

Executive Summary

I live in Bluffdale, Utah. Currently I am the Executive Secretary in the Bluffdale 12th YSA ward. There are several YSA (Young Single Adults) within the stake that are not currently active in our ward. They may be attending their home ward, but many are not attending church at all. The Stake was required to call Shepherding Couples in each of the wards to minister to these individuals. There have been several difficulties in coordinating our ward's efforts with those of the other wards in the stake. Another difficulty encountered is keeping everyone up to date on which individuals need to be ministered to. Individuals are constantly moving out or coming into the stake. Many times we find individuals who have left, but have not had their records sent to a new ward. If an individual is not attending our ward, we may send their record back to the family ward to be ministered to there. Keeping track of the changes and needs of each individual and communicating them back and forth is something that would be a full time calling in the Church. We do not have the luxury of having a person assigned to this; therefore, we needed to develop an efficient way of gathering and dispersing the information to all individual involved.

In order to more rapidly determine which individuals were under who's stewardship I developed a program which would use the information from a stake custom report and generate a report for each ward alerting them to changes in their ward. These changes include new members under their stewardship, members who are no longer under their stewardship, and changes to individuals who are currently under their stewardship. For individual changes, we look at a few important items, namely: phone numbers—cell and home, email address, living address, and assigned home teachers.

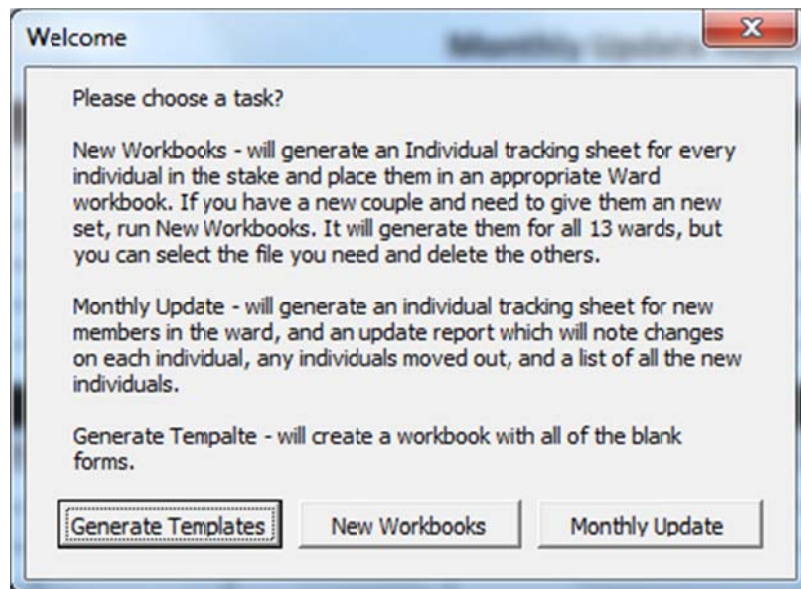
Beyond just alerting each couple to the details of the individuals that they are ministering to, we wanted to provide a way that they could track their progress, ensure that an individual is progressing, and ultimately report and be held accountable for their ministering. In order to facilitate this we developed a system similar to the missionary forms used for tracking investigators. The form we developed is designed to be used on each individual. It provides a location to write details about each individual, activities and goals to accomplish, and a place to record the results of each visit. This allows for each couple to report individually on each person under their stewardship. It also allows them to easily pass the information on to another person should they be released and a new couple called. These forms could be filled out with each person's information manually, but that would be time consuming. In order to make it easier for the couples, the program will fill out the forms for each individual in their ward. On a monthly basis it will send them new forms for the new individuals who have moved in. They simply need to keep a binder with the forms, or maintain the workbook on a computer, and add or remove individuals as they come and go.

Although there is no automation in this portion, there is also a form designed to aid in the communication between the couple and the bishop, or between wards. It can be filled out after each visit to report actionable items that need to be completed by others. For example, if a couple visits and individual, and a visit from a member of our ward would help them, they could write

the individual's information and give some details of what we can accomplish in a visit. They can then pass that form to us. We will assign someone to visit the individual or complete the actionable item. Once complete we can use another form to report the results of our visit back to the couple, we may also include other visits or information we gain relevant to individuals in that ward.

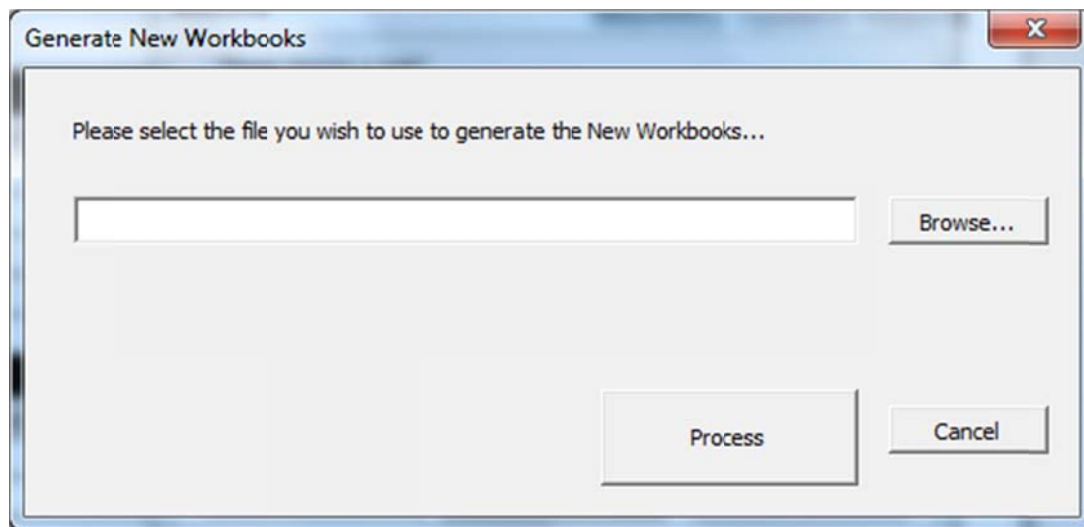
Implementation Documentation

The implementation of the program must be simple so that even the most simple of users can run the program and make it function. Overall the program is simple. Immediately upon opening the workbook, the user is presented with a form asking them what they want to do.



