

Vehicle Resale Inventory Database Management System

Entities List

(With Primary and Foreign Keys)

- Dealer- **Dealer ID**
- Refurbisher- **Refurbisher ID**
- Financer- **FinancerID**
- Supplier- **Supplier ID**
- Car- **VIN**
- Refurbishment-**Refurbishment ID**, *VIN, Refurbisher ID*
- Inspection-**Inspection Number**, *VIN, Dealer ID*
- Car with Dealer– (**Dealer ID**, *VIN*)
- Sales Representative- **Sales Rep ID**, *Dealer ID*
- Transaction- **Transaction ID**, *Supplier ID, Dealer ID, VIN*
- Request-**Request ID**, *Sales rep ID number, Customer ID*
- Customer- **Customer ID**
- Loan- **Loan ID**, *Customer ID*
- Customer Transaction- **Transaction ID**, *Dealer ID, Customer ID, VIN*

Primary Keys are mentioned in Bold.

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 dealer-supplier 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 car may have a refurbishment done based on the inspection report.
- A dealer may have many cars.
- Many requests can be made for a car.
- A refurbisher may do many refurbishments.
- A dealer will have many sales representatives.
- A dealer 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 customer transaction will have only one car related.
- A customer can take only one loan for buying a car.
- A financer can give multiple loans to a customer for multiple transactions.

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 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 dealership.
- 4) To pay the transaction amount, the customer may pay it on their own or contact a financier 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.