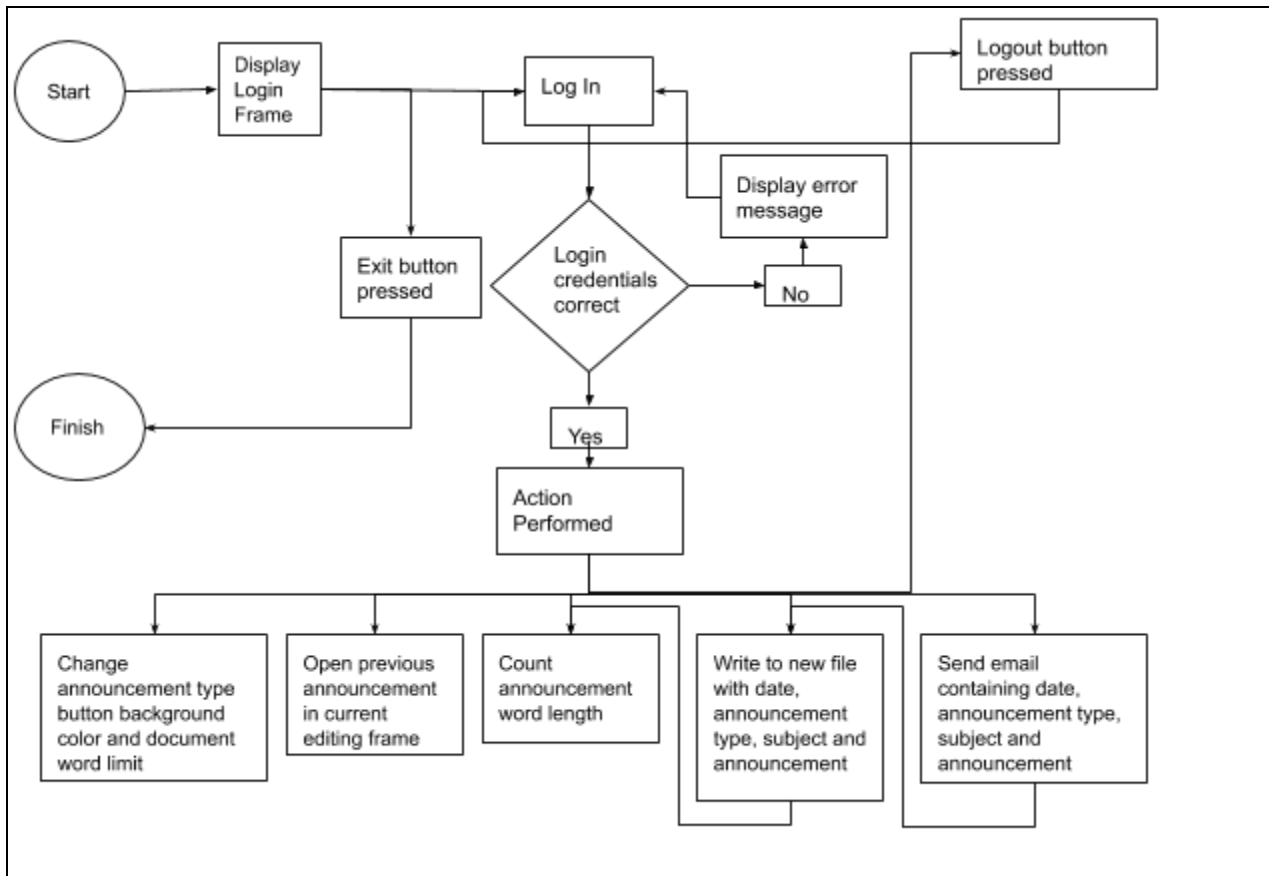


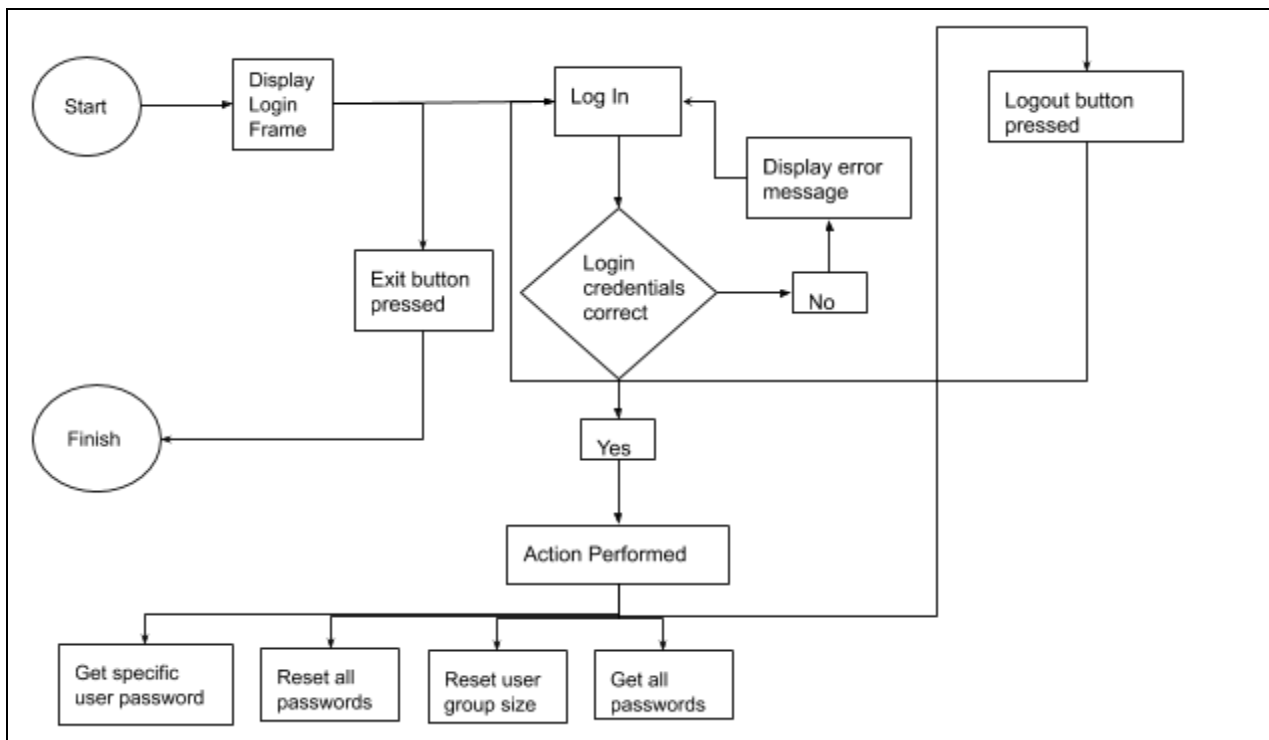
## Criterion B: Solution (Design Overview)

### Process Description: Flowcharts:

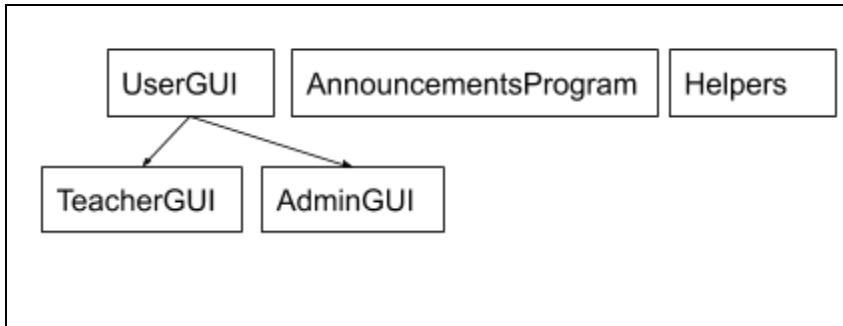
#### Teacher as User:



#### Administrator as User:



### UML Diagram (Only showing project structure):



### Software Interface Designs:

#### Login Frame (Activity 1):

The Login Frame (Activity 1) interface design features a blue header bar with the text "VPCI Announcements". Below the header, there are two input fields: "ID:" and "Password:". Below the password field, there is a red text label "\*Error/Success Message\*". At the bottom, there are two buttons: "Login" and "Exit".

#### Teacher Editing/Submitting Frame (Activity 2):

The Teacher Editing/Submitting Frame (Activity 2) interface design features a blue header bar with the text "VPCI Announcements". Below the header, there are two input fields: "Subject:" and "Announcement:". To the right of the "Announcement:" field, there is a red text label "Word count: xx/xxx words". Below the "Announcement:" field, there is a large text area for editing. At the bottom, there are two buttons: "Save" and "Send". On the right side, there is a vertical stack of buttons: "Previous Announcement", "Logout", "Song", "Heritage Month", "SLC", "Arts/Sports", "Other", and "Guidance".

Administrator Control Frame (Activity 3):

VPCI Announcements

New Passwords  
(\*user group size\*  
users)

Get Password

Get All  
Passwords

New User  
Group Size

\*Displays information\*

Logout

Logout Frame (Activity 4):

VPCI Announcements

Log out?

Yes

No

Success Save/Email Frame (Activity 5):

VPCI Announcements

File saved/emailed.

Yes

No

Unsuccessful Save/Email Frame (Activity 6):

VPCI Announcements

Error: Over word count!

Yes

No

Exit Frame (Activity 7):

Confirm Exit

Are you sure?