The form gives instructions so that the user knows what choosing each of the buttons will do. Clicking the button will in most cases open up another form requesting inputs from the user. The Generate Templates button simply generates the templates and alerts the user to where the template was placed.

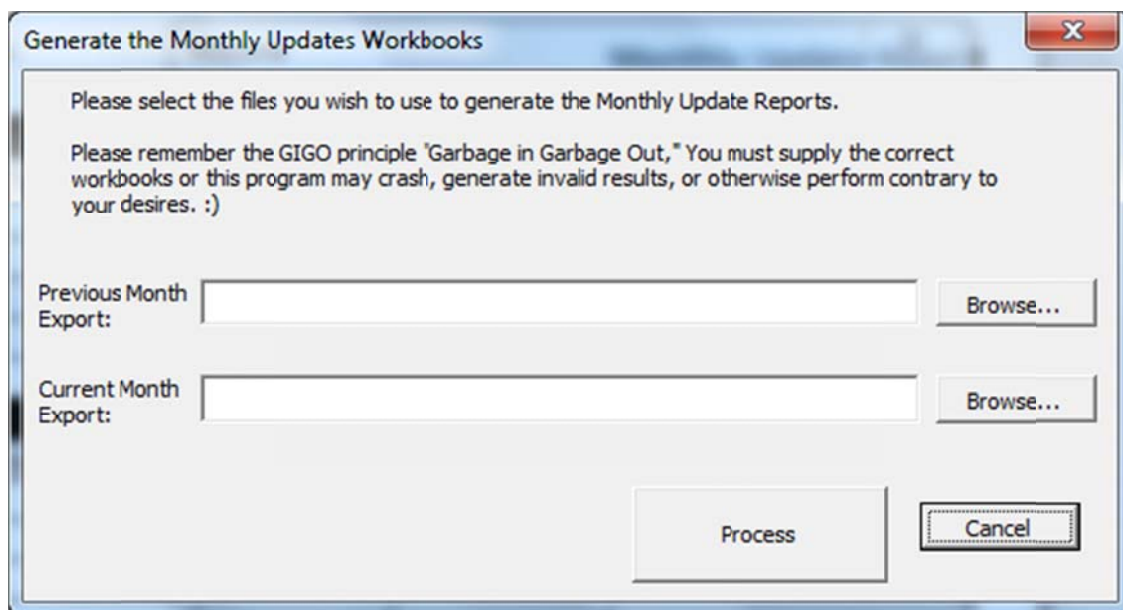
Clicking the New Workbooks button presents the user with this form.



A dialog box titled "Generate New Workbooks" with a close button (X) in the top right corner. The main text reads: "Please select the file you wish to use to generate the New Workbooks...". Below this text is a single text input field. To the right of the input field is a "Browse..." button. At the bottom of the dialog are two buttons: "Process" and "Cancel".

The user will then choose the file they have received from the Stake. Clicking the Process button does some error checking to make sure that the file is of the right type and that there actually is a file, etc. The processing will take a few minutes then the user will be presented with a message alerting them that the processing has been completed successfully. Cancel returns the user to the main welcome screen.

Clicking on the Monthly Update button presents the user with the following screen.



A dialog box titled "Generate the Monthly Updates Workbooks" with a close button (X) in the top right corner. The main text reads: "Please select the files you wish to use to generate the Monthly Update Reports." Below this is a warning message: "Please remember the GIGO principle 'Garbage in Garbage Out,' You must supply the correct workbooks or this program may crash, generate invalid results, or otherwise perform contrary to your desires. :)". There are two input fields: "Previous Month Export:" and "Current Month Export:". Each input field has a "Browse..." button to its right. At the bottom of the dialog are two buttons: "Process" and "Cancel".

This form works the same as the New Workbooks from, with the exception that the output is different, and that it requires two files.

The Monthly Update report follows this template, and is filled with the information specific to the ward.

The Church of Jesus Christ of Latter-day Saints
Bluffdale Utah Stake

Monthly Update Report

New Individuals					
Name	Address	Individual Phone	Home Phone	Email	Home Teachers

Updates to Individuals (maybe)					
Name	Address	Individual Phone	Home Phone	Email	Home Teachers

