

## GTASS- Design Documentation

## I. Overall Design Pattern

For this project, we decided to implement the Model-View-Controller design pattern that is commonly used in web development. This pattern encourages code modularity and maximizes the potential for the website to be expanded with further functionality. Modification to the baselines are also simplified because of the clean and intuitive organization of source files. The diagram below serves as a visual for this model:

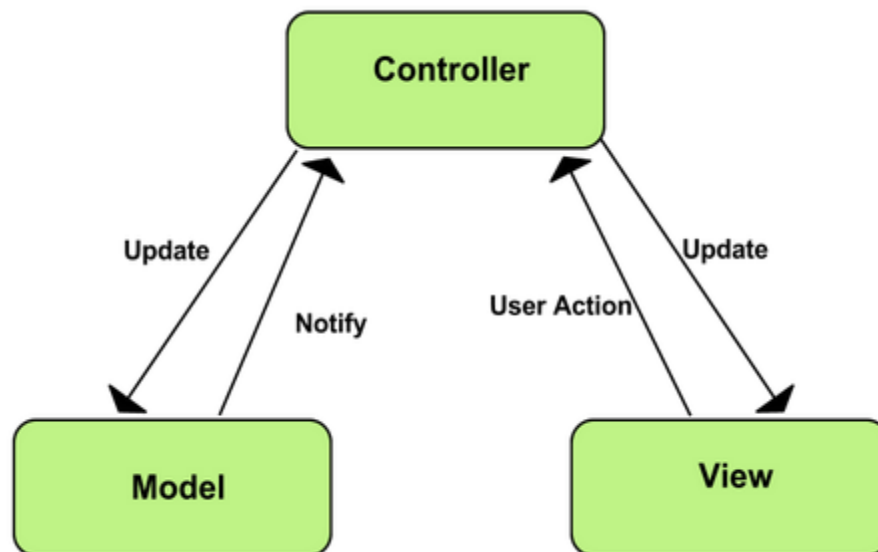


Figure 1: Standard MVC Pattern Implementation ([Source](#))

## II. The Database

The database schema was architected based closely on the set of requirements laid out by the project description. The primary influence on its design arose from the goal to minimize data redundancy and the number of functional dependencies within tables. For example, there are two forms on the website that share several attributes: the Nomination form and the Nominee Information form. Originally, we were storing the shared attributes independently in both tables. However, we later realized that we could exclude those attributes from the Nominee Information table and create foreign key that references the Nomination form table. As a result of decisions like this, we believe our relational schema is well-defined and minimal. The Entity-Relationship diagram for our schema can be found on the next page.