Yes

No

**Input/Output/Actions Performed For Each Activity**

Activity 1:

Input	<ul style="list-style-type: none"><li>- Always listen for if the buttons are pressed<ul style="list-style-type: none"><li>- Exit: go to activity 7</li><li>- Login: get values in the two text fields</li></ul></li></ul>
Output	<ul style="list-style-type: none"><li>- Output 1: "Invalid ID!!!"</li><li>- Output 2: "Wrong password!!!"</li></ul>
Other Actions	<ul style="list-style-type: none"><li>- Open and read file containing all ID and passwords</li><li>- Verifying ID and password after getting the values:<ul style="list-style-type: none"><li>- If ID found and password correct: go to activity 2</li><li>- If ID not found: display output 1</li><li>- If ID found and password incorrect: display output 2</li></ul></li></ul>

### Activity 2:

Input	<ul style="list-style-type: none"><li>- Always listen for if the buttons or keys are pressed<ul style="list-style-type: none"><li>- Save:<ul style="list-style-type: none"><li>- If announcement word count less than or equal to word limit: write to and save file and go to activity 5</li><li>- Else: go to activity 6</li></ul></li><li>- Send:<ul style="list-style-type: none"><li>- If announcement word count less than or equal to word limit: send it through gmail to Announcements Team gmail and go to activity 5</li><li>- Else: go to activity 6</li></ul></li><li>- Count update:<ul style="list-style-type: none"><li>- Count all words in announcement textarea; change output 1 to red if word count is over word limit</li></ul></li><li>- Song: set word limit to 15 words and button appear darker</li><li>- Heritage Month: set word limit to 200 words and button appear darker</li><li>- SLC: set word limit to 120 words and button appear darker</li><li>- Arts/Sports: set word limit to 100 words and button appear darker</li><li>- Other: set word limit to 75 words and button appear darker</li><li>- Guidance: set word limit to 350 words and button appear darker</li><li>- Open Previous Announcement:<ul style="list-style-type: none"><li>- If the user's storage folder is not empty: open most recent file (with correct subject, date, tag, and content)</li><li>- Else: do nothing</li></ul></li><li>- Logout: go to activity 4</li></ul></li></ul>
Output	<ul style="list-style-type: none"><li>- Output 1: "xx/wordMax words"</li></ul>
Other Actions	<ul style="list-style-type: none"><li>- Create new file with information including tag and date in the user's folder and open it</li><li>- Set default word count to 15</li></ul>

### Activity 3:

Input	<ul style="list-style-type: none"><li>- Always listen for if the buttons are pressed<ul style="list-style-type: none"><li>- Get password:<ul style="list-style-type: none"><li>- If ID not found: display output 1</li><li>- If ID found: display output 2</li></ul></li><li>- Get all passwords: display output 3 in textarea</li><li>- New user group size: change user group size and generate new passwords for each of the user; display output 3 in textarea</li><li>- New passwords: generate new passwords for current user group size; display output 3 in textarea</li><li>- Logout: go to activity 4</li></ul></li></ul>
Output	<ul style="list-style-type: none"><li>- Output 1: "Invalid ID!!!"</li><li>- Output 2: *password of user with entered ID*</li><li>- Output 3: all current ids and passwords</li></ul>
Other Actions	<ul style="list-style-type: none"><li>- Open and read file containing all ID and passwords</li></ul>

#### Activity 4:

Input	<ul style="list-style-type: none"><li>- Always listen for if the buttons are pressed<ul style="list-style-type: none"><li>- Yes: close all previous activities and go to activity 1</li><li>- No: close activity 6 (since past activity isn't closed, it will still appear)</li></ul></li></ul>
Output	
Other Actions	

#### Activity 5:

Input	<ul style="list-style-type: none"><li>- Always listen for if the buttons are pressed<ul style="list-style-type: none"><li>- Yes: close current frame</li><li>- No: close current frame</li></ul></li></ul>
Output	
Other Actions	

#### Activity 6:

Input	<ul style="list-style-type: none"><li>- Always listen for if the buttons are pressed<ul style="list-style-type: none"><li>- Yes: close current frame</li><li>- No: close current frame</li></ul></li></ul>
Output	
Other Actions	

#### Activity 7:

Input	<ul style="list-style-type: none"><li>- Always listen for if the buttons are pressed<ul style="list-style-type: none"><li>- Yes: close current frame</li><li>- No: close current frame</li></ul></li></ul>
Output	
Other Actions	

#### **Testing plan**

Criteria to Test	Task Description	Expected Result
Build verification test	Check if the program runs/exits properly.	Login frame appears when the program runs and all frames close when the program exits.
User login test	Check if login information is read from file	File should be properly read and steps below should have initial data
	Check if account id is in	Output message should change when the user

	current list	is in the system or not
	Check if password of the valid user is correct	Output message should show when user enters the wrong password and open teacher editing frame/administrator editing frame if correct
Teacher user test	Check if word count functions	Word count of announcement should not be interfered by tabs and line breaks
	Check if saving function works	A new announcement should be encoded and saved or a previous announcement will be overwritten when the save button is clicked and the length is under word count
	Check if sending function works	Destination email should receive the announcement with correct information
	Check if open previous announcement works	Previous announcement should be opened if there is such a file
Administrator user test	Check if getting password function works	If the id is valid, the password of the id should be shown; else an error prompt should show
	Check if getting all passwords function works	All ids and passwords should show in the text area
	Check if resetting password function works	All ids with their new passwords should show in the text area
	Check if change user group size function works	All ids with their new passwords should show in the text area and the user group size should be the number entered
Final test	Check if the program works in .jar file	The .jar file should be generated from the source code that can be ran if Java is locally installed

**Word count: 0 words**