

GTA Management System (GTAMS)

1. Introduction

Each spring semester, faculty members of the department nominate Ph.D. students for a GTA (Graduate Teaching Assistantship) for the next school year. These nominations are evaluated by the Graduate Committee (GC) consisting of several professors in the department. The best nominees are selected based on their academic performance. Your team is to develop a Web-based database application, called GTASS, to support this activity.

There are four different groups of GTAMS users: (1) the GTA nominees, (2) the nominators, (3) the GC members, and (4) the system administrator. The system administrator is responsible for setting up a new session for each round of GTA evaluation. Once the session has been set up, the professors may submit their nominations for existing and incoming Ph.D. students. The system then emails the nominees to request additional information. The GC members use this system to evaluate the nominees and collectively select the winners.

2. System Description

GTAMS has four user interfaces, one for each of the four categories of users. We discuss these four interfaces in this section.

2.1. User Interface for Nominators

A faculty member needs to log in to use this service to nominate an existing or an incoming Ph.D. student for a GTA. The online nomination form requests the following information:

- Name of the nominator
- Email address of the nominator
- Name of the nominee
- Ranking this nominee among the candidates nominated by this nominator
- PID (Personal Identification Number) of the nominee
- Email address of the nominee
- Is the nominee currently a Ph.D. student in the Department of Computer Science? The nominator can click to select “Yes” or “No”.
- Is the nominee a newly admitted Ph.D. student? The nominator can click to select “Yes” or “No”.

The system timestamp is automatically added to this form; and it is stored in the database. If a nomination misses the deadline, GTAMS displays the “missing deadline” message to caution the nominator.

After a nominee has successfully provided the requested information in response to a nomination, the nominator is notified to verify the nominee information and complete the nomination process. The details of this verification process is discussed at the end of the following Subsection 2.2.

2.2. User Interface for Nominees

For the nomination of an existing student initiated by a faculty member, the GTAMS emails the nominee to request additional information. A URL is provided in this email to allow the nominee to conveniently access an online information form. This form requests the following information:

- Name of the nominator
- Name of current Ph.D. advisor
- Name and time period of previous Ph.D. advisors
- Name of the nominee
- PID (Personal Identification Number) of the nominee
- Email address of the nominee
- Phone number of the nominee
- Is the nominee a Ph.D. student in Computer Science? Nominee answers by selecting (1) “Yes” or (2) “No”.
- Number of semesters as a graduate student
- Has the nominee passed the SPEAK Test. Nominee answers by selecting one of three possible answers: (1) YES, (2) No, or (3) Graduated from a U.S. institution
- Number of semesters (including summers) working as a GTA
- List of graduate-level courses completed. For each course, provide the letter grade.
- G.P.A. for the above courses
- List of publications (providing citation information for each publication)

The GTAMS system emails a reminder to warn the nominee about the “deadline in two days” if he/she still has not responded to the nomination. The system timestamp is automatically added to the information form; and it is stored in the database. If a nominee misses the deadline, GTAMS displays the “missing deadline” message to caution the nominee at the end of the nominee session.

When a nominee has successfully provided the requested information in response to a nomination. GTAMS sends the nominator an email to provide a link to access the nominee’s information page. Through this page, the nominator verifies the accuracy of the information entered by the nominee, and finally checks a box to complete the nomination process. The GTAMS displays a “late nomination” message if a nomination is completed after the deadline specified by the system administrator.

2.3. User Interface for GC Members

Each GC member needs to log in to use this service. Through this user interface, a GC member is presented a Score Table with the following columns:

- Name of nominator
- Name of nominee
- Ranked by the nominator

- Existing or New student
- One score column for each GC member (identified by the last name)
- The average score. If a score has not been entered, a “0” is used as the default score in computing the average.

By default, the Score Table is sorted based on the nominators in alphabetical order. For each nominator, the nominees are listed according to their ranking order. Alternatively, the Score Table can be displayed in terms of the average scores of the nominees. For each nominee, the GC member is asked to give a score between 1 and 100 under his/her column in the Score Table. The GC member can also add comments under his/her table column to explain the score. Clicking on the name of an existing student brings up the information page of this nominee in a popup window. This mechanism allows the GC member to review the performance about a nominee before giving him/her a score. It is assumed that a separate system (not part of this project) is available for reviewing the admission applications of the new students.

In addition to the Score Table, this service allows a GC member to display a list of any incomplete nomination with one of the following two reasons for the incomplete: “nominee did not respond” or “nominator did not verify nominee’s information”.

2.4. User Interface for System Administrator

Before GTAMS can accept nominations for a given round of GTA selection, the system administrator needs to set up a new nomination session. A system administrator needs to log in to use this service. A session is identified by the semester of the application deadline (e.g., Fall2016). In setting up a session, the system administrator provides the following information:

- Names of the GC members and their email addresses
- Name of the GC Chair
- Login name and password of each GC member
- Deadline for a faculty member to initiate a nomination
- Deadline for a nominee to respond to a nomination
- Deadline for the nominator to verify nominee’s information and complete the nomination

Once the new session has been set up, an email is sent to each GC member to inform them of their login name and password. A URL is also provided in this email to allow the GC member to access a GTAMS form to change the login name and/or password if so desired.

When a given round of the GTA selection process has been completed, the session is closed and all the information is saved in the database for future reference. Each GC member may access information from previous rounds to look up historical information.

3. Project Requirements

The GTASS can be implemented using any of the programming languages and software development environments discussed in class. No software framework may be used for this project. In addition to submitting the software on a USB drive or a DVD, each team is given 15 minutes to give a demo presentation. Online deployment for demonstration is encouraged but not required. Every team member must participate in the presentation. The following documents are also required:

- **Design document:** It explains the design of the system with relevant diagrams and the reasoning behind.
- **User manual:** It includes instructions to operate the program from the provided files. If compilation is required, instructions must be given. File indexes to the source files that include important functionalities should be listed.
- **Individual report:** Each team member gives each of his/her teammates a score between 0 and 100 based on his/her contribution to the team project. Explain the contribution of each team member including that of the reporting student. These reports are confidential and should be submitted individually to the instructor in hard copy. The report should include the name of the reporting student and the team number.

4. Grading Policy

Functionality	40%
User Interface	30%
Demo Presentation	10%
Documentation	20%

Individual score is adjusted based on the peer-review reports and attendance of the demo presentations by the other teams. Attendance will be given and everyone is expected to actively participate by giving comments and asking questions.

5. Important Dates

04/01/2016	Team progress report
04/14/2016	GTAMS software, presentation slides, design document, and user manual due
04/14/2016	Team presentations, peer-review reports due before each presentation
04/19/2016	Team presentations, peer-review reports due before each presentation
04/21/2016	Team presentations, peer-review reports due before each presentation
04/26/2016	Team presentations, peer-review reports due before each presentation