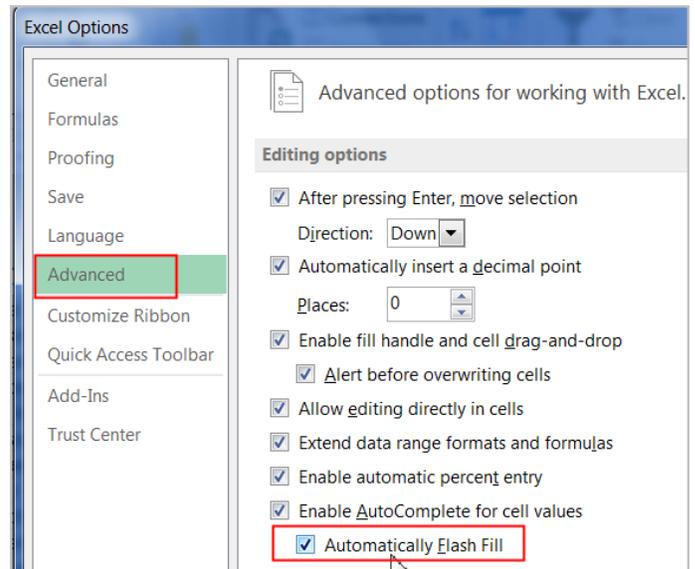


### Flash Fill:

A new feature since Excel 2013, **Flash Fill** can enter data automatically into your worksheet, saving you a lot of time and effort. Just like the fill handle, **Flash Fill** can guess what kind of information you're entering into your worksheet. Flash Fill is on by default and automatically fills your data when it senses a pattern. However, if it's not working as expected, here's how you can check if **Flash Fill** is turned on.

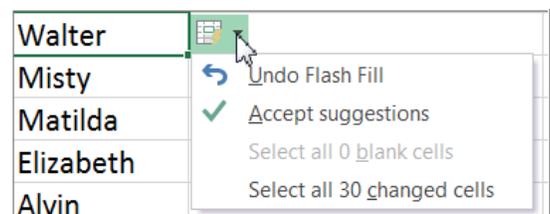
1. Click **File>Options**.
2. Click **Advanced** and make sure the **Automatically Flash Fill** box is checked.



If your data has many inconsistencies, automatic **Flash Fill** may not appear though you selected the options explained above. In this case, you can manually activate **Flash Fill** by using **Data>Flash Fill** in the **Data Tools Group** OR using **Control + E** combination. You can always use the old feature, **Text to Columns** to split text into different cells (This feature will be covered in Level 5). In the exercise below, instead of using **Text to Columns** feature to split the data, we'll use **Flash Fill** to create a list of **first names** using a list of existing **email addresses**.

**Exercise:** Open *FlashFillExample* worksheet in the same workbook *ExcelPart2.xlsx*.

- Select Cell C5 and type in the first name "Josie" in the cell. **Note:** **Flash Fill** is case sensitive. If you enter a lower-case last name, for example, all the first names follow suit.
- Select Cell C6 and as soon as you start with the letter "W" to type the next first name "Wendy", the **Flash Fill preview** will appear below the selected cell whenever Flash Fill is available.
- Just hit **Enter** to accept the data to be **added** to the worksheet.
- **Note:** To modify or undo **Flash Fill**, click the **Flash Fill button** next to recently added Flash Fill data.
- Save the workbook and close it.

