

### Stage III - Elaboration: Database Model

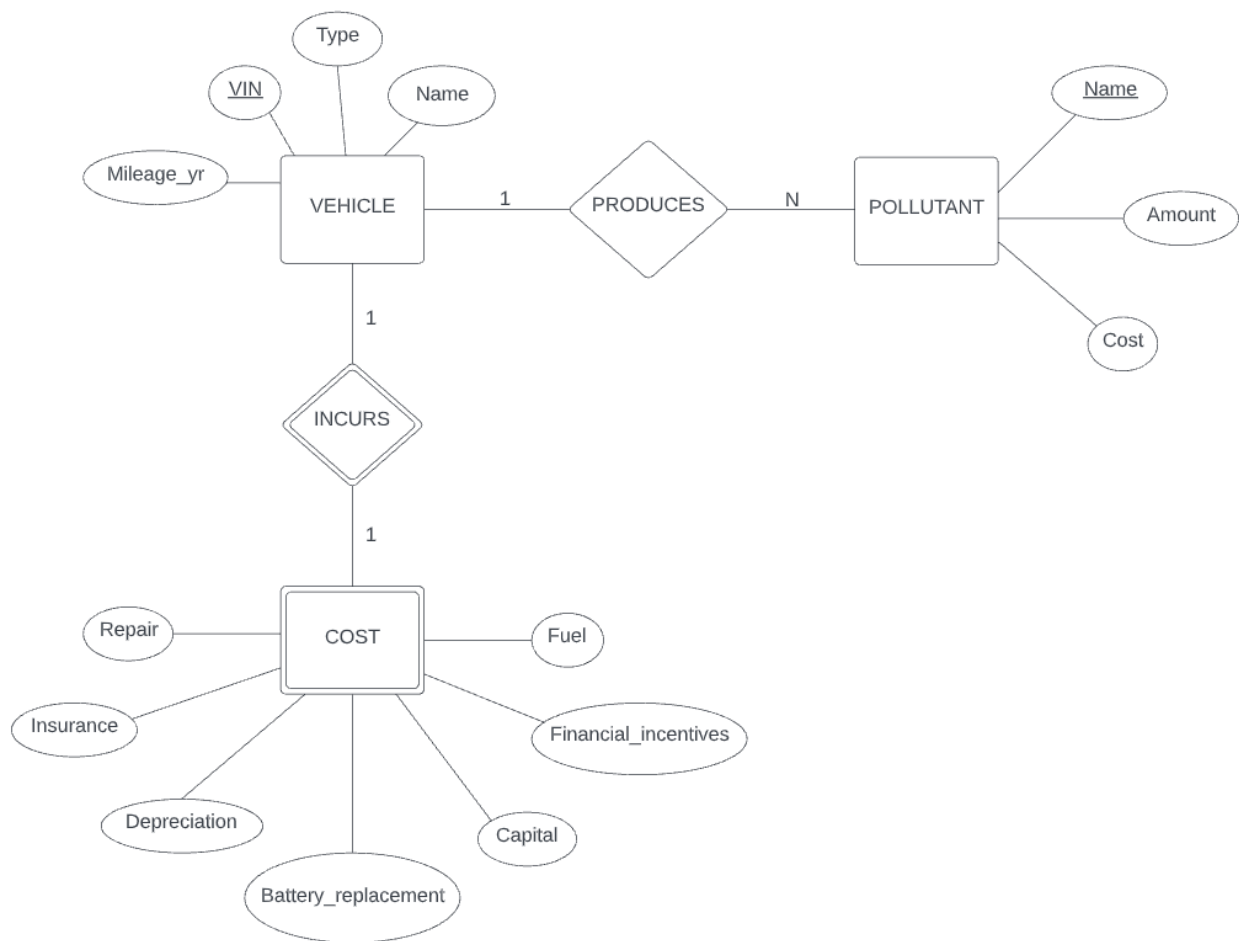
Team 02-4

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Modifications are shown in red.