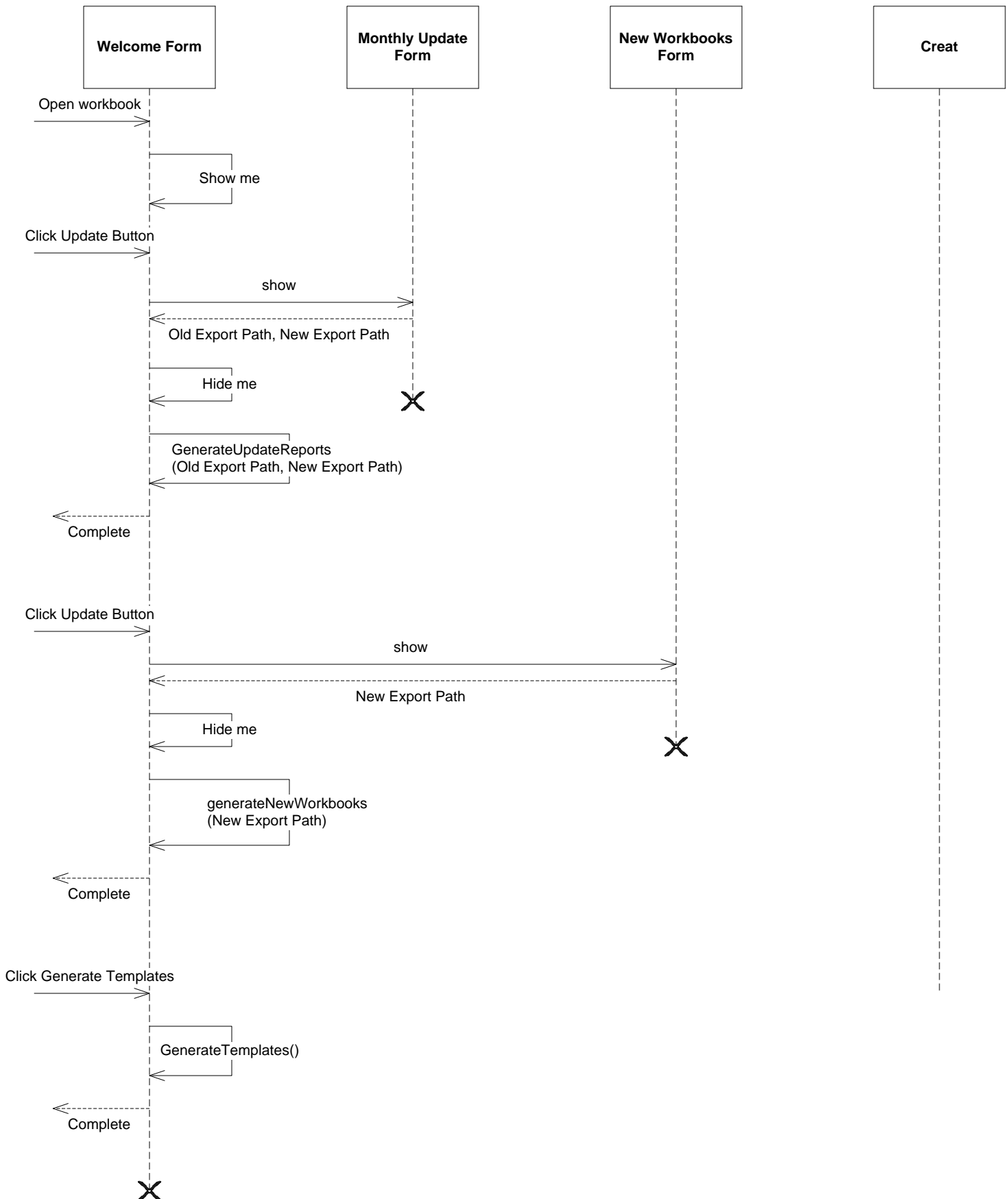
Individuals Moved From Unit					
Name	Old Address	Old Individual Phone	Old Home Phone	Old Email	Where did they go?

This is also accompanied by several Individual Tracking Forms (see appendix), which are filled with information on each new individual.

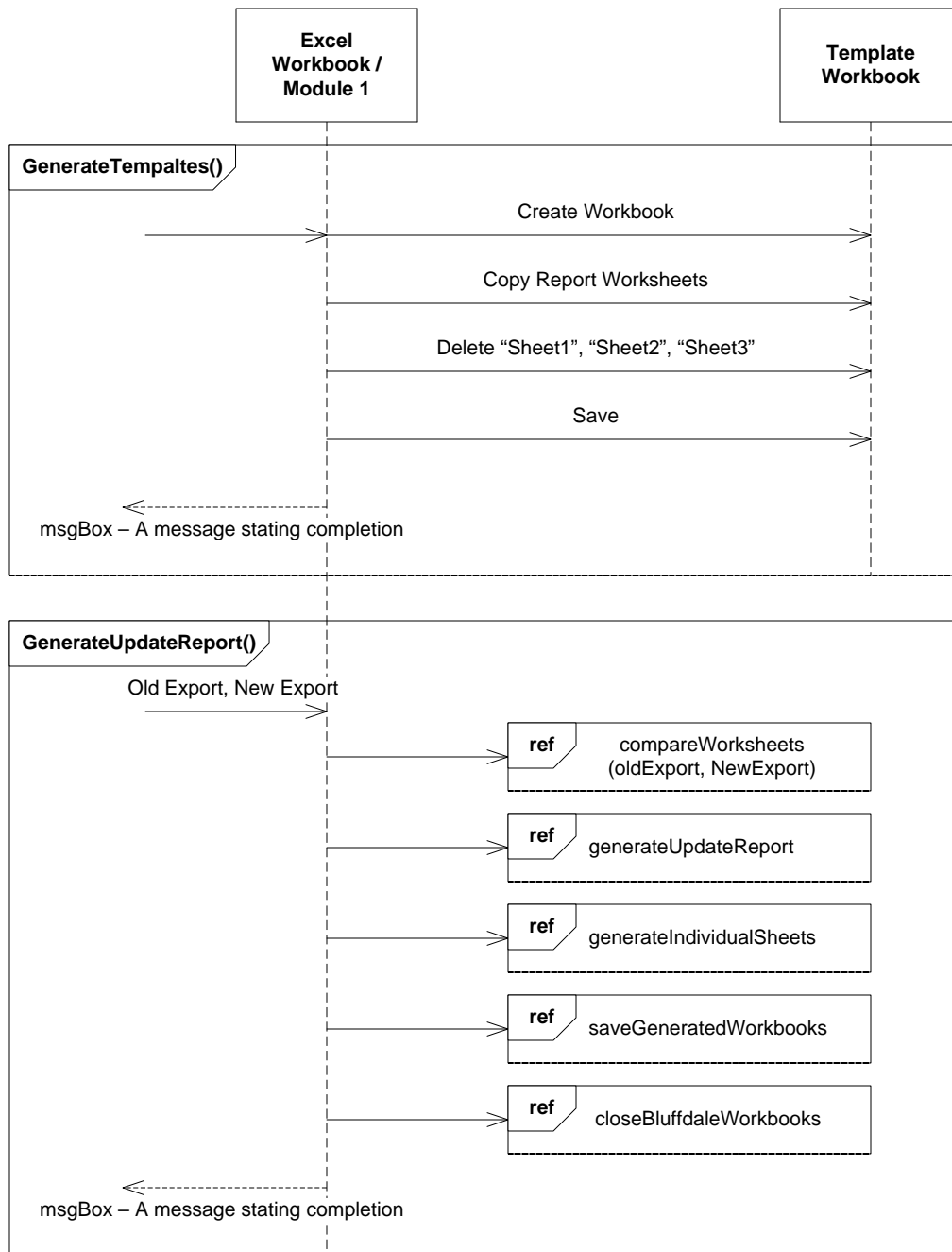
The final form is an example of the Ward Progress Report (see appendix), which is used by each ward to coordinate with one another.