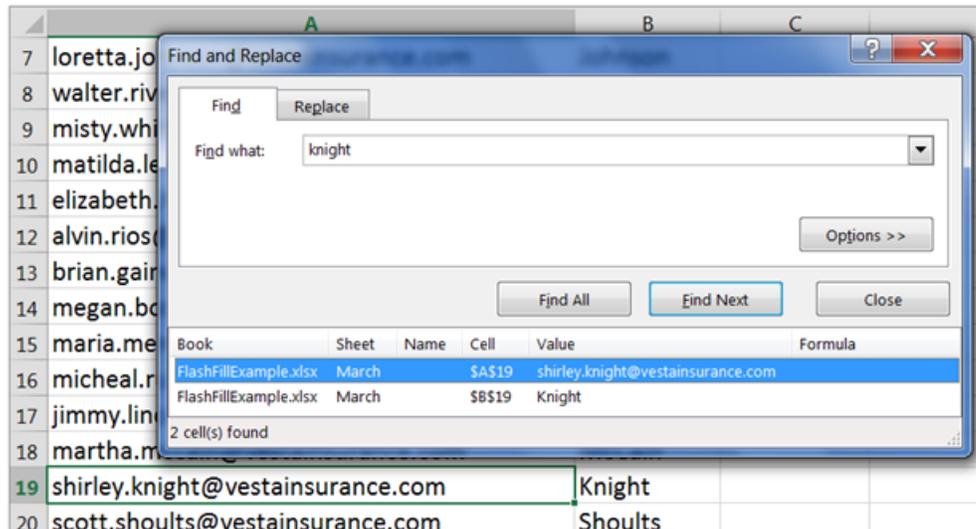
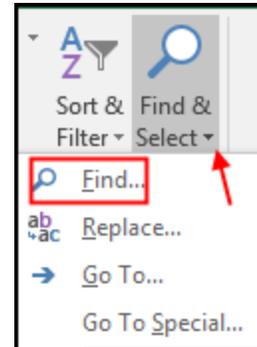


## Find and Replace

This feature helps you save time to locate specific information when working with a lot of data in Excel. You can easily search your workbook using the Find feature, which allows you to find the data and also modify content using the Replace feature.

### Exercise to find content:

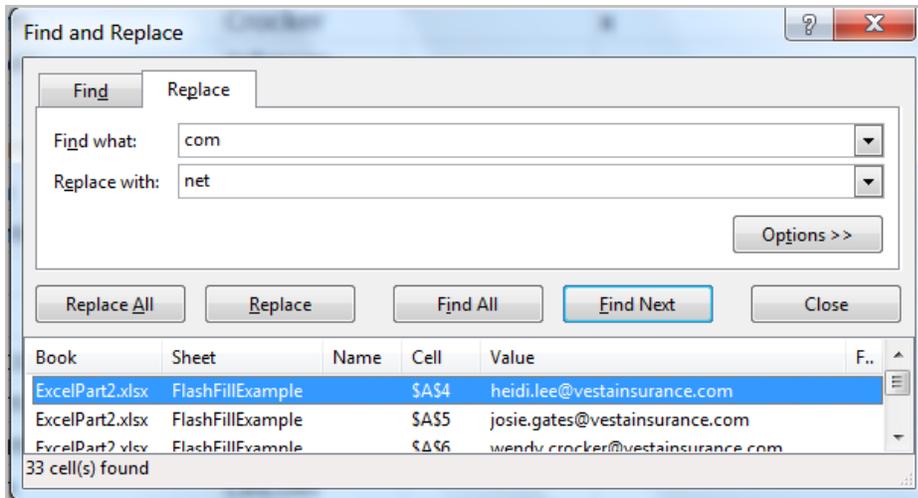
- From workbook *ExcelPart2.xlsx*, select *FlashFillExample* worksheet.
- From the Home tab, click the **Find and Select** command, then select **Find...** from the drop-down menu. (**Note:** You can also access the Find command by pressing **Ctrl+F** on your keyboard.)
- The Find and Replace dialog box will appear. Enter the content you wish to find. In our example, type in an employee's last name "knight".
- Click **Find Next** to find further instances or **Find All** to see every instance of the search term.



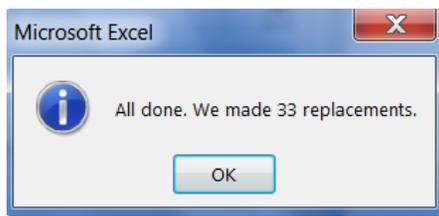
- When you are finished, click **Close** to exit the Find and Replace dialog box.

### Exercise to replace content:

- In the same workbook, from the **Home** tab, click the **Find and Select** command, then select **Replace...** from the drop-down menu. (**Note:** You can also access the **Replace** command by pressing **Ctrl+H** on your keyboard.)
- The **Find and Replace** dialog box will appear.
- Type the text you wish to find in the **Find what:** field. Type "com".
- Type the text you wish to replace it with in the **Replace with:** field. Type "net" then click **Find Next**.
- If the content is found, the cell containing that content will be selected.
- Review the text to make sure you want to replace it.



