Assignment 1: Relational Schema Design Exercise

Learning objectives

- Become familiar with data abstraction, indirection, and strategies for data representation that use the relational model.
- Gain experience analyzing the characteristics of a dataset.
- Gain experience with documenting rationale for on data representation selection, emphasizing relevance to data curation.

Remember, this exercise is not about learning the relational model; we assume you already have a basic understanding. This is rather an opportunity to stand back and reflect on the general principles involved in exactly how the relational model solves data management problems.

And don't make this too hard on yourself. We aren't looking for detailed complex models. So it won't be just one table, but otherwise feel free to make reasonable simplifying assumptions; you can note them in your documentation.

Scenario

The setting is an auto dealer. In this company, there are 3 departments, including:

- Inventory
- Sales
- Customer relations

Right now, each department manages their information differently.

These departments would like to integrate their data into a shared database, in order to be able to answer questions like, "What engine is in Customer Smith's car?." It's a challenge to answer right now because the Sales department has information about which car Customer Smith bought; the Inventory department tracks which engines are in which cars; and the Customer Relations has totally separate, slightly redundant