

## Term Project

### Due Dates

5PM November 04 (Wednesday), 2009	Preliminary Design Document
5PM December 02 (Wednesday), 2009	Final Design Document
December 28 (Monday) – 30 (Wednesday), 2009	System Demo
January 07 (Thursday), 2010	Final Report and Oral Presentation

### Project Description

The goal of the term project is to design and implement a software service, that realizes a customizable admission application and evaluation website for large universities with over a hundred departments/programs. This is an open-ended project and its scope is mostly up to the decision of each individual team. Nonetheless, we pose the following requirements that should be essential for such a software service.

Before a particular university has its admission application and evaluation website open to the public, the university, as a client of the service, should be able to

- add or remove a department/program,
- set up the appropriate roles in applications processing,
- select the items required for an application, which may be program dependent,
- select the style/layout of its Web pages,
- etc.

The system, for a particular university, should provide the following functions to its various users.

- An applicant should be able to
  - fill out on-line application forms (he may apply for several departments/programs),
  - download possibly other forms that are to be completed off-line,
  - upload completed forms,
  - save his application data and return to complete them later, and
  - check the status of his application.
- A recommender should be able to

- fill out on-line recommendation forms,
- upload completed recommendation letters, and
- save his recommendation data and return to complete them later.
- The university admission office should be able to
  - inspect the applications using different views,
  - get various statistics,
  - record exam scores (assumed to be received through ordinary mail from “standard test” organizations) of an applicant,
  - monitor the progress of the evaluation made by each individual department/program, and
  - send acceptance/rejection notifications to the applicants.
- A department/program should be able to
  - inspect all applications to the department/program,
  - get various statistics,
  - assign applications to its faculty members for evaluation, and
  - report the progress and result of the evaluation to the university.
- A faculty member should be able to
  - inspect and evaluate the applications that are assigned to him,
  - conduct discussions with other faculty members on a particular application.

There are also non-functional requirements, including access control, privacy protection, and system robustness. An adequate access control policy should be in place. Any piece of data can only be accessed by a person with the access right. Privacy of applicants should be protected. The system should be robust and gracefully handle any illegal inputs by the user.

## General Instructions

- Find other classmates to form a team of around *eight* members and elect a leader for your team. *Each team should try to include two junior and two senior students.*
- Each team leader should email Yih-Kuen Tsay ([tsay@im.ntu.edu.tw](mailto:tsay@im.ntu.edu.tw)) a list of all team members no later than October 7 (Wednesday), 2009.
- All design documents and reports should be in printed form and dropped by their respective deadlines in the physical mailbox of Yih-Kuen Tsay. Late submissions will be penalized 20% for each working day overdue. Please use A4 papers and staple in the upper left corner. NO plastic or cardboard covers; NO binders, either.

- You are encouraged to write in English.
- The design documents, the demonstration, the final report, and the oral presentation all will be taken into account for the grade of your project.
- If you are willing to make your design and implementation available to future participants of the course, we would appreciate very much a copy of CD-ROM that contains all relevant sources to accompany your final report. Please include in the CD-ROM compilation and installation instructions.
- DO NOT plagiarize (i.e., do not use material without crediting the source).

## **Design Documents**

The preliminary/final design document gives a thorough description of your preliminary/final design, which should include at least the following items:

- an overview of the design,
- the various UML diagrams and their accompanying specifications,
- any other verbal descriptions that would help clarify the design, and
- detailed discussion on how the knowledge learned from course has been applied.

There is no clear line between the preliminary and final designs, but the final design should be more comprehensive and detailed, in particular the behavioral models. The preliminary design is useful for your own understanding of the design objectives and also for others to give early feedbacks.

## **Demonstration**

- A demonstration should be about 20–30 minutes long (including Q&A).
- Please schedule well in advance a date and time with Yih-Kuen Tsay.

## **Final Report**

The final report should include two parts:

### Part One

- an overview of the system from the users' perspectives
- simple (but self-contained) manuals for the different users

### Part Two

- a summary of the final design (including possible changes and the reasons for these changes)
- the lessons (not necessarily technical) you have learned

### **Oral Presentation**

Each team should give a 30-minute oral presentation with an appropriate set of slides. The slides should be designed in such a way that they can be made publicly available on our course Web site. The presentation will be a good opportunity for you to share special experiences or ideas with other teams. A brief demo during the presentation is optional.