The next several pages are simplified UML diagrams which document the interactions the program has between various sub procedures and items used in the creation of the documents. They are simplified because they do not detail each step of the process, rather the major points of the program. They also use names that better describe what is happening rather than a specific command. They have been designed so that someone who may be less familiar with UML and Sequence Diagrams can understand them.

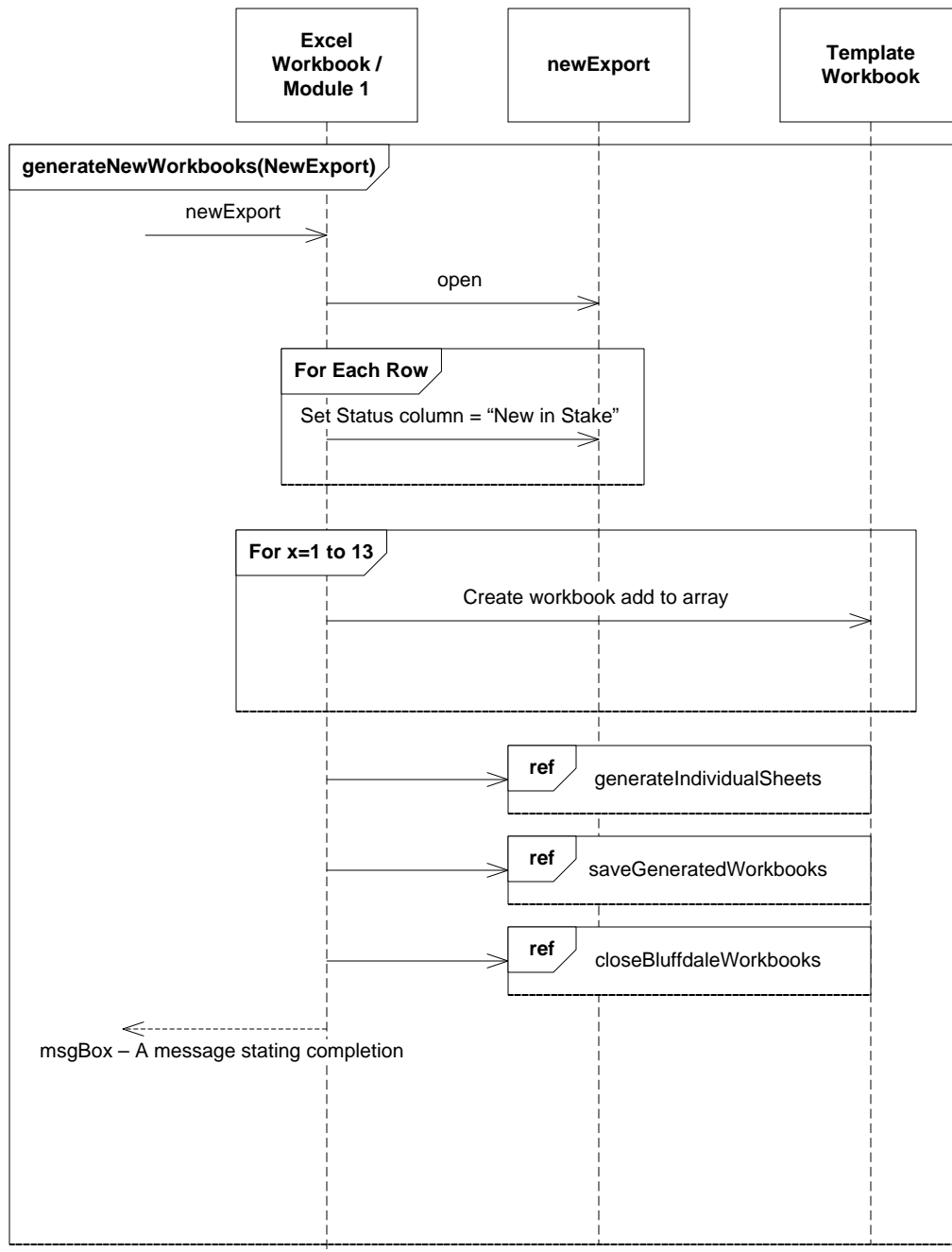
GUI Subs



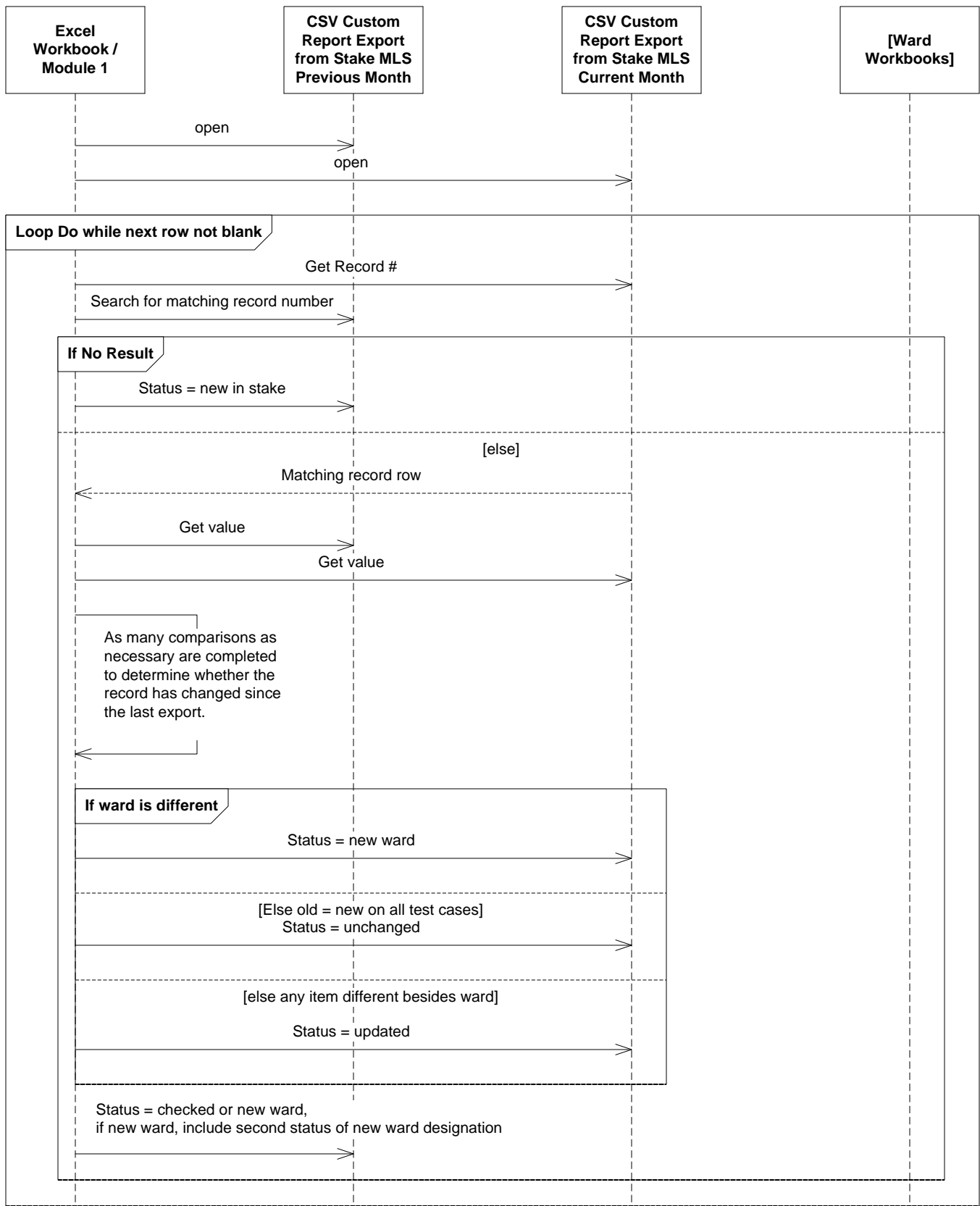
Action Subs



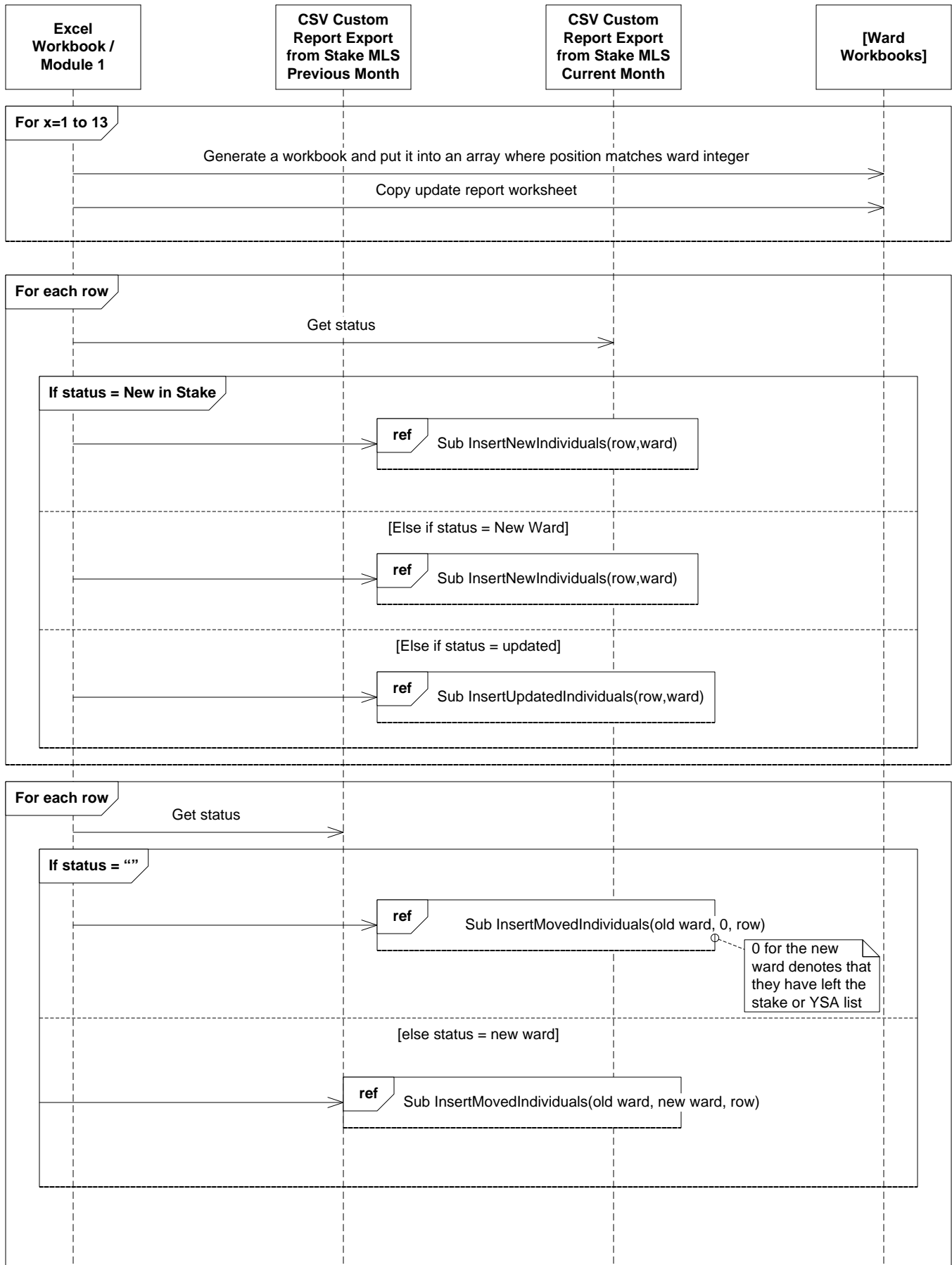
Action Subs



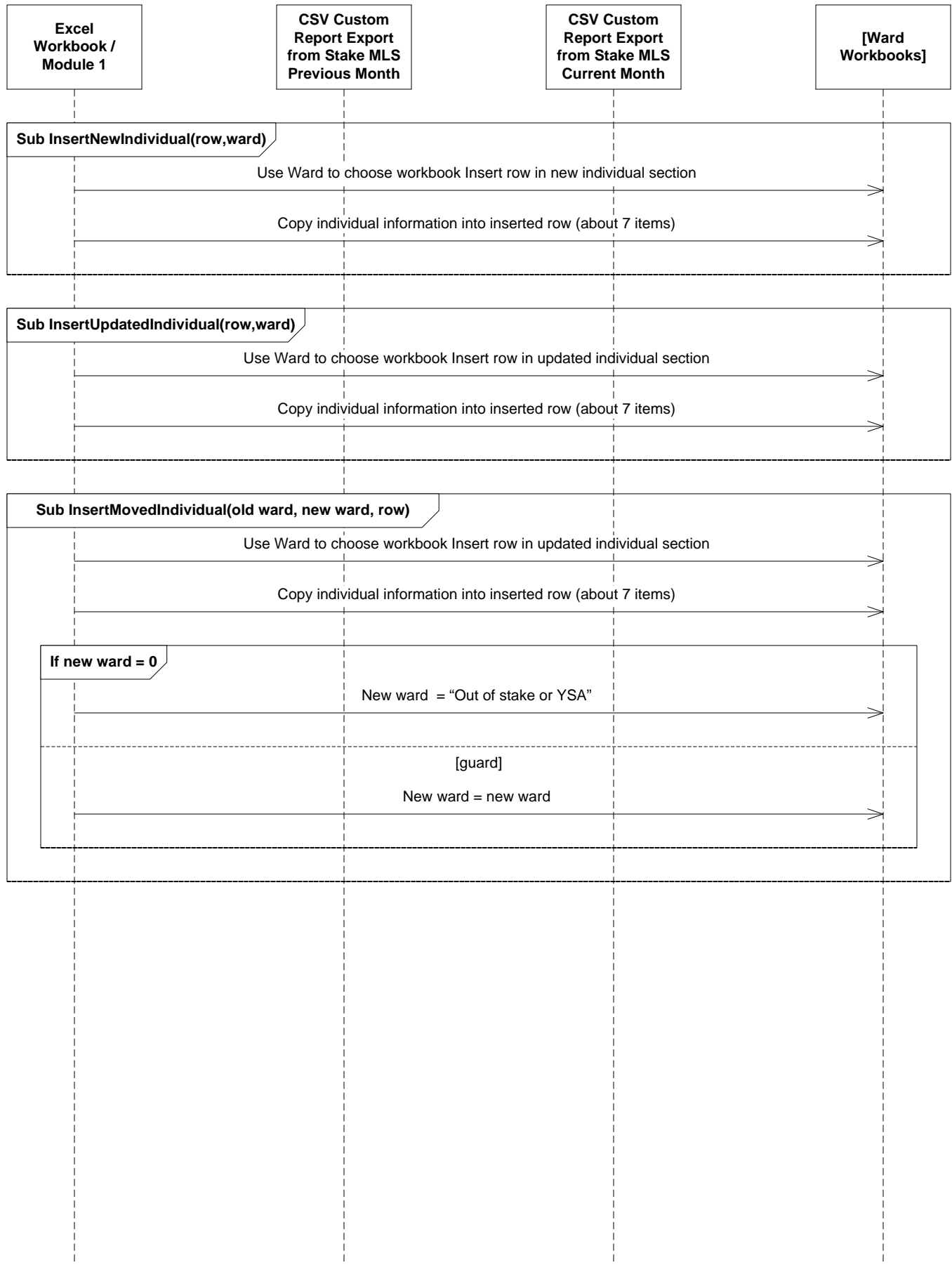
Sub CompareWorksheets(oldExportPath as String, newExportPath as String)