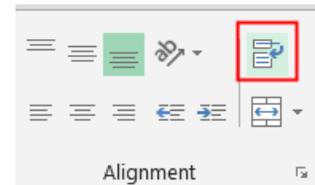
- If you wish to replace it, select one of the replace options:
  - **Replace** will replace individual instances.
  - **Replace All** will replace every instance of the text throughout the workbook. In our example, we'll choose this option to save time.
- A dialog box will appear, confirming the number of replacements made. Click **OK** to continue.



- The selected cell content will be **replaced**. When you are finished, click **Close** to exit the Find and Replace dialog box.

### Fit the Data Without Resizing Column:

Add a new worksheet by clicking on the plus sign to work on this concept. You can fit the data in a cell without resizing the width of a column by using the **Wrap Text** command in the **Alignment Group** under the **Home Tab**. Use this command before or after entering data and the cell height will be automatically adjusted to *accommodate the current cell width*.



### OR

You can use the keystroke combination **Alt + Enter** when you reach the end of the cell and you want to force the cursor to create another line within the same cell. **Note:** Click the Wrap Text command again to unwrap the text.

1. Enter the data shown in Cells A1:B7. See right. Do not worry about content not fitting in the column yet. Use tab key to enter data across the row and then hit **Enter** key to move your selected cell to the cell below. Select the entire column A. Click on the **Wrap Text** command



in the **Alignment** group. See all cells with longer texts now rearranged to fit cell contents on two lines in same cell.

|   | A                | B      |
|---|------------------|--------|
| 1 | Item             | Amount |
| 2 | Rent or mortgage | 800    |
| 3 | Electric         | 120    |
| 4 | Gas              | 50     |
| 5 | Cell Phone       | 45     |
| 6 | Groceries        | 500    |
| 7 | Car Payment      | 273    |

2. Let's make all the columns width 19. Select the entire worksheet. Resize the column width to 19 by using **Home>Format>Column Width**. Now each cell has enough space to fit its contents. Still have the entire worksheet selected.
3. Let's make Excel fit all contents in each column just right (not too wide or narrow). Double-click between *any two columns and any two rows* to let Excel do the work for you.
4. Finally, click in any cell to de-select the entire worksheet.
5. Leave the workbook open.

### To merge cells using the Merge & Center command:

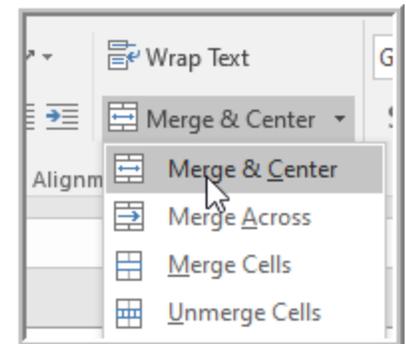
Cells can be merged in order to create larger cell areas – to create a title cell for the entire table, for example.

#### Exercise:

- Use the same worksheet already opened above.
- Insert a new row above the heading row 1. (**Hint:** Select the entire row 1 and select **Insert** from the **Cells** group under the **Home** tab.)
- Type in "MONTHLY EXPENSES" in Cell A1.
- Select the **cell range** you want to merge together. (Cells A1:B1)
- Select the **Merge & Center** command on the **Home** tab.
- The selected cells will be **merged**, and the text will be **centered**. Re-adjust the row height on row 1.

|   | A                | B      |
|---|------------------|--------|
| 1 | MONTHLY EXPENSES |        |
| 2 | Item             | Amount |
| 3 | Rent/mortgage    | 800    |
| 4 | Electric         | 120    |

|   | A                | B      |
|---|------------------|--------|
| 1 | MONTHLY EXPENSES |        |
| 2 | Item             | Amount |
| 3 | Rent/mortgage    | 800    |