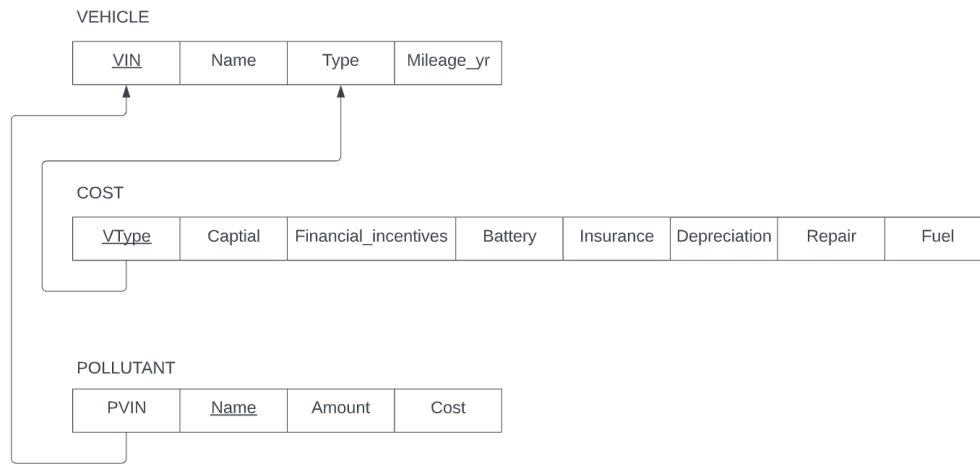
ER Diagram:

#### ER DIAGRAM

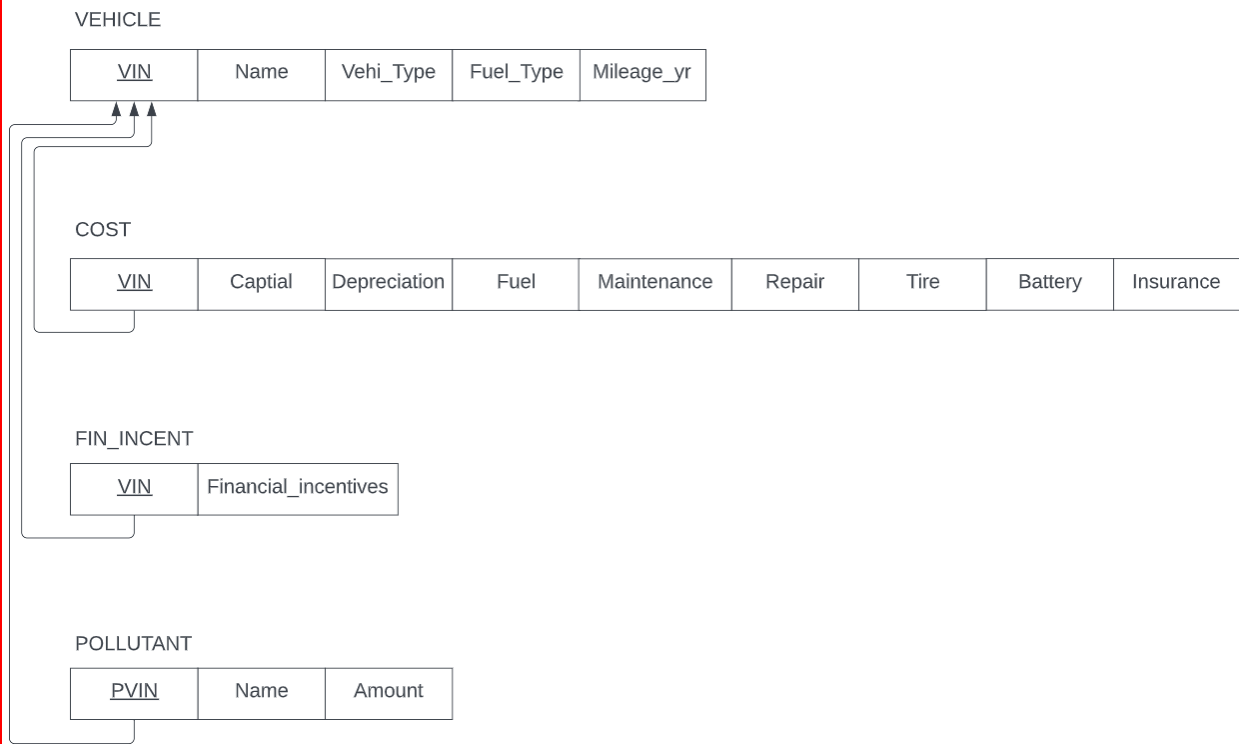


## Relational schema:

### RELATIONAL SCHEMA



### **[updated] RELATIONAL SCHEMA in BCNF**



*See Stage IV – Elaboration: Database Design for further details on the updated schema.*

Additional estimations:

- Based on the data provided by Paul Romano as well as some data we expect to find through our own research, we estimate the database to have around 18 records in each of the vehicle, cost, and pollutant tables, and around 5 in the financial incentives table.
- The types of searches/queries to the database will likely be to see:
  - 1) types of vehicles and their economic costs based on an input dollar budget amount, and
  - 2) types of vehicles and their environmental costs based on an input emissions budget amount (in lbs)
- Searches will likely not be done frequently, as a user can make a query, keep the data for their own record, and only check back with the database if data is updated as time passes and new cost and emissions information is available