Mid-Semester Project Presentation *Fleet Management*

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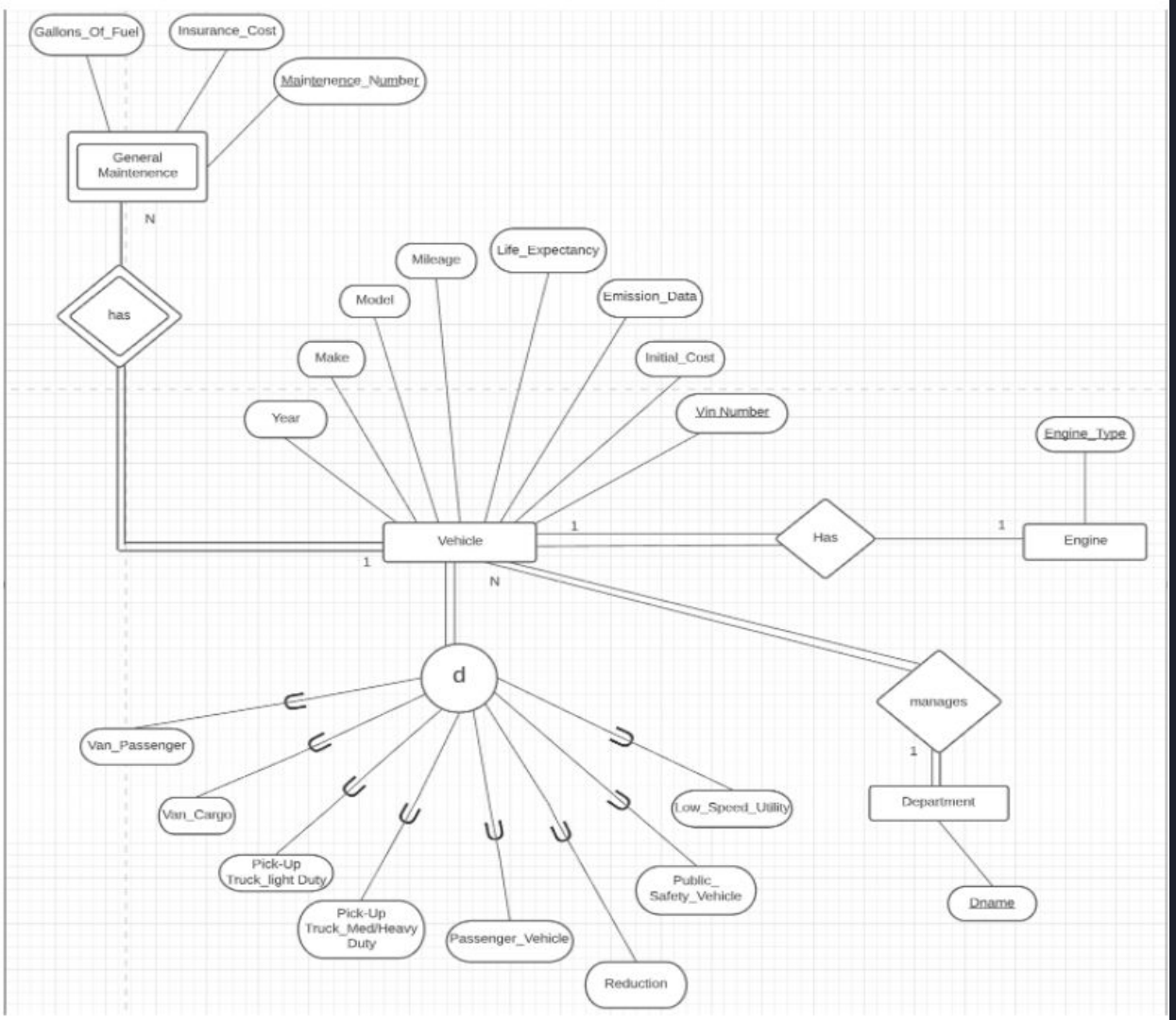
Review of Scope - Harkiran & Brian

- Problem Statement:
  - Alter fleet vehicle management through replacement or reduction in order to assist TCNJ to become Net Zero by 2040
- Objective:
  - Build a user friendly interface that allows the user to compare and contrast key differences between the fleet vehicles on campus
- Data:
  - Vehicle year, make and model
  - Vehicle costs
    - Initial cost
    - Annual Depreciation
    - Financial Incentives
    - Maintenance Cost
    - Insurance
  - Emissions
- End Goal:
  - Database that shows key information on individual vehicles in the fleet and helps user decide if vehicle should be replaced

Review of Specifications

- Inputs
  - Make and model of the vehicle
  - Vehicle Year
    - Example: 2005 Dodge Caravan
- Outputs
  - Data about the vehicle
    - Gallons of fuel, insurance cost, maintenance number, mileage, life expectancy, emission data, initial cost, vin number, engine type and department name
    - These outputs will allow the user to compare different fleet vehicles' expected costs and their effects on the environment and help determine the most optimal group of vehicles to make up the fleet vehicle management at TCNJ
- User interface
  - Menu-driven interface
    - User will have drop down where they input the make, model, and year of vehicle they are looking for
  - Once done, user will click "submit"
  - After submitting, the user will be able to see the vehicle's information
    - Can see the vehicle's emission data, VIN number, the department the vehicle belongs to, engine type, insurance cost, initial cost, life expectancy, etc.