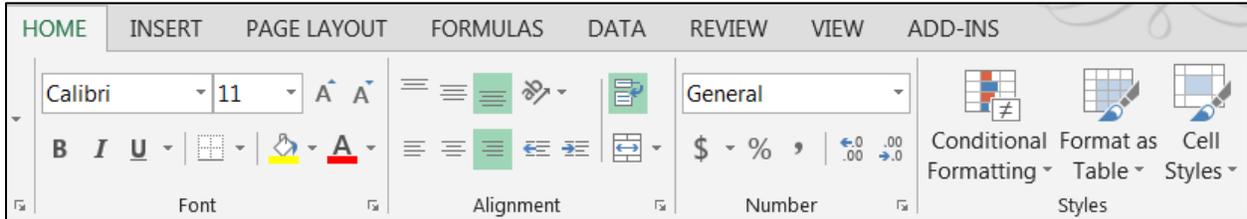


#### Other Merge Options:

- **Merge & Center:** Merges the selected cells into **one cell** and **centers** the text.
- **Merge Across:** Merges the selected cells into **larger cells** while keeping each **row** separate.
- **Merge Cells:** Merges the selected cells into one cell, but **does not center** the text.
- **Unmerge Cells:** Unmerges selected cells.

## Formatting Cells

Use Excel Formatting commands to draw attention to specific sections of your workbook and make your text easier to view and understand. You may also apply number formatting to tell Excel exactly what type of data you're using in the workbook, such as percentages (%), currency (\$), and so on. You can find all formatting commands under the **Home tab**: *Font Group, Alignment Group, Number Group, and Styles Group.*



**Exercise:** Use *FormattingCellsExample* worksheet from same workbook and follow instructions.

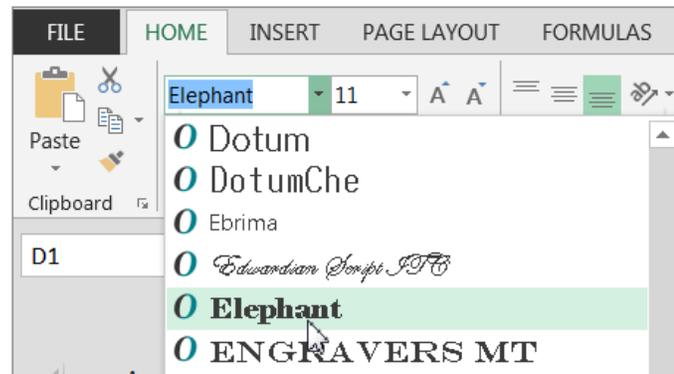
### To change the font:

Excel provides a variety of other fonts you can use to customize your cell text though the default font is Calibri. In the example below, we'll format our **title cell** to help distinguish it from the rest of the worksheet.

1. Select the **cell(s)** you wish to modify. Select the merged cells D1 through G1 for our practice.

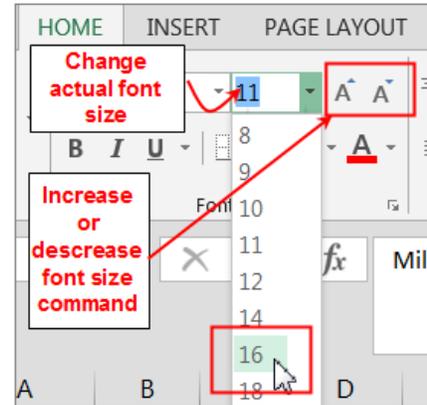
| Date      | Starting     | Ending                       | Miles |
|-----------|--------------|------------------------------|-------|
| 6/24/2014 | 1000 Mayfair | Summit Mall 3265 W Market St | 5.42  |

2. Click the drop-down arrow next to the **Font command** on the **Home tab**. The Font drop-down menu will appear.
3. Select the desired font. A live preview of the new font will appear as you hover the mouse over different options. In our example, we'll choose **Elephant**. The text will change to the selected font.



### To change the font size:

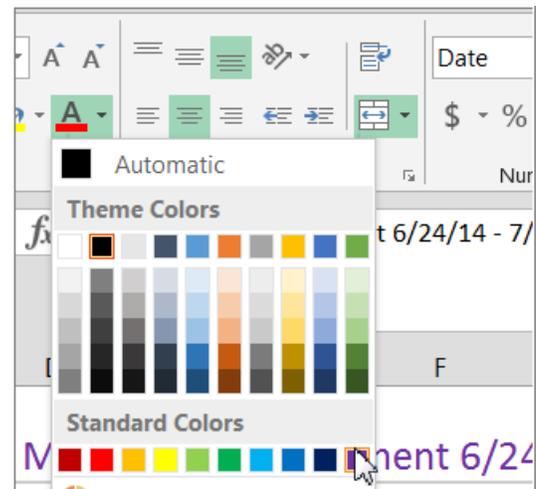
1. Select the same merged title cell you selected above.
2. Click the drop-down arrow next to the **Font Size** command on the **Home** tab. The Font Size drop-down menu will appear.
3. Select the desired font size. A live preview of the new font size will appear as you hover the mouse over different options. In our example, we will choose 14 to make the text larger.