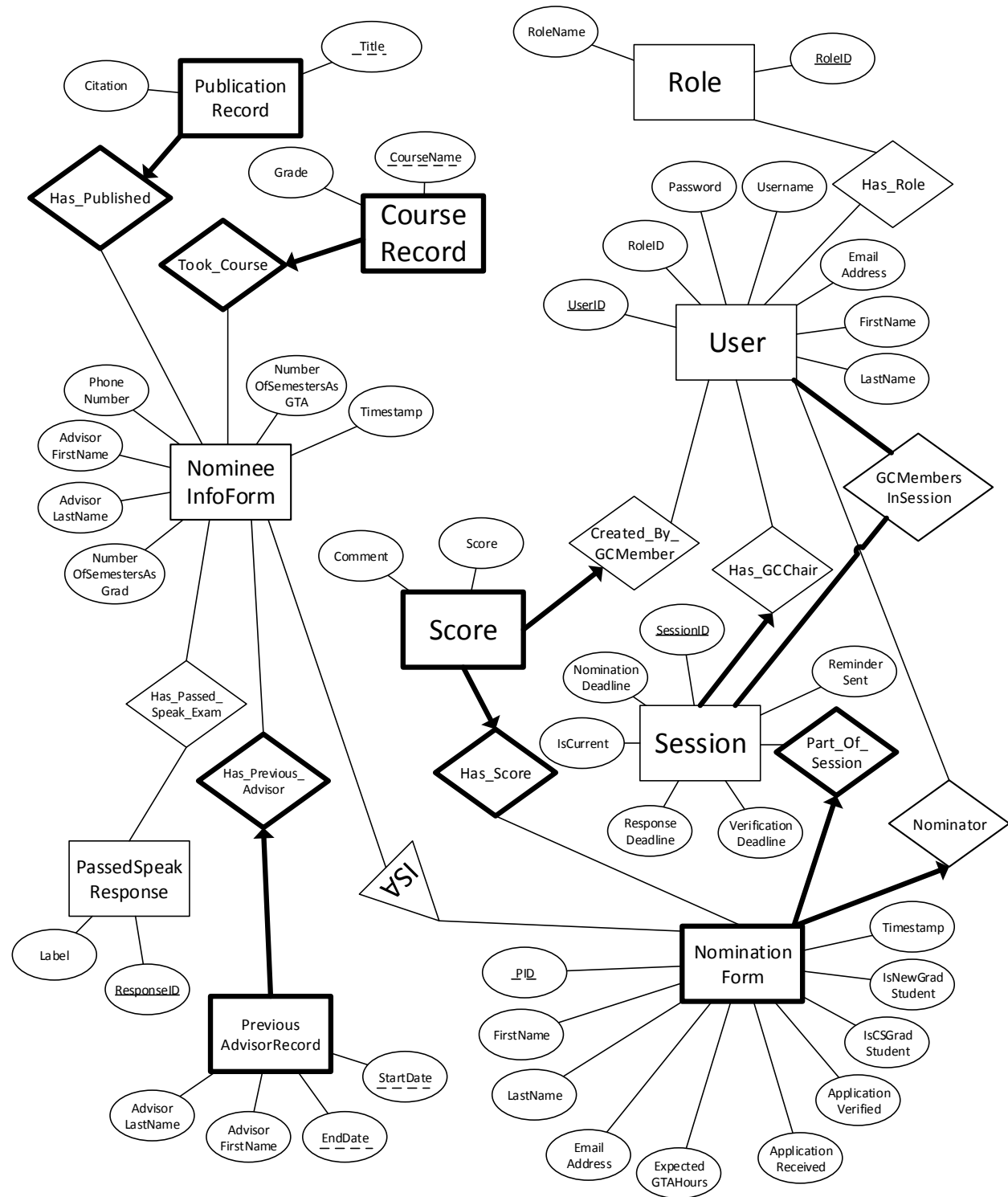
