

Homework Assignment #2: Design and Implementation of a Database

Important Dates/Notes

9:10AM November 1 (Thursday), 2012 design document
9:10AM November 8 (Thursday), 2012 demo

Task Description

This assignment is essentially the first sprint (in the terminology of Agile Software Development) of the term project, the goal of which is to develop a mobile application for university courses searching, browsing, and enrollment. Your task in this sprint is to design and implement a relational database whose refined and expanded version will become a major component on the server side of the mobile application. The database supports storage and organization of all persistent data relevant to the application.

To demo the database, you will need to write some webpages that allow the user (with a browser) to view or update the database. For this assignment, it suffices to be able to handle the individual tables one at a time (though anticipated functions in the mobile application will require operations on multiple tables).

What should be in the database is up to you, but we expect it to store at least the following information.

- All courses
- Courses offered in the current semester
- Students' basic information
- Rules/restrictions on course enrollment
- Enrollment records
- Account information and even profiles of the users (including students and staff) of the mobile application

General Instructions

- This assignment is to be completed by each student individually (though the term project will be carried out by teams of two members).

- You must use the Git version control system, set up for this course, to manage your development work.
- Drop a printed copy of your design document by the due time in Yih-Kuen Tsay's mail box on the first floor of Management Building 2. Late submission will be penalized by 20% for each working day overdue.
- The demo may not be postponed.
- Both the design document and the demo will be taken into account for the grading.
- DO NOT plagiarize (i.e., do not use material without crediting the source).

Design Document

The design document should include at least the following items:

- An overview of the database with adequate diagrams and explanations
- Rationale of the design
- Illustrative queries or updates (here you should anticipate possible functions in the mobile application)

The design document, including the cover and references, is limited to 8 pages. So, please use the space wisely.

Demo

Again, for the demo, you only need to provide queries or updates for individual tables. To make the demo go smoothly, you may want to create a webpage (as home) that includes all links to the pages for the individual tables. The demos will be scheduled during the breaks of the class meeting on November 8.