**DESCRIPTION OF PROBLEM:**

A vehicle dealer needs to effectively manage his business branches,particularly considering the growing popularity of electric cars. It’s crucial to stay informed about the specifications of these vehicles and maintain a detailed inventory. As the customer base expands over time, keeping track of customer details becomes increasingly important. Additionally, the dealer needs to monitor rentals and sales closely while studying market trends to ensure business success.

**REQUIREMENT COLLECTION:**

The business owner operates several branches, each uniquely identified by an ID, spread across various cities within the country. Each branch is associated with a specific location, a landline phone number, and an email address. The owner needs to be aware of these details for effective management and coordination:

**1.customer details:**

(NationalID,fname,mname,lname,{home, work address}: building no. and name, street no. and name, postal code, city, state, phone number {up to 3 numbers})

**2.company suppliers:**

(company code, company name, address, email address, supply chain manager phone number (only one), homeland)

**3.tansportation companies:**

(trans\_company code, no of available trucks, landline number, email)

**4.salesman:**

((National ID, fname, mname,lname,commission,salary

home: building no. and name, street no. and name, postal code, city, state, phone number (only one))

**5.manager:**

((National ID, fname, mname, lname, managing date

home: building no. and name, street no. and name, salary, postal code, city, state, phone number (only one))

**6.receipt:**(reference no., date, method of payment {cash, card}, payment rate{lump sum, installments})

**7.workers:**

((National ID, fname, mname, lname, salary

home: building no. and name, street no. and name, postal code, city, state, phone number (only one))

**8\_1. normal cars:** state (sold or in stock),price of sale , time of sale (or the start of warranty)

Purpose {for rent or sale}, VIN, brand, model, year, engine type, color, horsepower, torque, fuel efficiency, transmission, drivetrain (car: front-wheel, rear-wheel, all-wheel)

**8\_2. electric cars(no rent):**model,VIN,brand, battery capacity(in KWh),range,efficiency(measured in wh/km),power(horse/kilowatts),acceleration, top speed, drivetrain, price, state, fast charge speed(in km/hr),time of sale, battery type.

**RULES:**

**1.**each branch can rent or sell several cars for one customer.

**2.**multiple suppliers can deal with the branch.

**3.**salesman can sell for several customers several vehicles or make rental contracts for them.

**4.**rentals must be finite and not more than 20 days for each contract and for one customer at a time.

**5.**the branch gives a warranty on sold products {5 years for electric cars, 3 years for normal ones}

**6.**dealership must deal with at least one transportation company and 3 at most.

**7.**each sale must have a distinct receipt.

**8**.each employee must work in 1 branch only.

**9.**no person works two jobs at the same time

**10**.we want to keep track of each salesman sales monthly.

**11**.all electric cars are new and for sale only.

**12**.the warranty starts from the date of purchase with noting that the car details are deleted upon ending of the warranty.