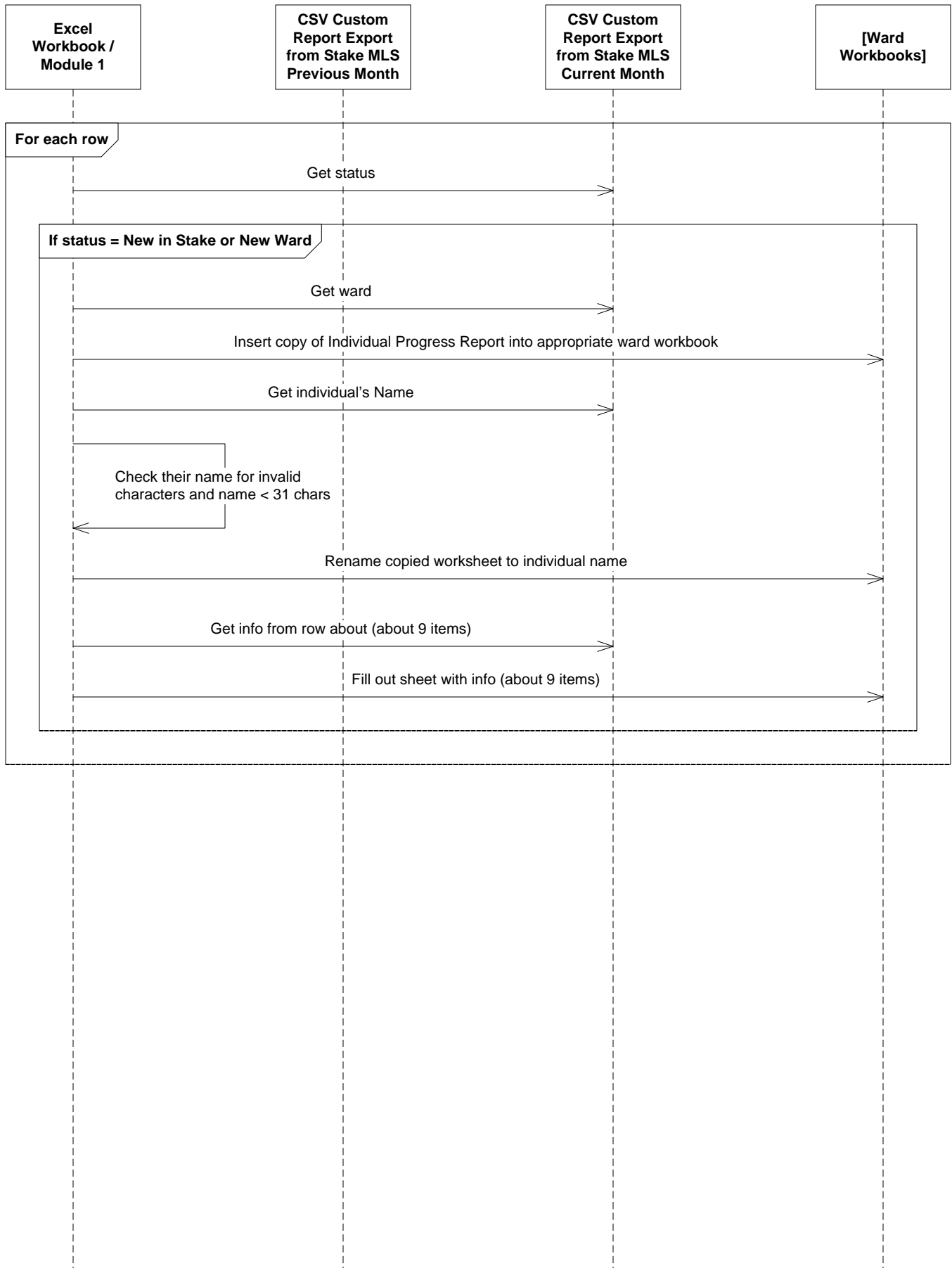
Sub GenerateUpdateReport()



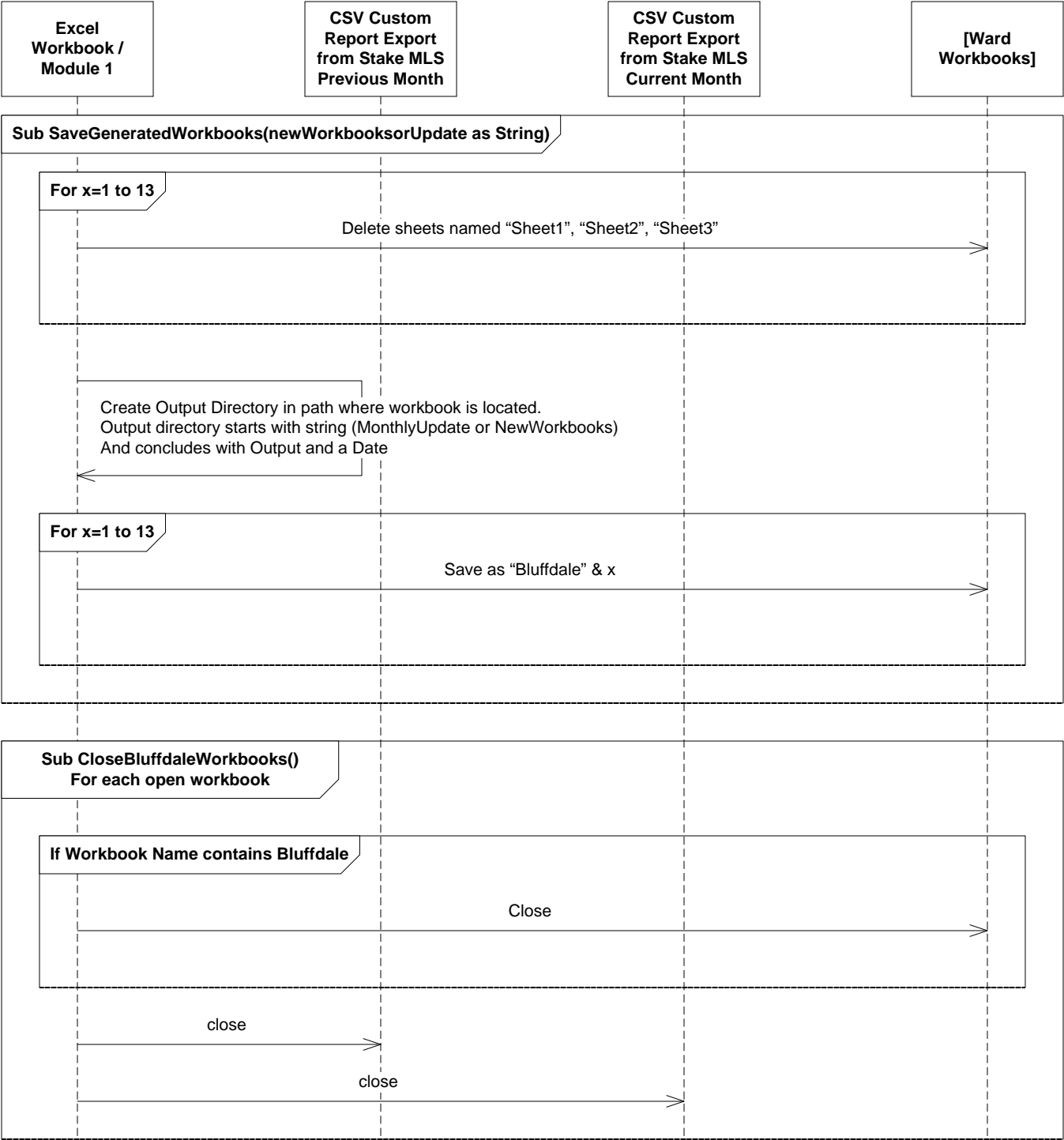
Subs insertIndividuals()



