Project: CSE 360 Help System Phase 1

Alan Lintemuth, William McLean, Max Neville, Tushar Sachan, Taj Yoshimura

CSE 360: Thursday Group 47

**Phase One Project Overview**

This project is only the first phase in larger project with the final goal of creating a help system for students to use in future CSE 360 classes. In this phase, we are creating the groundwork of the entire system starting with user account creation and sign-in functionality. This system is coded in Java utilizing JavaFX for the Graphical User Interface.

In this system we have specified 3 specific roles of users: admins, students, and instructors. The role of admin has the ability to perform certain actions that the other user types cannot (though the role admin may also be possessed at the same time as the student or instructor role). These specific admin abilities are to:

* Invite someone to join the application
  + This process gives a new user a one-time password which allows them to proceed with account creation
* Reset a user account
  + This process gives a user a new one-time password allowing them to log-in and set a new password
* Delete a user account
* List the user accounts
  + This shows each user and their associated name and role(s)
* Remove or add a role from a user
* Log out

This differs from the abilities we give to all other users, students or instructors, which are to:

* Create an account from an invitation given by an admin
  + This will utilize a one-time password given from an admin, which will then allow a user to create an account with its own unique password
* Select their role
  + A user may be allowed to select their own role unless they are assigned a certain role by an admin
* Log out

A new user would create an account by entering an email, username, password, first name, middle name, last name, and preferred name with the first person to make an account with our system is assigned to the admin role. At this point the user may choose which role they would like to continue as. If they choose admin, they are then given choice to do any of the previously mentioned admin functions. Otherwise, if the user would’ve chosen either student or instructor, they would then be able just to log out.

A major focus within this phase has been the security of the system. In order to keep our program, secure we added multiple measures such as a system of one-time passwords with expiration dates that are used within the process of creating new accounts, and keeping passwords protected by storing them as a more secure data type.

In later phases we will work to implement other parts to fully realize this system. However, for now we have just made a base to work off. This groundwork is a vital factor in our final goal of building a system to allow students to search for help in future CSE 360 classes.