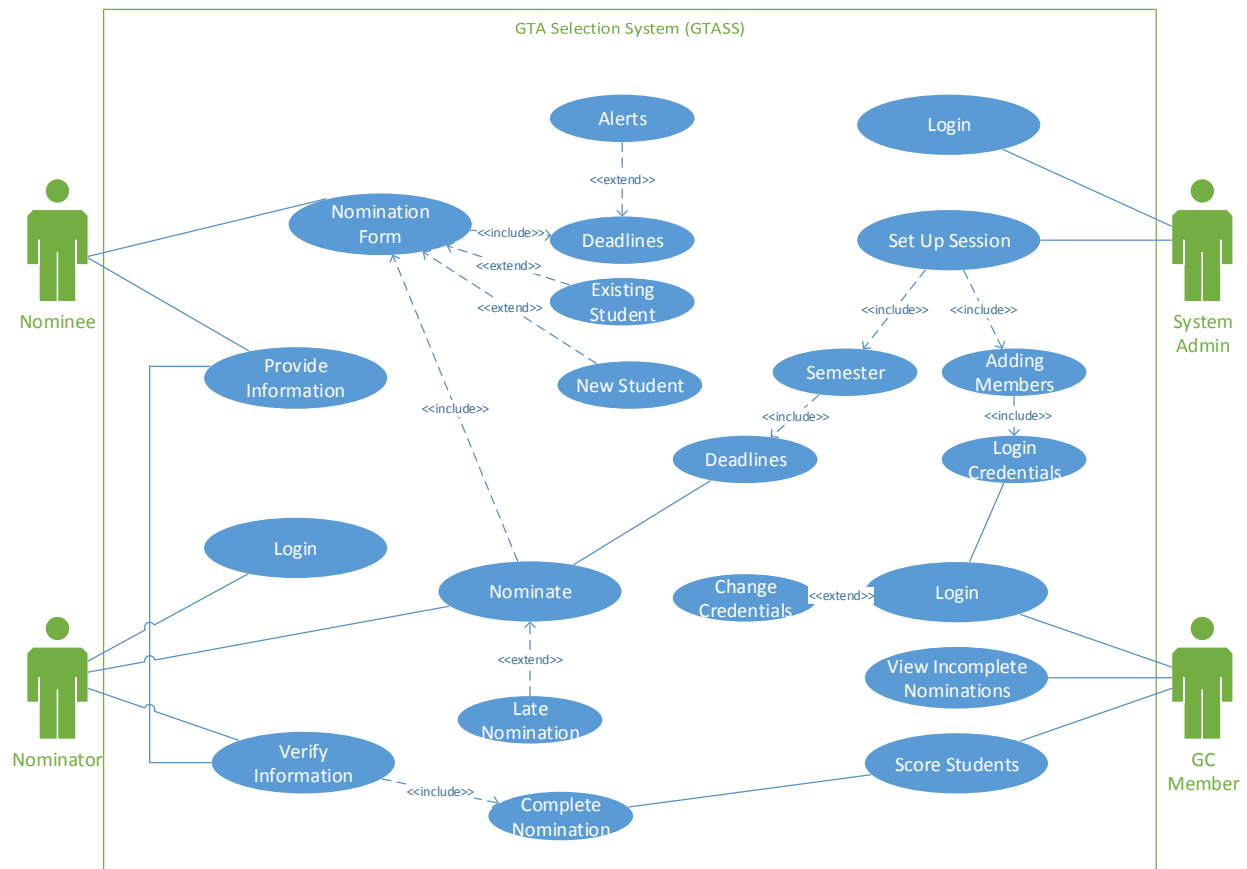


