. A day and time when the car is to be picked up and returned will be allocated to each client's account.
7. Each vehicle can have many maintenance needs; in addition, several vehicles can share the same maintenance issues.
8. Each car is rented out to one customer, and each customer can only drive one rental car at a time.
9. If maintenance requirements are met, information about the vendor, the maintenance work, date, time, and cost is recorded for every maintenance for each vehicle.