

VBA Final Project

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Executive Summary

At church, I was called as a home teaching supervisor. This means that I am asked to encourage a group of priesthood brethren to complete their home teaching and assist them in any way I can. Towards the end of the month I find out how everyone did and report the results to the elder's quorum secretary. In order to complete my calling, not only do I need to keep track of who has completed home teaching each month, but I also need to see who is consistently missing their home teaching. I also need to keep track of comments and concerns home teachers have about their assigned families so I can communicate them to the elder's quorum presidency. The church has many of these features available on MLS; however, the elder's quorum secretary is the one that uses that software. To keep track of things, I created an Excel based home teaching program.

The home teaching program will help me to complete my duties as a home teaching supervisor, but it is capable of helping to organize an entire ward home teaching system. The program has the following features.

- Because turnover is so high in student wards, the program uploads the ward directory off of lds.org.
- The program allows the user to add or delete families if they move during the semester.
- The program adds a new column for each month of home teaching.
- The program allows the user to assign and reassign home teachers to families.
- The user can add comments pertaining to an individual family. The user can view all pending comments and delete resolved ones.
- The user has the ability to generate a number of reports to help organize home teaching and monitor home teaching consistency.

Implementation Documentation

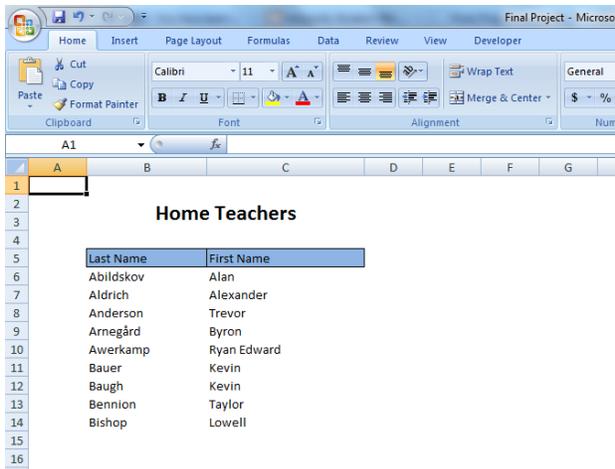
The following screen shot shows the “CurrentSemester” worksheet, which acts as the starting point for everything else.

The screenshot shows the Microsoft Excel interface with the 'CurrentSemester' worksheet active. The ribbon includes Home, Insert, Page Layout, Formulas, Data, Review, View, and Developer. The worksheet contains a table titled 'Fall 2011' with the following data:

