

**PWSP DATABASE MANAGEMENT CLASS**  
**LUBE OIL CHANGE STORE DATABASE DESIGN PROBLEM**  
**FEBRUARY 26-27, 2007**  
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**Instructions:** Design the database and show an E-R Diagram for the case below. For many-to-many entities, show the additional tables that you would create.

**Description:** Quick Oil Company is in the business of changing engine oil for its customers. In addition to changing oil, the company also performs other services such as changing wipers, light bulbs etc. There are several technicians assigned to a car as it comes in for an oil change. They maintain the **name, address, social security number, phone, and email address** of the customer. In addition, the services that the customers purchase at different times are tracked. For each service, they store **the name of the service, the cost of the service, description of the service, and number of hours of labor for the service**. They maintain employee information including **name, phone, social security number, address, date-of-birth, date-of-hire, and their hourly salary** in the database. They also sell parts and the name, manufacturer, cost, weight and number of items of each part is stored. A list of parts is maintained in the database and customers that bought each part are tracked.