

Homework

20 points

**NOTE:** This car dealership is *slightly different* than the dealership previously discussed in class!

Design a database for the following scenario by drawing an E-R Diagram using UMLet. Email the instructor your final ER diagram by 11:59pm Monday, Sept 9. Your ER diagram must include each teammates' name. In your email, indicate whether or not each member of your team has ever bought a car from a car dealership.

Bring two printed copies of your diagram to class on Sept 10.

You are welcome to bring a draft of your ER diagram to office hours for discussion.

What queries do you think the dealership will want to make on this database? By who? When? List 6. Make sure your E-R Diagram can support these queries.

### **Car dealership.**

The dealership employs a number of people. Each employee has a unique employee ID (EID). Some employees manage other employees. Each employee is paid a base salary plus a commission on each car they sell (5% for each car they sell) plus 2% of the sales made by anyone they directly manage. (What other data about employees can you think of recording?)

Each car has a unique vehicle identification number (VIN), make, model, year, color (outer and interior), base price, arrival date, and asking price. (What else can you think of recording?)

When a car is sold the selling price (which may not equal the base price) and the date are recorded.

Cars can be used or new. New cars come with various warranty options the customer can choose to buy. Used cars have some number of miles on them. Warranties have a price and duration based on miles and time. Every used car goes through a 6 point inspection before it is sold. The results of this inspection must be recorded. The cost of the repairs required by the inspections must also be recorded so that the cost of the repairs can be offset by a higher selling price.

This dealership does not have a service department.