



Knowledge Systems Institute
CIS 510 – Software Project Management

Fall 2016

Project Intent Statement

Building up a database (or even a simple spreadsheet) for courses under teaching and bookkeeping student records such as names, e-mail addresses, telephones, class attendances, along with numerous grade data has proven to be not only tedious but also time consuming for faculty members at KSI. With recent advances in database applications development as well as web for data management and information publishing, it was recommended for a development of a web-based or a spreadsheet based database application for course management. This project calls for the development of such a web based or spreadsheet based course management system. The following section describes the intent of this project.

General description:

- The intended course management system should be kept disjoint with any particular course. It means the system should not be bound to any particular course or course offering.
- The system can be configured to accommodate any course and / or course offering as assigned to a faculty member to teach for a particular semester in KSI.
- A course may not be offered in a particular semester. However, a course may also be offered more than one session in a particular semester. Different sessions of the same course may be offered in the same time slot or in different time slots. Different sessions may be taught by the same faculty or by different faculty members (obviously).
- As a semester long course project, the project does not ask for the database application to be a server (or a cloud) application. Rather, it is sufficient for the system to be developed for a single user application. In other words the system can be installed in a personal PC.
- Although Web was recommended as a system platform, the system can be developed with any package (including programming environment and programming language) that provides on-line interface, e.g., Microsoft visual basic environment.

As of this time, the intended system is supposedly a single user system for any faculty member at KSI. The following are use cases from the user's perspective.

Course Creation and Management:

- A faculty member should be allowed to create a course using the system. When creating a course, the faculty member needs to provide such basic information as course number, title, course description, and prerequisite course numbers and / or titles, e.g., algebra. On top of it, the faculty member should also be allowed to store a general syllabus draft for the course for future elaboration.
- The faculty member user of the system should be able to update and / or delete course information as well.



- For each course created, the faculty member user should also be able to instantiate an offering. The offering of a course is tied up to a particular academic and a semester, e.g., 2015 Fall, etc.

Student Information Management:

- For each course offering instance, the faculty user can add / update / remove student to the class. The essential information for a student account is name (first name, last name), student ID, and class web account ID. Faculty user can also mark a student with a withdraw status. Additionally, the user can mark a student in the class as an on-line student.
- When student information is entered for a class, the information should be stored into the database. When student name and / or ID is referenced in the future, student information should be retrieved from database automatically so as to save the user from re-entering the information for different classes.
- It will be an extra credit if the system can connect to the system KSI installed and is using for class enrollment management so that student information can be retrieved from KSI system directly.

Student Attendance Records Management:

- The user can enter / update student attendance records into the system on weekly basis. Comments / remarks such as early exit can also be entered along with the attendance records.

Grade Management:

- The faculty user of the system may create / update / delete grade items such as midterm exam, homework assignment #1, etc. to a course offering, i.e., a class.
- Along with the addition of a grade item, the user needs to specify if it is a score grade or a letter grade. For a score grade, what is the full score and percentage of this grade item to the final grade. For letter grade, the user needs to specify if it is an extended letter grade, e.g., A+, B-, etc., or a regular letter grade, e.g., A, B, C, etc., and scores corresponding to the letter grades.
- The user can enter grade for each student for each grade item into the system. For score grade, the system would calculate the weighted score (based on 100 points) for the grade item automatically. For letter grade, once the grade is entered into the system, the corresponding score grade should appear along with the letter grade.
- A button should be provided for the user to trigger the calculation of final score grade and letter grade. Final grade will be re-calculated when the final grade calculation button is pressed again in case if grades for some students are changed.

The above description specifies but not limits the requirements of the intended course grade management system. Each team is given the flexibility for the design including human interface design of the system.