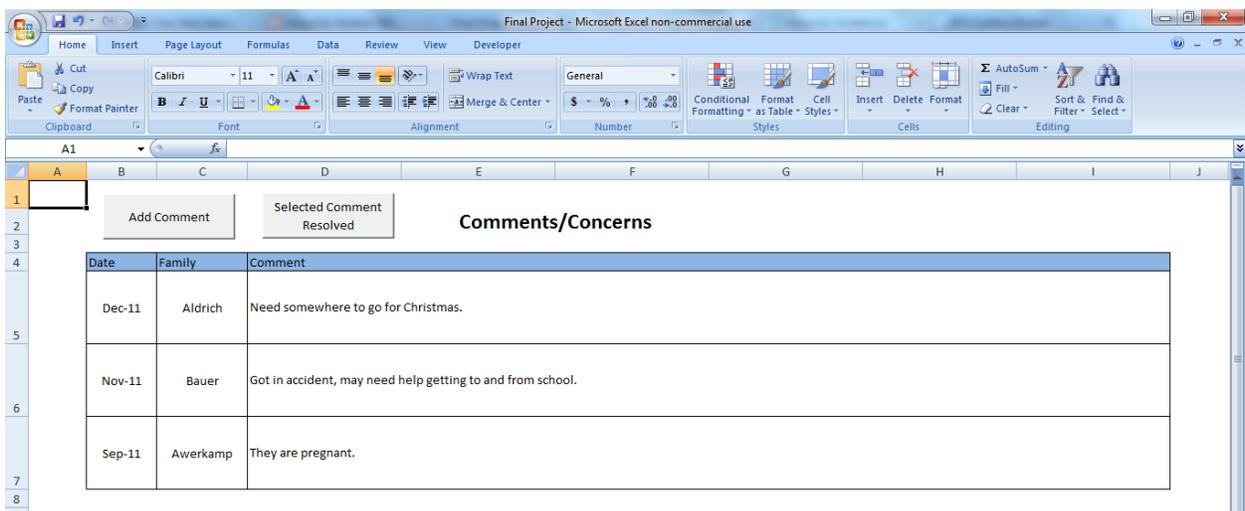
| Last Name | First Name | Home Teachers | December | November | October | September |
|-----------|-----------------|-----------------------|----------|----------|---------|-----------|
| Abildskov | Alan | Awerkamp, Ryan Edward | Y | Y | Y | Y |
| | Samantha Lee | Baugh, Kevin | | | | |
| Aldrich | Alexander | Bennion, Taylor | | Y | Y | |
| | Rebekah Anne | Baugh, Kevin | | | | |
| Anderson | Trevor | Arnegård, Byron | | | | |
| | Lauren Ann | Abildskov, Alan | | | | |
| Arnegård | Byron | Abildskov, Alan | Y | | Y | Y |
| | Jenisy Monica | Aldrich, Alexander | | | | |
| Awerkamp | Ryan Edward | Aldrich, Alexander | Y | | | |
| | Jenessa | Arnegård, Byron | | | | |
| Bauer | Kevin | Arnegård, Byron | | Y | Y | Y |
| | Jessica Lynn | Awerkamp, Ryan Edward | | | | |
| Baugh | Kevin | Awerkamp, Ryan Edward | Y | Y | Y | Y |
| | Meridith Lauren | Bauer, Kevin | | | | |
| Bennion | Taylor | Bauer, Kevin | | | | Y |

This worksheet displays home teaching information for the current semester (none of the home teaching data is real, and the list of people has been shortened for convenience). Each family is listed alphabetically by last name and their home teachers are listed to the right of their names. The semester is indicated in cell E8. The six buttons in the upper right hand corner provide most of the functionality.

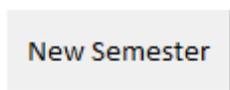
Before we go into the buttons, let’s look at the other worksheets. The “HomeTeachers” worksheet is shown below. It is a simple list of all the priesthood holders in the ward.



The “Comments” worksheet is also available and shown below (the comments are not real). This lists all the comments which have not been marked resolved. It also has two buttons which will be discussed later.



Now we will discuss the six buttons on the “CurrentSemester” worksheet.



The New Semester button allows the user to create a worksheet for the new semester. First the program moves the old semester to a new worksheet. It is named whatever was entered as the semester name located in cell E8. Notice also that the buttons are removed to prevent the user from accidentally trying to create reports from old data.

| Fall 2011 | | | | | | |
|-----------|-----------------|-----------------------|----------|----------|---------|-----------|
| Last Name | First Name | Home Teachers | December | November | October | September |
| Abildskov | Alan | Awerkamp, Ryan Edward | Y | Y | Y | Y |
| | Samantha Lee | Baugh, Kevin | | | | |
| Aldrich | Alexander | Bennion, Taylor | | Y | Y | |
| | Rebekah Anne | Baugh, Kevin | | | | |
| Anderson | Trevor | Arnegård, Byron | | | | |
| | Lauren Ann | Abildskov, Alan | | | | |
| Arnegård | Byron | Abildskov, Alan | Y | | Y | Y |
| | Jenisy Monica | Aldrich, Alexander | | | | |
| Awerkamp | Ryan Edward | Aldrich, Alexander | Y | | | |
| | Jenessa | Arnegård, Byron | | | | |
| Bauer | Kevin | Arnegård, Byron | | Y | Y | Y |
| | Jessica Lynn | Awerkamp, Ryan Edward | | | | |
| Baugh | Kevin | Awerkamp, Ryan Edward | Y | Y | Y | Y |
| | Meridith Lauren | Bauer, Kevin | | | | |
| Bennion | Taylor | Bauer, Kevin | | | | Y |