Sub GenerateIndividualSheets()



Subs Save N Close Workbooks()



Learning from the Experience

There were several things that I learned through completing this project. One of the things that I ran into a lot was struggling to learn how to reference various items by their name appropriately. In dealing with 15 notebooks open at any given time I needed a way to easily reference back to them and perform functions in them. In programming I had to learn how to use references that referred to the object rather than using the name. I also found that sometimes there were differences in the way the workbook came from the stake. I had to modify my code to use relative references in order to make sure that the program did not break when there were slight changes in the file we got from the stake.

Another issue I had was learning to work with ranges and merged cells. When working with merged cells, I found that they are difficult to work with, you cannot just use cell references, but have to use the reference to the cell it would be. In adding rows to ranges I had a hard time figuring out how to copy a row, expand the range, and keep the formatting of the cells the way I wanted them to stay.

Error handling also became an issue in certain cases. I knew there might be an error but did not want to do anything about it. This happened for example if a person was not found when searching in the old workbook, or when deleting sheets which were extraneously entered by excel. I learned how to skip over the error, but needed help to make sure that I turned errors back on in other cases when there were problems.

I began wanting to just go through the process for each option and write a subroutine that would do everything. I found that this would result in code being copied several times and a very inefficient way of writing the subroutines. When I found that I was copying a lot of code, I would stop, and write a subroutine that would do what I needed. I then had the challenge of going back and updating my previously written code to use the new subroutine.

Another thing I learned was the value in using a MVC approach to writing the interactions. Although I have some pretty detailed subroutines in the main module, I found that by creating subroutines which did specific functions, when I linked the GUI to the other subroutines it was simply a matter of calling the function which would then go out and call all of the other routines that I needed.

My program does a lot of data copying. Initially I had some lines of code that worked but were very slow. I learned new ways to copy the values that interacted more directly with the properties of objects to place the information where I needed it, and ran about twice as fast.

Loops were fun! At one point I setup a loop and put a save workbook call into the loop. This resulted in the workbook being saved over 600 times as it looped through the processing. This made it very slow. It took me a while to figure out what was going on and why it was taking so long to run. Once I figured it out, it ran much faster.

One last piece of functionality I decided to try and incorporate was a status window to let the user know that the processing was taking place and that the program did not lock up. This was difficult because I never programmed anything in a way that would allow me to know how much was done. I finally decided that I could just update the screen and let them know how many records had been processed along each step of the way. I learned about using modal vs.

non-modal forms. I learned how to update the form along the way. One thing that was difficult was that I had to properly hide the other forms and display or update the status window as the program walked through various subroutines. I first found that when running the program the screen would not update, so the contents of the window were just blank. I tried adding DoEvents to the code right before a loop that would involve a lot of updating, but this did not resolve the problem. For speed and aesthetics I simply decided to remove the functionality.

A final problem that I added at the end, which complicated things just a little was to do a little bit of protecting of the sheets that are used as originals. I didn't want to use sheet protection on them because I don't want to eliminate the ability to update them. I also did not want to have to unprotect each sheet before I started adding data to it. I decided that I would simply hide the sheets in the original workbook. That way they are still there and accessible, can easily be edited if needed, but are not in the open to be messed with. I did find however that when copying the sheets they were still hidden. In order to resolve this, I just added a loop that went through each sheet while it was saving the workbooks and made them visible. This was an easier solution than unprotecting each sheet as it was added to the various workbooks, but still accomplished the desired functionality.

Name			Sex		Birthday			
Address			Email address					
Individual Phone			Home Phone					
Cell Phone Provider <small>(Required for text list)</small>			Other phone					
Calling			Pstd		RM		End	

Home Teachers			Visiting Teachers					
Discuss individuals needs in Ward Council	Dates:							

Church Activity	Invited	Complete
Attend church regularly		
Invite to Singles Ward		
Meet with Bishop of Singles Ward		

Callings/Involvement	Invited	Complete
Receive calling		
Actively fulfill caling		
Has assignment as Home/Visiting Teacher		
Attend Singles Ward activities regularly		
On text list to get activity announcements		
Develop friendship with Singles Ward members		
Invite friends to attend ward with them		

Spiritually Uplift	Invited	Complete
Meet with Ward Missionaries (if applicable)		
Have daily personal prayer		
Have daily personal scripture study		
Live the gospel commandments in daily life		
Attend FHE (Singles Ward/Family)		
Receive appropriate Priesthood advancement		
Attend Temple for Proxy ordinances		

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[illegible]

New Individuals					
Name	Address	Individual Phone	Home Phone	Email	Home Teachers

Updates to Individuals (maybe)					
Name	Address	Individual Phone	Home Phone	Email	Home Teachers

Individuals Moved From Unit					
Name	Old Address	Old Individual Ph	Old Home Phone	Old Email	Where did they go?

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Bluffdale Utah Stake

Ward Progress Report

Couple: _____

Ward: _____ **Date:** _____

Use this report to communicate your ministering activities to Ward Councils so that appropriate actions can be taken to minister to each individual, and help them come to know their Savior, Jesus Christ.

[illegible]

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Bluffdale Utah Stake

Ward Progress Report

Couple: _____

Ward: _____ **Date:** _____

*Type: AS = Activate Singles - Individuals who we feel could be active in the Singles Ward now. A = Activate - Individuals who have expressed interest we feel we can activate in either home or singles ward. V = Visit - Individuals for whom we have a specific reason to visit, ultimately these individuals need to move to an activation list.

[illegible]