In class Activity
University Mini-World Prompt EER

Recall our university mini-world we created:

In our mini-world we are tracking information for a University. We need to know the information about students, such as their ID number, name, address, phone number, email, and major. We also need information about instructors, such as their ID, Rank (lecturer, professor, etc) Name, office, email, and phone number.

We also need to track information about the structure of the university. For instance there are colleges, and departments. Both Colleges and Departments have a name, main office and main phone number. Departments also have a numeric code. A College administers several departments, but a department can only belong to one college. One instructor is the dean of each college. One instructor is the Chair of each department, and they have a start date for when they were appointed the chair of the department. The department employs many instructors, but an instructor is only employed by one department. A department has many students, but a student only belongs to one department.

We also need to track information about courses. A course has a code (example CPSC 4620), number of credits, name, and description. A course is offered by a department. A course can have many sections. A section has a room that it meets in, the days and time it meets, section ID, section number, semester and year. A section can only belong to one course. A student takes multiple sections, and earns a grade for each section they take. An instructor teaches multiple sections, but a section is only taught by one instructor.

Now that we have our Extended Entity Relationship model, we can actually get more specific, and create some super/sub class relationships. Draw out the diagram for the following subsection of our university prompt. You do not need to add it to the previous diagram.

There is some shared information for students and instructors, such as name, phone number, address and email. Group these into an entity called Person. Every person has a CUID to uniquely identify them .We can specialize that entity into some further categories, such as student, and faculty. Note that someone can be a faculty member and also a student.

Students can be split into undergraduate and graduate student. The difference is that a graduate student should have information about whether they are a Master's or PhD student, and an undergraduate student should have information about whether they are going for a BA or a BS. A graduate student also has A GRE score.

Faculty can be split into professors and lecturers, and a faculty member cannot be both. Professors should have information about their research fields. Only Professors can also be a chair or a dean (but not both). A professor has a rank (associate, assistant, full, emeritus) and a lecturer has a rank as well (junior or senior)

Any faculty member can serve as an academic advisor for undergraduate students, to help them pick what classes they should take. A student only has one advisor. Only a professor can serve as the advisor to a graduate student.

While you do not have to draw the whole diagram from the previous prompt, consider how the relationships that were previously connected to student and instructor. What entities would these relationships connect to now?