Login Credentials

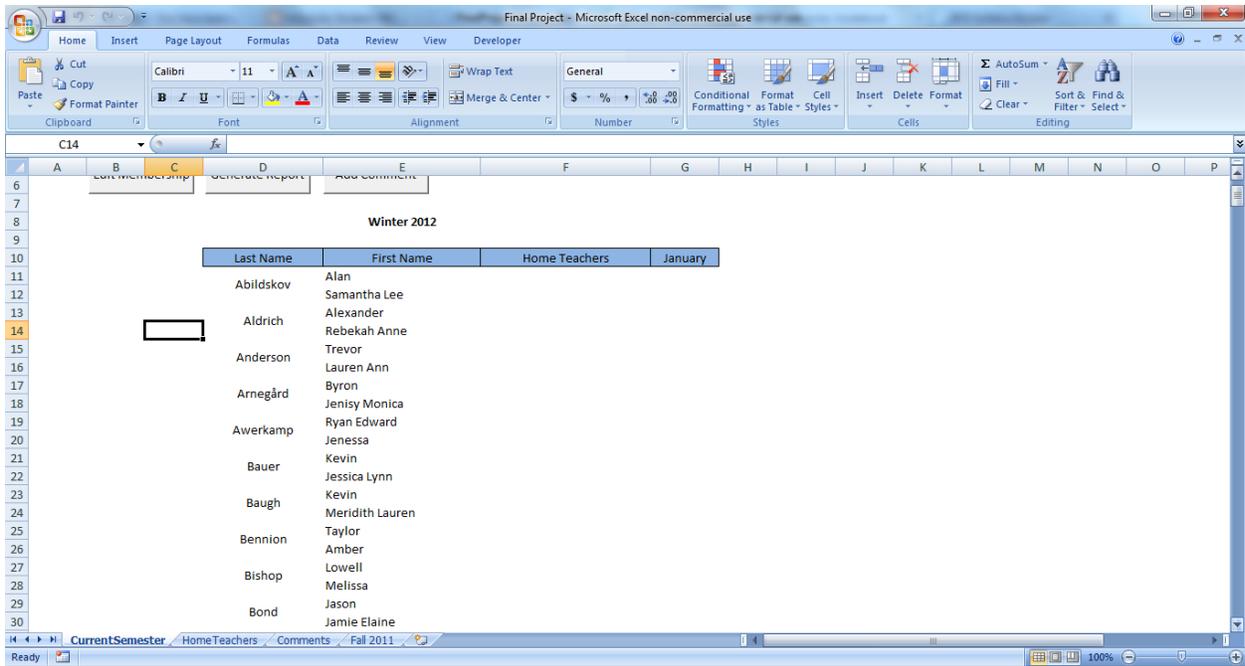
User Name:

Password:

The program asks whether to run the end of month report, which will be discussed later and then brings up this user form asking for the user's username and password. After the user enters the information, the program goes to the lds.org directory behind the scenes and retrieves all the families in the ward. Once the upload is complete, the program asks what you want to name the new semester as shown below.

Microsoft Excel

Please enter new semester name and year.

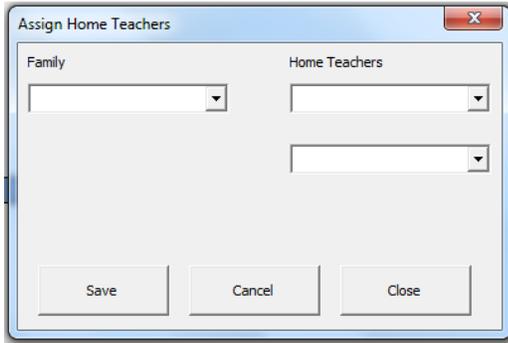


The above image shows the new “Winter 2012” semester. The program also updates the HomeTeachers worksheet as can be seen from the increased information as opposed to the shortened data set before. The data set will be shortened again for the remainder of the paper.