Figure 2: ER Diagram for GTASS Schema

### III. Use Cases

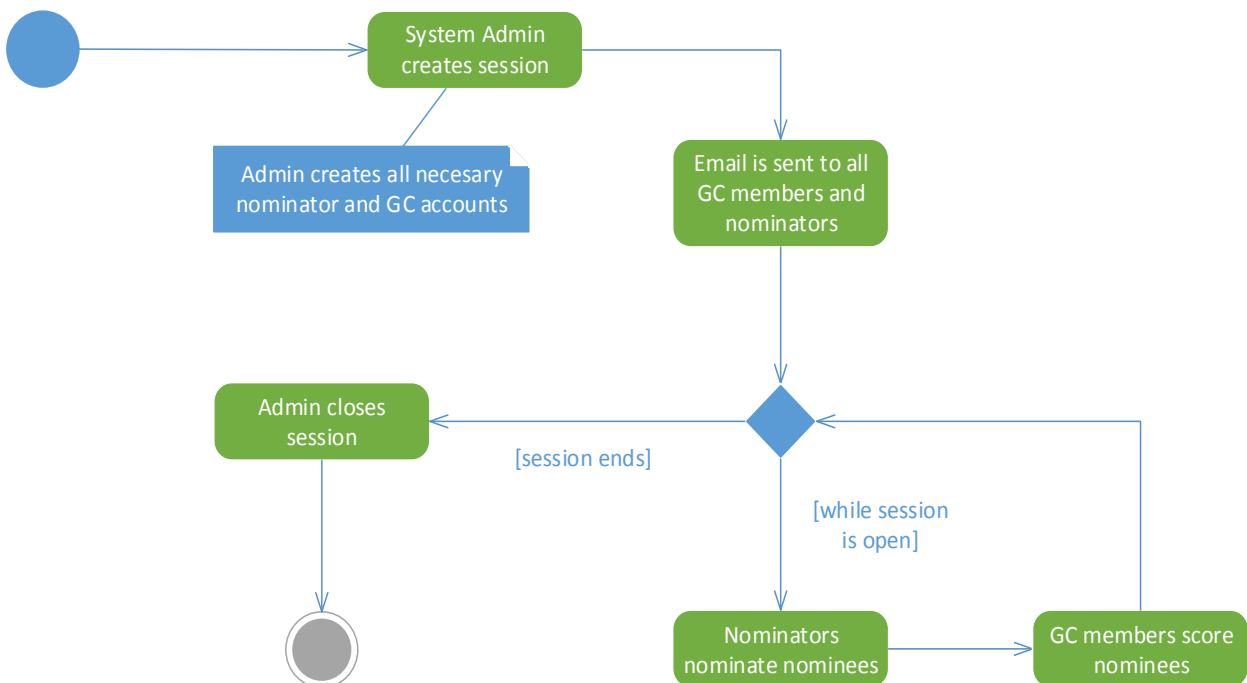


The GTASS has 4 types of Users: Nominees, Nominators, System Admin, and GC Member. The way that it has been set up allows for all of the users except for the Nominees to log in. They all interact with one another via input forms, where they can comment, score, approve or just review given information. The Admin is in charge of creating sessions and adding Nominators and GC Members. The GC Members are in charge of scoring the students based on the information they turned in. The Nominators have the ability of adding Nominees, and then verifying the information the students provided. The Nominees fill out a form with accurate information that will be revised by the Nominators, and eventually scored by GC Members.

## IV. Activity Diagrams

The following diagrams illustrate the possible actions that can be taken by users of the system.

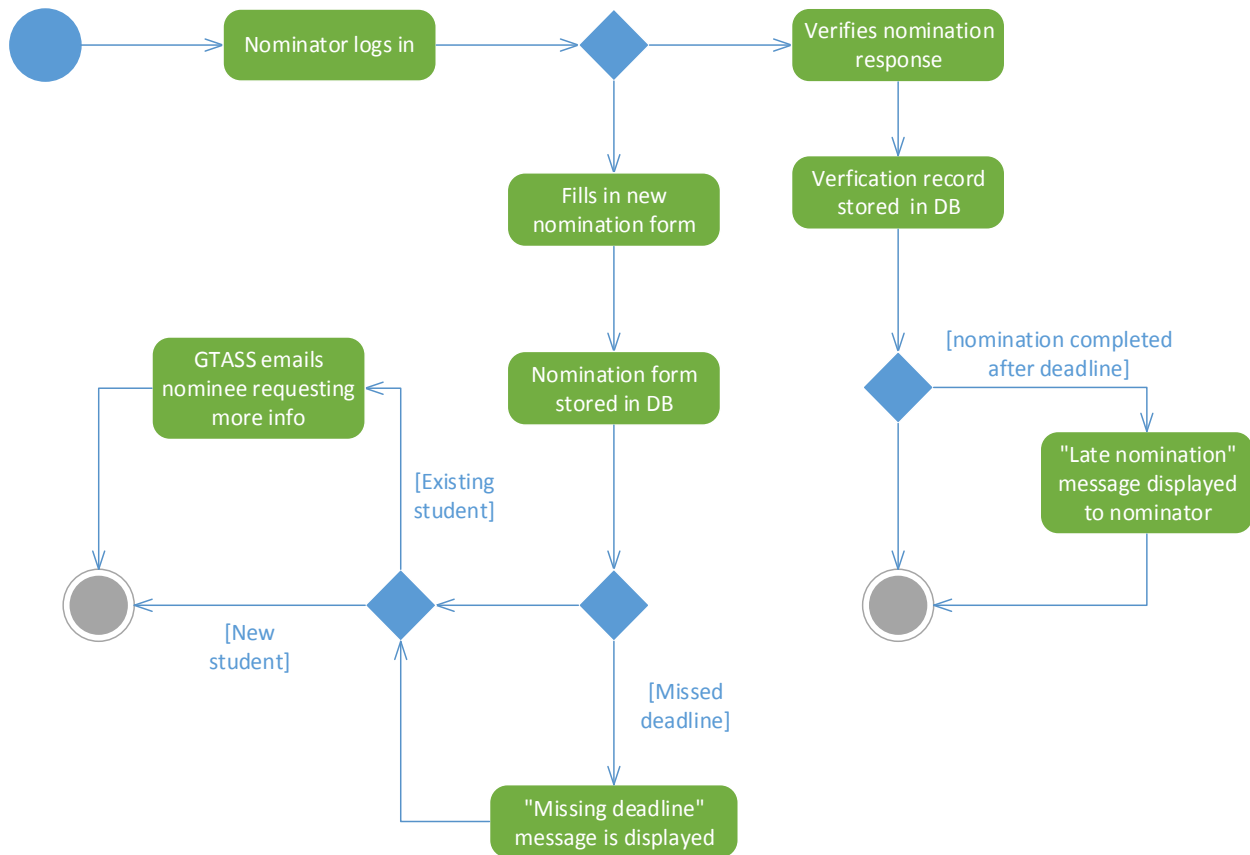
### A. Admin and Session Activity



The System Administrator manages the creation and closing of the session. This includes creating user accounts for the session. GC accounts are created during session creation because all GC accounts are associated with a single session. This is done to prevent GC members in previous sessions from participating in later sessions (unless new accounts are created for them).