ER Diagram


Gallons_Of_Fuel
Insurance_Cost
Maintenence_Number
General Maintenence
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has
Mileage
Life_Expectancy
Model
Emission_Data
Make
Initial_Cost
Year
Vin Number
Engine_Type
Vehicle
1
Has
1
Engine
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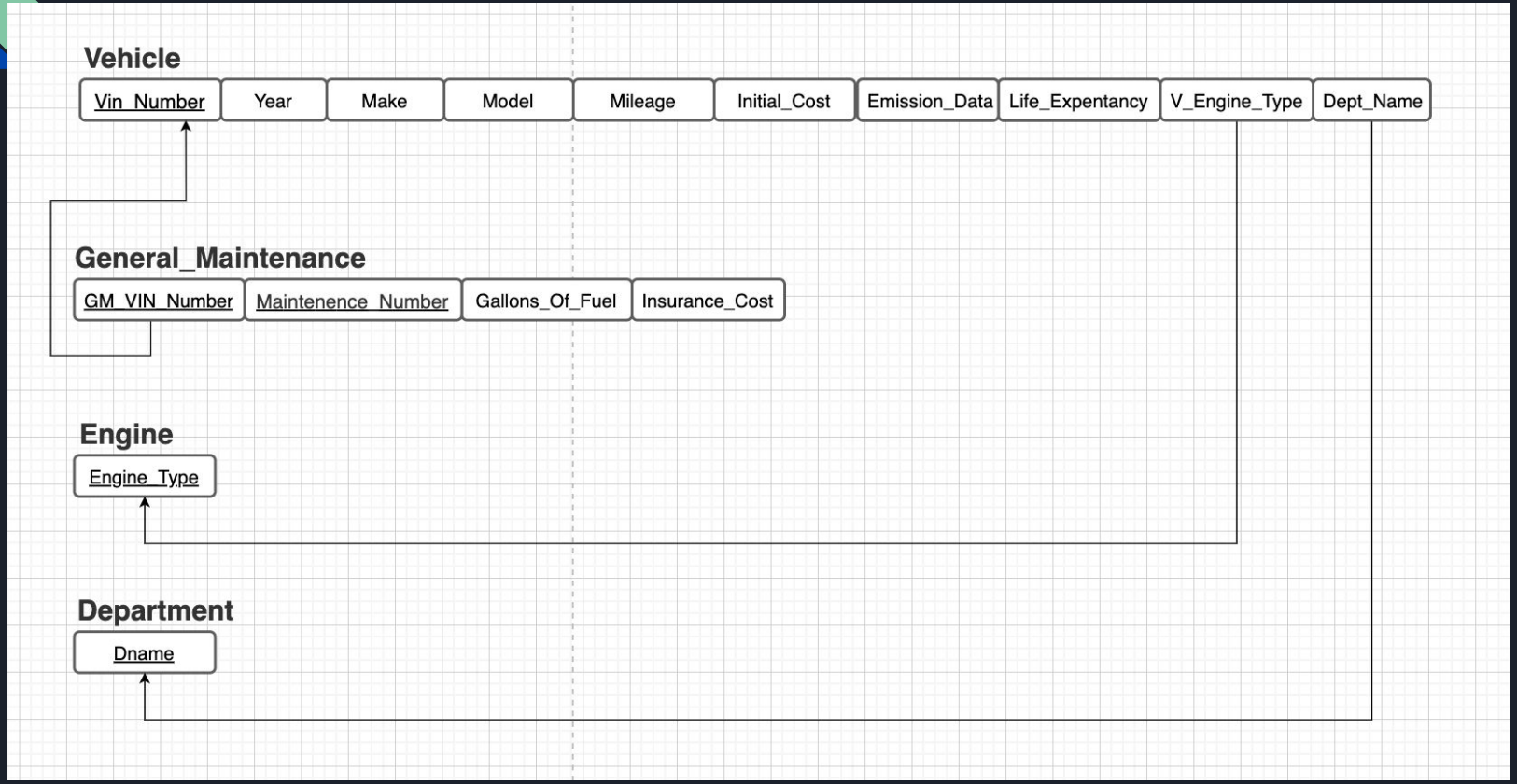
N
d
manages
1
Department
Dname
Van_Passenger
Van_Cargo
Pick-Up Truck_light Duty
Pick-Up Truck_Med/Heavy Duty
Passenger_Vehicle
Reduction
Public_ Safety_Vehicle
Low_Speed_Utility

Relational Schema



Estimates

Database Size: Since there are currently 97 fleet vehicles logged on the fleet vehicle spreadsheet, there will be a total of 97 fleet vehicle entries in the database.

Searches: We will need 2 to 3 searches because we will be joining multiple tables.