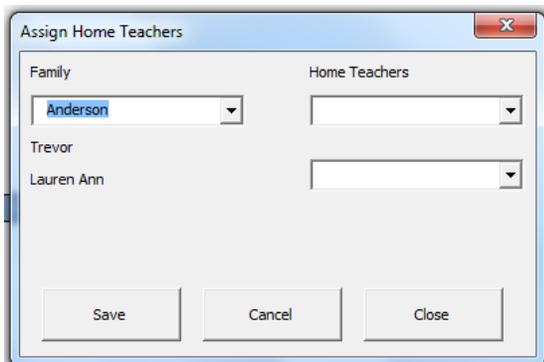
Assign
Home Teachers

This allows us to fill in the Home Teachers column on the CurrentSemester worksheet. Clicking the button brings up this form.



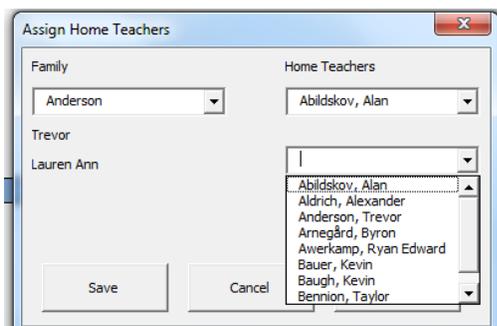
The screenshot shows a window titled "Assign Home Teachers" with a close button (X) in the top right corner. On the left, there is a "Family" dropdown menu. On the right, there are two "Home Teachers" dropdown menus. At the bottom, there are three buttons: "Save", "Cancel", and "Close".

By selecting a family's last name, the rest of the box is populated.



The screenshot shows the same "Assign Home Teachers" window. The "Family" dropdown menu now has "Anderson" selected. Below it, the names "Trevor" and "Lauren Ann" are listed. The two "Home Teachers" dropdown menus are still empty.

Currently the Andersons are not assigned home teachers. Selecting home teachers in the empty boxes and pressing save will assign them. Selecting the same home teacher for both boxes will bring up a message box asking the user to use two different names. Pressing the cancel or close buttons will close the form without any changed information saved on the current family.



The screenshot shows the "Assign Home Teachers" window. The "Family" dropdown menu is still "Anderson". The top "Home Teachers" dropdown menu now has "Abildskov, Alan" selected. The bottom "Home Teachers" dropdown menu is open, showing a list of names: "Abildskov, Alan", "Aldrich, Alexander", "Anderson, Trevor", "Arnegård, Byron", "Awerkamp, Ryan Edward", "Bauer, Kevin", "Baugh, Kevin", and "Bennion, Taylor".

Winter 2012

| Last Name | First Name | Home Teachers |
|-----------|---------------|--------------------|
| Abildskov | Alan | |
| | Samantha Lee | |
| Aldrich | Alexander | |
| | Rebekah Anne | |
| Anderson | Trevor | Abildskov, Alan |
| | Lauren Ann | Aldrich, Alexander |
| Arnegård | Byron | |
| | Jenisy Monica | |
| Awerkamp | Ryan Edward | |
| | Ianessa | |

Add Comment

During the month, the user may need to record notes about a family. The add comment button brings up this form.

The month and year are automatically populated with the current month according to cell G10 and the year according to cell E8 on the CurrentSemester worksheet. The user can enter a family, write a comment, and modify the date, and press save to enter it on the Comments worksheet. The comments are sorted by date. Close will close the form without saving.

| Date | Family | Comment |
|--------|----------|--|
| Jan-12 | Baugh | Will be moving in February. |
| Dec-11 | Aldrich | Need somewhere to go for Christmas. |
| Nov-11 | Bauer | Got in accident, may need help getting to and from school. |
| Sep-11 | Awerkamp | They are pregnant. |

The Add Comment button on the Comments worksheet has the same function. The Selected Comment Resolved button deletes whichever comment is selected.

