CSC343 Fall 2012
Assignment 3
Entity Relationship Diagram and Database Design

Distribution date: Sunday, November 4, 2012
Due date: Sunday, November 18, 2012 11:59 p.m.

Introduction

For this assignment, you will design a database schema for a web-based conference management system. You will be given a general description of a system and you will need to analyze it and prepare a report containing a detailed specification of how information will be represented and stored in the system.

Conference Management System description

A web-based conference management system is a system that supports the organization of academic conferences. An academic conference is an event for researchers to present and discuss their work. Together with academic or scientific journals, conferences provide an important channel for exchange of information between researchers. The system helps the program chair(s), the authors and the reviewers of a conference in to perform their respective activities online. A conference management system can be regarded as a domain-specific content management system.

System Functional Requirements

There are three user roles that interact in an academic conference management system:

- Program Committee Chair (or PC Chair), which is in charge of the enactment, coordination and monitoring of the necessary tasks.
- Regular Program Committee Member (or Reviewer), which evaluates the overall quality of a paper that usually falls in his or her area of expertise.
- Contact Person (or Author), which submits documents (papers) of recent research.

Each of the user roles can register to the system by providing a login name, email and password information. Once logged in, they can provide further information about their profile, such as real name and demographics (e.g., institute they belong to, telephone, address, etc.). Reviewers in particular can provide further information about their topics of expertise to help the PC Chair to assign them research papers that they are capable of reviewing.

The organization of a conference might be separated in four main phases; *setup*, *submission*, *reviewing* and *decision* phase, as follows:

- *Setup phase*: During the setup phase, the PC Chair provides functional information about the conference such as:
    - defining administrative conference information (dates, description, etc.)
    - defining the topics of the conference (each conference has a number of topics)
    - defining additional PC chairs (if any)
    - defining the program committee members
    - defining the review form (each conference has a review form that reviewers use to submit their assessment)

  - defining specific administrative settings (e.g., what is the number of reviewers assigned per paper?)
- *Submission phase*: During the submission phase, authors submit papers. In order for an author to submit a paper he has to first create an account to the conference. An author can submit more than one research paper to a conference. The submission of a paper is a three step process. First the author submits the abstract of a paper along with information about at least the paper title, co-authors, and topics of the conference that the paper falls into. Then, he uploads the full version of the paper. Finally, if the paper is eventually been accepted, then the author would need to upload the camera-ready paper as well. During the submission, authors have also the option to provide information about conflicts of interest (COI). A COI occurs when a co-author of the submitted paper participates to the same conference as a reviewer.
- *Reviewing phase*: During the reviewing phase, each submitted paper goes through a reviewing process, where the program committee makes suggestions about which papers are accepted or rejected to appear in the conference's proceedings. Decisions are based on at least a number of reviews per paper, so one of the tasks of the PC Chair is to assign each paper to a number of knowledgeable reviewers (usually 3). To help in the assignment task, reviewers are asked to define preferences to specific submitted papers through *a bidding process* and by expressing interest to review papers that fall on specific topics of the conference.
- *Publishing/Decision phase*: During the decision phase, the PC Chair makes decisions about whether a paper should be accepted or rejected based on the reviews submitted by reviewers about each paper. A notification letter is then sent to the author for notifying them about the outcome of their submission.

Deliverable

The deliverable of this assignment is a report that should include the following parts:

- **Part A [10%]**: A detailed description of the assumptions you made about the system's functionality.
- **Part B [50%]**: An Entity Relationship Diagram (ERD) of the system.
- **Part C [30%]**: A translation of your ERD to a Relational Schema.
- **Part D [10%]**: A definition of your Relational Schema following the PostgreSQL syntax.

Electronic Submission instructions

Your assignment must be typed; handwritten assignments will not be marked. You may use any word-processing software you like. Many academics use LaTeX. It produces beautifully typeset text and handles mathematical notation well. Whatever you choose to use, you need to produce a final document in *pdf*. Declare your team (whether it is a team of one or two students) on the first page (including first name, last name and student number). You should clearly state any grace days you used for this assignment, as well. If you are working in a pair, only one of you should submit.

You should submit your report electronically using the submit command in CDF. For this assignment, you will hand in just one file named **A3.pdf**. When you have completed the assignment, move your **A3.pdf** in CDF, and use the following command to electronically submit your file:

% submit -c csc343h -a A3 A3.pdf

You may submit your report as many times as you wish prior to the submission deadline (you might need to use the ***–f*** flag of the submit command). Make sure you name your report exactly as stated (including lower/upper case letters). Failure to do so will result in a mark of 0 being assigned.

Once you have submitted, be sure to check that you have submitted the correct version of each file; new or missing files will not be accepted after the due date. You may check the status of your submission using the command

% submit -l -N A3 csc343h

where -l is a hyphen followed by the letter 'ell'.

Paper Submission instructions

You should print and hand in a copy of your **A3.pdf** report during your lecture class on Tuesday or Wednesday after the due date. This should be identical to your electronic submission. Reports that are not handed in will **not** be marked.