Fall 2014: CS348 Assignment 2

In this assignment you have to draw an EER diagram that captures the situation described in the scenarios. You can use the example given in the course notes as a good starting point.

Hint: words in italics are important terms to consider and think about when drawing out the EER.

University of Dystopia Database

The University of Dystopia currently stores information about its employees (instructors and support staff) and students in flat text files. You have to draw an ER diagram such that it can then be given to a database programmer or DBA to ensure that the university's record keeping requirements can be met in a modern relational database system.

All individuals at the university are uniquely identified by their University ID (UID) but students are given unique Student IDs (SID) as well. The university needs to keep track of everyone's (whether they be an employee of the university or a student) *name*, *phone*, *email address* and *street address*

The university has many different departments (Biology, Math, etc.) which are uniquely identified by their Department Number (DNO).

There are three types of students for which the university wants to store different pieces information. For *undergraduate* students the university wants to know the *department* they belong to. For *Masters* students the university would like to store their *specialization* and for *PhD* students the university would like to keep track of their supervising professor (a professor who is an employee of the university).

There are two types of employees: instructors/professors and support staff. For professors the university would like to keep track of their *salary*, *rank* and *degrees* that they have attained. For support staff the university would like to keep track of their *salary, job title,* and only the *highest degree attained.* Each employee is assigned to at least one department. Instructors are assigned to one department only and can only teach courses that one department. Support staff however can work for at most 4 departments. Every department has one special instructor that is designated as the *head* of the department.

Each department can offer any number of courses. Each course has a *name* and is uniquely identified by its *course number*. Each course may have any number of other courses as *pre-requests*. In one *semester* an instructor can teach many courses. Similarly in one semester a single course can be taught by different instructors. Any number of students can *enroll* in a course per semester but each course must have at least one student enrolled in it. For each student enrolling in a course there is a grade that is eventually assigned that the university would like to record.