Edit Membership

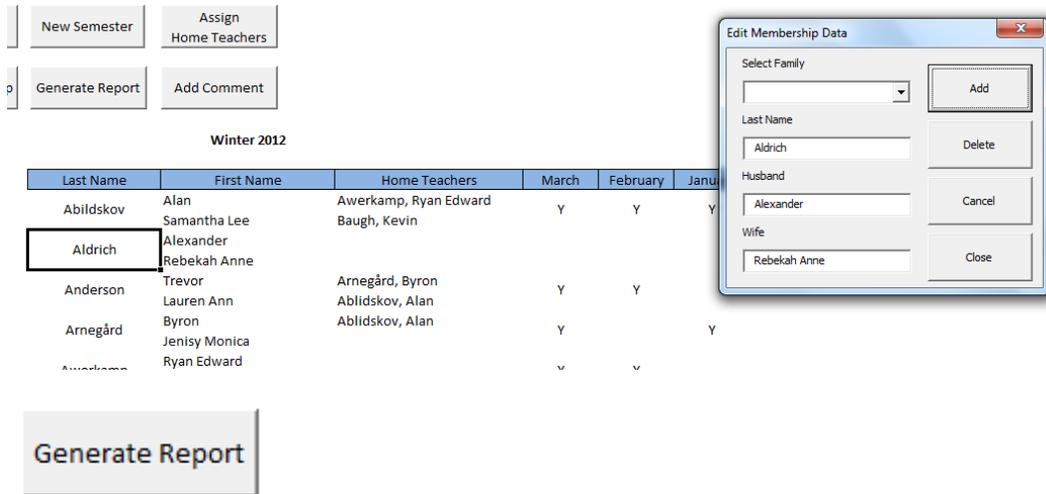
The Edit Membership button allows the user to add or delete single families who may move during the semester instead of re-downloading the entire directory. It brings up the following form.

| Winter 2012 | | | | | |
|-------------|--------------|-----------------------|-------|----------|---------|
| Last Name | First Name | Home Teachers | March | February | January |
| Abildskov | Alan | Awerkamp, Ryan Edward | Y | Y | Y |
| | Samantha Lee | Baugh, Kevin | | | |
| Aldrich | Alexander | Bennion, Taylor | | | |
| | Rebekah Anne | Baugh, Kevin | | | |
| Anderson | Trevor | Arnegård, Byron | Y | Y | |

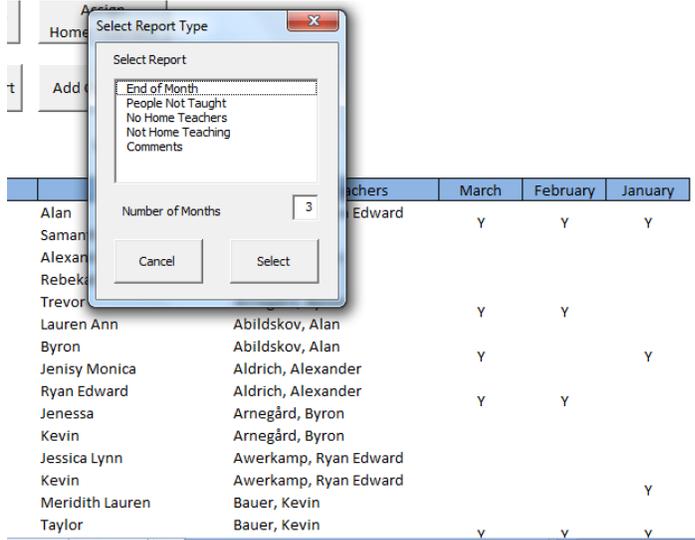
The user can select a family to delete as shown below. By pressing the delete button, their row on the CurrentSemester worksheet is deleted. The husband is also removed from the HomeTeachers worksheet and he is removed from any home teaching assignments he had shown on the CurrentSemester worksheet. The form information is cleared and the select a family combo box is automatically repopulated. In the example above and below, the Aldrich family was deleted.

| Winter 2012 | | | | | |
|-------------|---------------|-----------------------|-------|----------|---------|
| Last Name | First Name | Home Teachers | March | February | January |
| Abildskov | Alan | Awerkamp, Ryan Edward | Y | Y | Y |
| | Samantha Lee | Baugh, Kevin | | | |
| Anderson | Trevor | Arnegård, Byron | Y | Y | |
| | Lauren Ann | Ablidskov, Alan | | | |
| Arnegård | Byron | Ablidskov, Alan | Y | | Y |
| | Jenisy Monica | Byron Edward | | | |

The add button allows you to add a family whose information you have entered in the bottom three text fields. The names are added to the CurrentSemester and the husband's name is added to the HomeTeachers worksheet. The select family combo box is also populated and the worksheets are sorted.



