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CS 3810
Class Project - Part 2

Requirements Specifications/ Business Rules - A Simple Gradebook Database

For my project, a simple grade book database, I will implement the following business rules and requirements specifications -

1. The database should keep track of at least the following entities -

    1. Professor.
    2. Class.
    3. Student.
    4. Assignment.
    5. Grade.

2. The business rules governing the relationship's between the entities are as follows -

    1. A professor can teach many classes.
    2. A class can only be taught by one professor.
    3. A class may have many students enrolled.
    4. A student can be enrolled in many classes.
    5. A student may be assigned many assignments.
    6. An assignment can be assigned to many students.
    7. A professor can assign many assignments.
    8. An assignment is assigned by only one professor.
    9. A grade is given for only one assignment.
    10. An assignment will only be given on grade.
    11. A professor can give many grades.
    12. Grades are given by only one professor.

What about test, projects, quizzes, etc.

Why?

3. The attributes of the entities will include at least the following -

    1. Professor - Professor ID number, professor first name, professor last name, professor office number, professor phone number, professor department.
    2. Class - Class ID number, number of students, maximum size, class name, class prerequisites, current term, start date, end date, department.
    3. Student - Student ID number, student first name, student last name, Student email, student class level, students current grade.
    4. Assignment - Assignment number, assignment description, maximum points, due date, assigned date.
    5. Grade - Grade, assignment number, student ID number, professor ID number.

These are the basic entities, business rules, and attributes that should be included in the database. These may change as the project is further developed, but they represent my current goals and the current structure. They may also change based on feedback from the instructor. Some of the structure of these rules is based on information from the text book and from in class discussions. I think there

will be a need for some join or bridge tables to resolve some of the M:N relationships that are inherent in the business rules, but that will be addressed as the database design is completed.