Assignment: Modeling with UML/SADT/EER

Due Date: Wednesday, February 26
This assignment counts for 20% of the final grade

This assignment calls for modeling with UML/SADT/EER a University Organization, such as the one sketched below. The model is to be used by university staff who want to find out how some part of the university system works. Also, by newly hired staff who need to be introduced to the overall university organization and its procedures, or want to find out how to perform particular tasks they are responsible for. Moreover, the model is to be used by administrators who wish to analyze, streamline and otherwise improve university operations.

Doing the Assignment

This assignment has four steps. They are:

- Read the university organization description. Find our more things about university organizations by visiting the University of Toronto website (www.utoronto.ca); the instructor will answer any questions you have about details on the university organization structure and operation;
- Choose which modeling language you will use (UML, SADT or EER); if you choose EER, you won’t be able to model processes, so the focus of your assignment will be entities and relationships in a University Organization;
- Choose some part of the university domain, e.g., a department, undergraduate admissions, graduate admissions;
- Develop your model in terms of UML/SADT/EER diagrams and annotations, using MS Word/Powerpoint and/or other tools (e.g., Rational Rose);
- Write a report which describes the part of the university organization you have chosen (…in English…), presents the models you have accumulated, with explanations and comments where appropriate, and ends with some remarks on what you liked/didn’t like about the modeling language you have used, also some constructive suggestions for improvements.

Marking Scheme

The mark for this assignment will be based on:

- Completeness, accuracy of the University Organization description (20%)
- Completeness, accuracy of the UML model (60%)
- Overall presentation (20%)

The University Organization

The university organization involves one or more physically distributed campuses administered through a central administration. The organization is responsible for offering degree programmes in a number of disciplines, e.g., Computer Science, Biology, Electrical Engineering, and Management Studies. Degree programmes can be at the Bachelor's, Master's and PhD level.
A university is organized into faculties, which include zero or more departments. The university can also have institutes and centres, which don’t offer educational programmes, but do get grants and conduct research. The central administration includes a president, provost, and several vice presidents. Each faculty has a dean and several associate deans. Each department has a chair and several associate chairs. The university also has a senate which is the ultimate decision maker within the organization. The senate has a chair, members which include the central administration and representatives from different constituencies (students, faculty, staff,…)

A university employees professors, instructors (full-time or part-time), and staff, which includes librarians, administrative staff, cleaning staff and security staff. Students are undergraduates or graduates and can be part- or full-time.

Important processes for the university include:

Students:
  Accepting, Granting a degree, Enrolling in a course, Dropping a course

Professors:
  Hiring, Promoting, Firing, Retiring

Staff:
  Hiring, Firing, Retiring

Grants:
  Applying, Receiving the grant, Wrapping up a grant

Strategic objectives:
  Setting, Monitoring