Vehicle Resale Inventory Database Management System

Entities List
(With Primary and Foreign Keys)

- Dealer- Dealer ID
- Refurbisher- Refurbisher ID
- Refurbishment-Refurbishment ID, *VIN, car name, Refurbisher ID*
- Inspection-Inspection number, VIN, Car name, Dealer ID
- Showroom-Showroom ID
- Sales representative- Sales rep ID number, *Showroom ID*
- Transaction- Transaction ID, *Supplier Id, Dealership ID, Car VIN*
- Car- VIN
- Request-Request ID, *Sales rep ID number, Customer ID*
- Customer- Customer ID
- Loan- Loan ID, *Customer ID*
- Customer transaction- Transaction ID, *Dealership Id, Showroom ID, customer ID, car VIN*
- Financer- Financer name
- Supplier- Supplier ID

Foreign keys are mentioned in Italics.

Business Rules

- Many transactions can be done between a supplier and a dealer.
- Each car can have only one transaction related to it.
- A dealer will do physical inspection and will make transaction with the supplier.
- A car will have only one inspection.
- A showroom may have many cars.
- Many requests can be made for a car.
- A dealer will have many showrooms.
- A dealer may conduct many inspections.
- A refurbisher may do many refurbishments.
- A showroom will have many sales representatives.
- A showroom may have many customer transactions.
- A sales representative may get many requests.
- A customer may raise many requests.
- A customer may do many customer transactions.
- A customer transaction can be done through a loan.
- A customer may take a loan from only one financer.
- A showroom may have many customers.
- A customer transaction will have only one car related.

Key Descriptions

1) A supplier sells a car to a dealer which is justified by a transaction. Here, it is assumed that the car is physically verified by the dealer before buying that car and hence is not defined in the model.

2) The dealer further sends the cars owned for inspection and if the desired results are not obtained, the car is further sent for refurbishment. The refurbishment is done by refurbisher.

3) The dealer has multiple showrooms with multiple sales representatives. The customer makes a request for a car to the sales representative and if the customer likes the car, they buy the car by making a customer transaction at the showroom.

4) To pay the transaction amount, the customer may pay it on their own or contact a financer for a car loan which would pay for the car.

5) This whole process is managed with the help of a centralized database management system which helps in maintaining record of not only the cars but also the subprocesses and stakeholders involved.