CS 336 Homework 1

1. Construct an ER diagram for a car insurance company. The customers of the company own one or more cars each. Each car has zero or more recorded accidents. Each insurance policy covers one or more cars and has one or more payments associated with it. Each payment is for a particular period of time, has a due date, and has a payment received date.

2. Construct an ER diagram for a university database, according to the following specifications:

   - professors have an SSN, name, age, rank, and research specialty
   - research projects have a project number, sponsor name, starting and ending dates, and a budget
   - graduate students have an SSN, name, age, department, and degree program
   - each graduate student has a more senior graduate student as an advisor
   - each project is managed by one professor
   - each project is worked on by one or more professors and one or more graduate students
   - a graduate student's work on a project must be supervised by a professor
   - professors can work on multiple projects
   - graduate students can work on multiple projects and may have a different supervising professor for each project
   - departments have a number, name, and an office
   - each department has a department chair, that is, a professor who manages the department
   - professors may work in multiple departments, in which case a time percentage is associated with each department