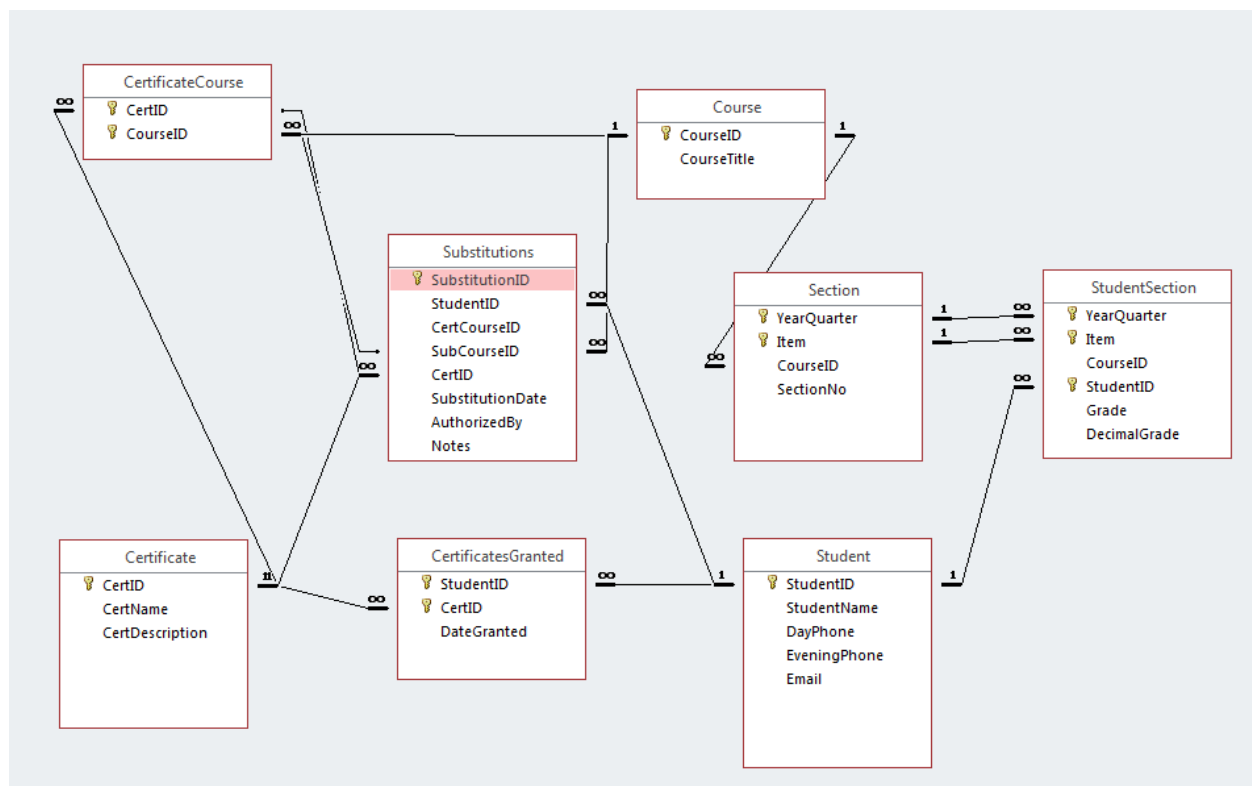# Certification Tracker

History

One of the problems Information Technology programs have had consistently over time is problem of students not completing their programs. This happens for many reasons: students get jobs before they have finished all their classes, financial aid runs out, personal or financial problems arise that require them to drop out or take a hiatus. This problem has become more acute recently because the state has decided to base funding on completions, and completions are defined by certificates and degrees and not by employment in the field. To meet this challenge, one of the strategies is to make "short" certificates of 2 to 4 quarters in length as well as the longer year and two year certificates and degrees. The idea is that more students will complete these shorter certificates.

Creating these short term certificates gives rise to another issue: It is difficult for both Program Managers and students to track these short term certificates. A database was developed to help track the process. Here is the preliminary Entity Design created in an Access database

The Project

The goal of the project is to develop software, ideally a web application to track and document students' progress toward both short term and longer term certificates and degrees.

Scope

The program will track requirements for program certificates and degrees. It will track the courses students take and their grades. Ideally, the data will be periodically loaded from either the system main frame or from local Databases generated from the mainframe. The program must be flexible enough to allow administrators to grant course substitutions for certificates or degrees. It should be able to generate a list of all students who have completed certificates and degrees within a stated period of time. Again, ideally, administrators would be able to add new certificates and requirements, approve substitutions and generate reports, including, but not limited to, an individual student's status, all completions in a quarter, all completions over a set period of time, completions for a given certificate, etc. Assuming a web application, students should be able to see their own status and available certificates and degrees. Faculty should also be able to login in and check on a student's status in order to advise them about potential certificates and degrees.

Constraints

The application must be FERPA (Family Education Rights and Privacy Act) compliant, which means student information must be protected. A student is only authorized to see their own information, and no outside observer can be allowed to see any but the most general information. For instance, a general user could see the list of certificates and degrees and the requirements for each. They could also see general summaries of numbers of students and summaries of certificates earned. But they must not see anything that can attributed to a specific student unless that student has signed a release.

Time Line and Deliverables

Week one

Feasibility and project overview.

Week Two

Requirements and use cases.

Week Three

Process and activity diagrams

Week Four

Initial Class diagrams –objects

Week five

Elaborated class diagrams (object relations, interfaces, etc.)

Week six

Coding test samples

Week seven

Sequence diagrams

Week Eight

Testing

Week Nine and following

More coding and testing