The Generate Report button brings up a form that allows you to create different reports.

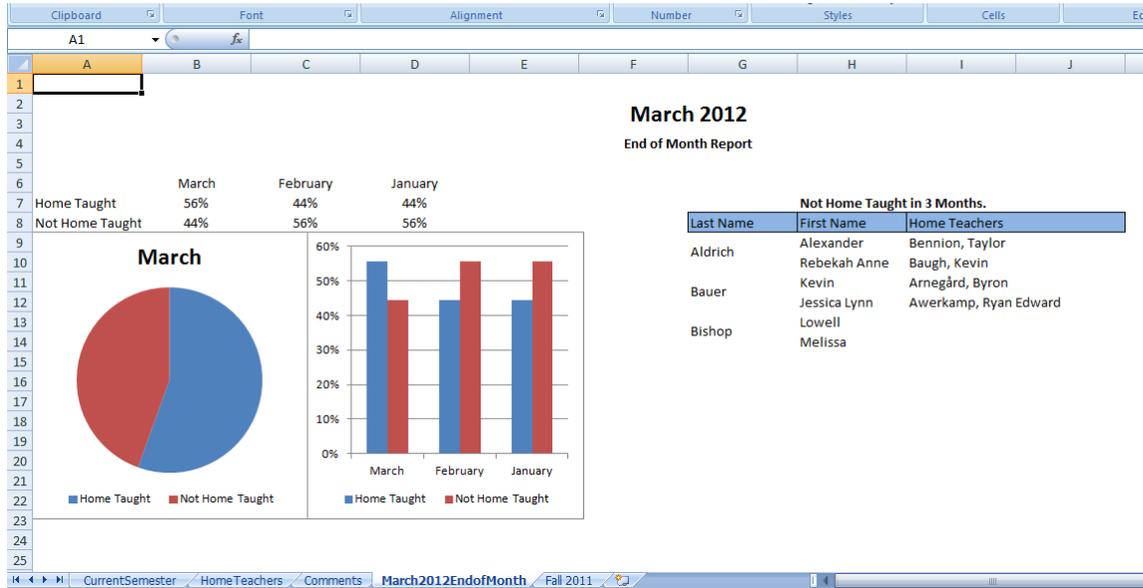


The end of month and people not taught reports allow you to specify the number of months of data. The default number of months is the number of month columns on the CurrentSemester worksheet. If the number of months is larger the number of month columns, a message box asks the user to pick a number at or below the maximum. Cancel closes the form while highlighting a report name and clicking select will bring up a new report before closing the form.

End of Month

The end of month creates a worksheet labeled as the month, year, and 'End of Month'. It replaces all end of month reports from the same month, but each month's report is kept until the user deletes it. It show the home teaching statistics on the left with a pie chart for the month and a bar chart for the number of months specified by the user on the form. On the right, families

who have not been home taught in the specified number of months are listed along with their home teachers (the Bishops have no home teachers for this example).



People Not Taught

This report provides a simple list of all the people not taught in the specified number of months.

The report replaces previous ‘People Not Taught’ reports.

| Not Home Taught in 3 Months. | | |
|------------------------------|--------------|-----------------------|
| Last Name | First Name | Home Teachers |
| Bauer | Kevin | Arnegård, Byron |
| | Jessica Lynn | Awerkamp, Ryan Edward |
| Bishop | Lowell | |
| | Melissa | |

No Home Teachers

This report shows a list of all families with no home teachers. It also shows a list of families with only one home teacher. This may be due to home teachers moving out of the ward. This report replaces previous ‘No Home Teachers’ reports.