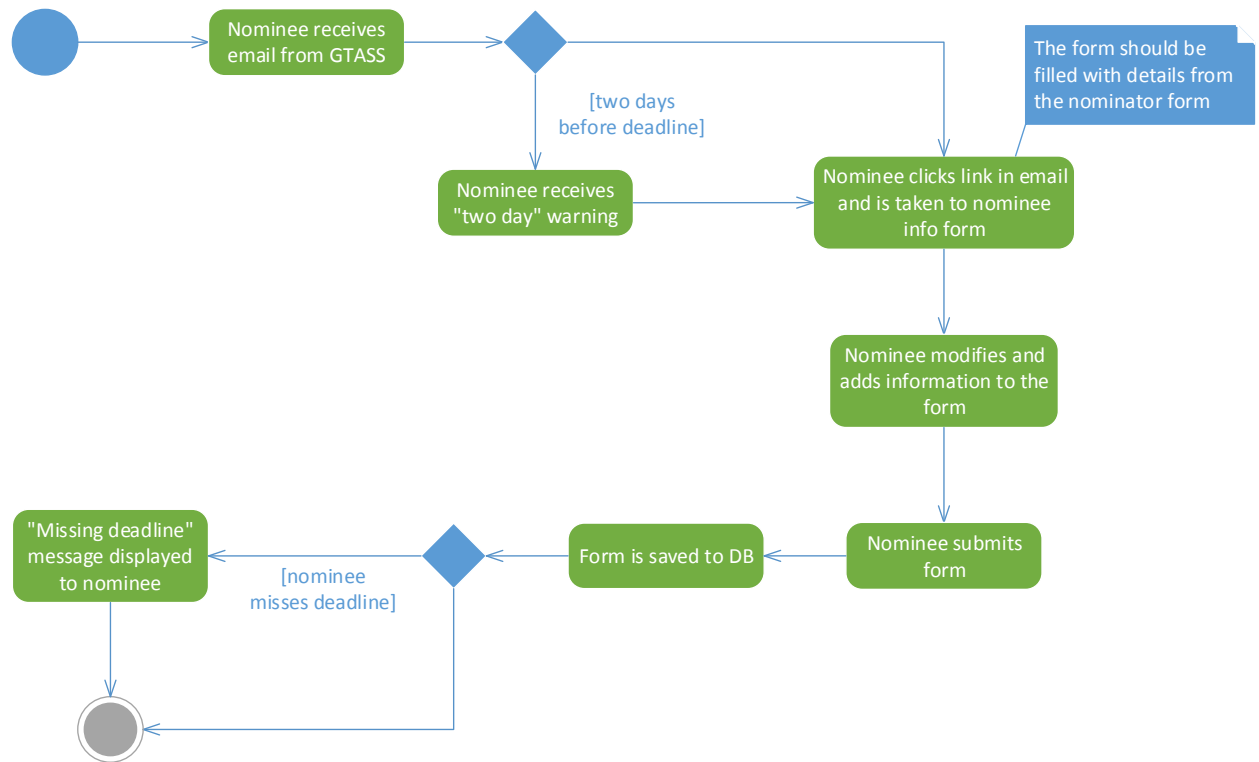
When the Admin closes the session, GC members can no longer add scores and comments to nominees. Moreover, nominators can no longer nominate students.

