

## Homework Assignment #3: Building an Abstract Data Model

### Due Date

2PM Wednesday, October 26, 2016.

### Note

The purpose of this assignment is for you to exercise the basics of domain modeling, which are the steps you take to go systematically from the problem domain to the solution domain. We will focus on the data part, i.e., the construction of an abstract data model, that would form the basis of a more detailed design.

Please write or type your answers on A4 (or similar size) paper. Put your completed homework on the instructor's desk before the class starts. For late submissions, please drop them in Yih-Kuen Tsay's mail box on the first floor of Management Building II. Late submission will be penalized by 20% for each working day overdue. You may discuss the problem with others, but copying answers is strictly forbidden.

### Problem Description

Construct an abstract data model for a recommendation letters management system for university admission applications that has to meet the following requirements:

- An applicant may be applying for several different programs/universities, each of which usually requires two or three recommendation letters.
- A recommendation letter may be in different states, including not started (or requested, resulted from a request newly made by the applicant), incomplete, complete, and submitted.
- A submitted letter can be viewed, but not edited, by the recommender.
- A recommender may write a recommendation letter for several different applicants.
- Contact information is maintained for programs/universities, recommenders, and applicants.
- A recommender must have an affiliation and a job title.

Please use the UML as much as possible when describing the model. State the assumptions, if any, you make for your design.