| | | | | | | | | | | |
|----|---|---|---|---|---|---|---|---|---|--|
| fx | | | | | | | | | | |
| B | C | D | E | F | G | H | I | J | K | |

No Home Teachers

| Last Name | First Name |
|-----------|--------------|
| Aldrich | Alexander |
| | Rebekah Anne |
| Bishop | Lowell |
| | Melissa |

Only One Home Teacher

| Last Name | First Name | Home Teacher |
|-----------|---------------|-----------------|
| Arnegård | Byron | Ablidskov, Alan |
| | Jenisy Monica | |

Not Home Teaching

This report shows a list of all men not assigned as a home teacher. This report replaces all previous 'Not Home Teaching' reports.

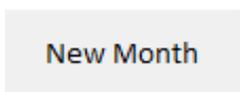
| | | | | |
|---|---|---|---|--|
| E | F | G | H | |
|---|---|---|---|--|

Not Home Teaching

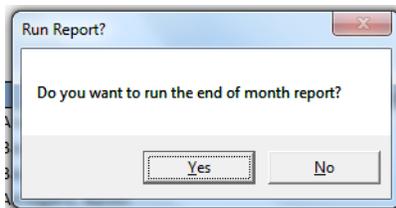
| Last Name | First Name |
|-----------|------------|
| Aldrich | Alexander |
| Anderson | Trevor |
| Bennion | Taylor |
| Bishop | Lowell |

Comment

The selecting the comment report takes the user to the Comments worksheet discussed earlier.



The New Month button adds a new column to column G of the CurrentSemester worksheet. It automatically populates the month and formats the column. It also gives the option to run the end of month report, which will be discussed in more detail under the End of Month Report section.



| Winter 2012 | | | | | | |
|-------------|-----------------|-----------------------|-------|-------|----------|---------|
| Last Name | First Name | Home Teachers | April | March | February | January |
| Abildskov | Alan | Awerkamp, Ryan Edward | | Y | Y | Y |
| | Samantha Lee | Baugh, Kevin | | | | |
| Aldrich | Alexander | Baugh, Kevin | | Y | Y | Y |
| | Rebekah Anne | Arnegård, Byron | | | | |
| Anderson | Trevor | Arnegård, Byron | | Y | Y | |
| | Lauren Ann | Abildskov, Alan | | | | |
| Arnegård | Byron | Abildskov, Alan | | Y | | Y |
| | Jenisy Monica | | | | | |
| Awerkamp | Ryan Edward | | | Y | Y | |
| | Jenessa | Arnegård, Byron | | | | |
| Bauer | Kevin | Arnegård, Byron | | | | |
| | Jessica Lynn | Awerkamp, Ryan Edward | | | | |
| Baugh | Kevin | Awerkamp, Ryan Edward | | | | Y |
| | Meridith Lauren | Bauer, Kevin | | | | |
| Bennion | Taylor | Bauer, Kevin | | Y | Y | Y |
| | | | | | | |

Learning and Conceptual Difficulties

One part of the project that really challenged me was sorting the data, especially on the CurrentSemester worksheet. Because the last name was only typed once for the family, the blank spaces kept the rest of the information in the chart from sorting correctly. I tried merging the cells to help, but excel still identifies blank cells in between. This became a challenge when I would try to add a family. I couldn't add them at the bottom and then sort. Instead, I had to add the husband's name into the HomeTeachers worksheet and sort there. After that, I used an in string function to identify which name was above his. Finally, I had to search for the same name on the CurrentSemester worksheet, insert the rows and reformat accordingly.

I did run into a couple limitations. First, I had hoped to have more information so I could contact people directly from this worksheet. The lds.org directory allows you to download an excel spreadsheet with wonderful information, but it brought up a download permission box. Nothing I tried worked in getting around this, so I was not able to get all the contact and extra information. Another possible limitation is that the directory only had husband and wives available for me to extract. It is possible in a regular ward that young men would be left off the home teaching list. I would need to find another source of information to overcome this. Finally, much of my program runs on the assumption that there are no single people, which is fine for my ward. A large part of the program would have to be rewritten to accommodate for single people; however, that was out of the scope of my planned project and would have taken many more days to work around.