## B. Nominator Activity



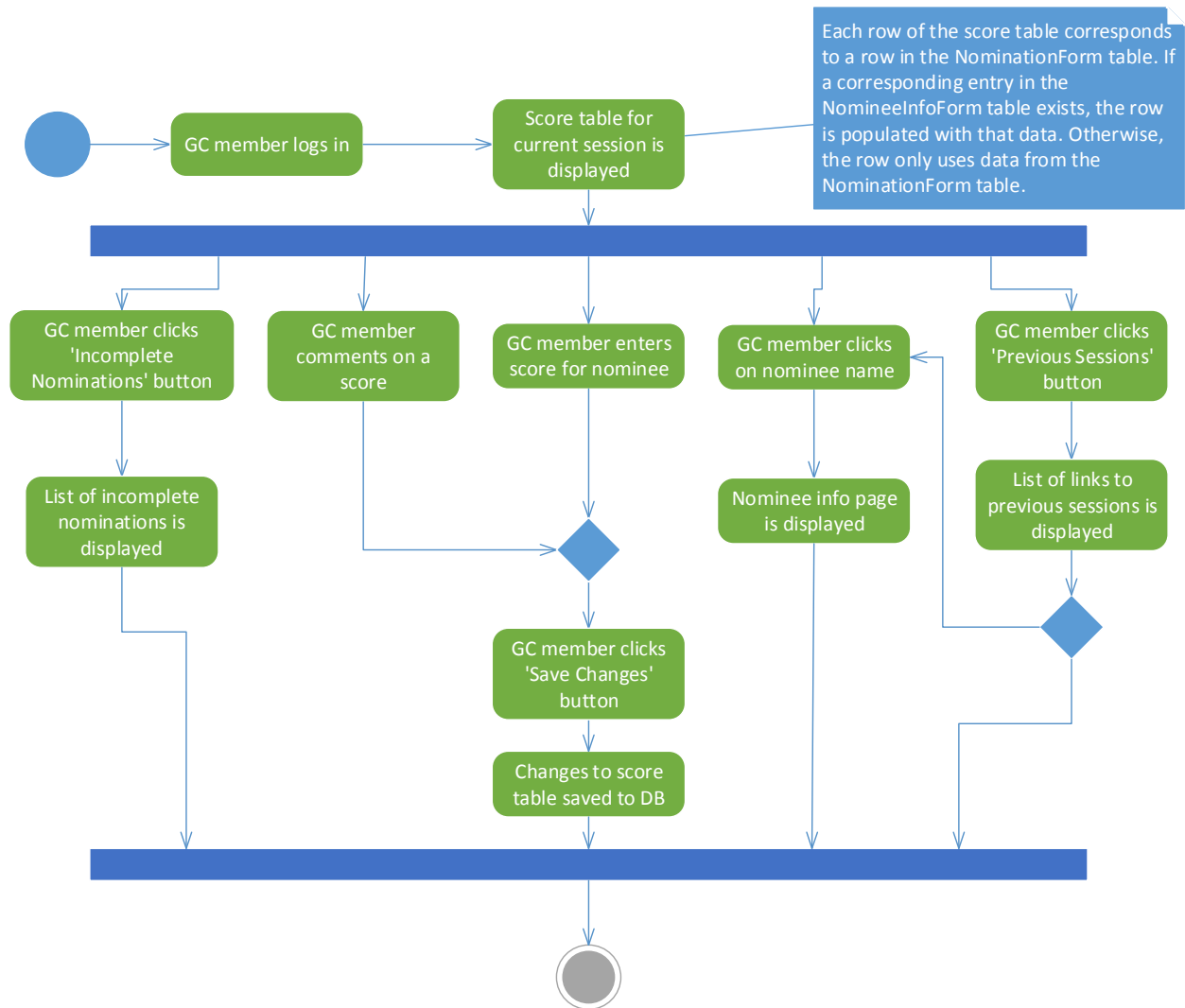
A nominator nominates potential GTA's and reviews their information forms for approval. When a nominee submits his information form, the nominator is emailed and asked to approve the information.

## C. Nominee Activity



Nominees do not have user accounts in the system. The only time that they can access GTASS is when they receive an email from a nominator informing them that they have been nominated. When this happens, a nominee must click the link in the email that he received and submit the information form for approval by the nominator.

## D. GC Member Activity



GC members have access to the most functionality in the system. They can view all information that has been stored for every nominee and from every session. However, GC members can only modify information for nominees in the current session. If there is no open session, all information for all sessions is presented in a read-only view.