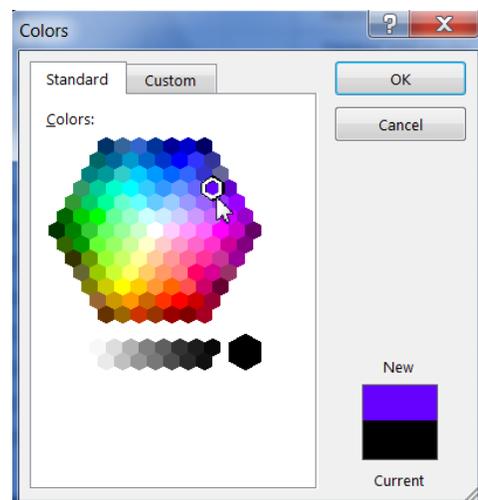
**Note:** You can also use **Increase** or **Decrease font size command** by click on either command.

### To change the font color:

1. Select the same merged title cell you selected above.
2. Click the drop-down arrow next to the **Font Color** command on the Home tab. The **Color** menu will appear.
3. Select the desired **font** color. A live preview of the new font color will appear as you hover the mouse over different options. In our example, we'll choose **Purple**.
4. The text will change to the selected font color.

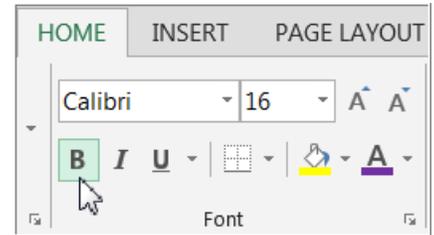


**Note:** You can also select **More Colors** at the bottom of the menu to access additional color options.



To use the Bold, Italic, and Underline commands:

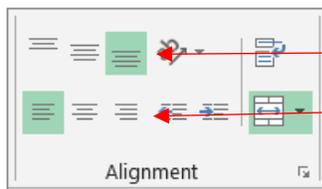
1. Select the same merged title cell you selected above.
2. Click the **B**, *I*, or U command on the **Home** tab. In our example, we'll make the selected cells **bold** to look like below.



**Note:** You can also press Ctrl+B on your keyboard to make selected text **bold**, Ctrl+I to apply *italics*, and Ctrl+U to apply an underline. These commands are **Toggle Buttons** which means click to turn them on and click it again to turn them off.

### Text alignment

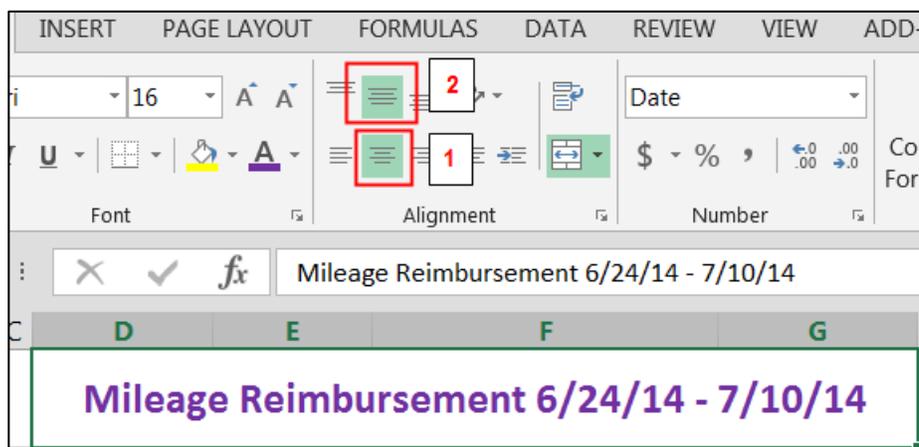
By default, any text entered into your worksheet will be aligned to the bottom-left of a cell. Any numbers will be aligned to the bottom-right of a cell. Changing the alignment of your cell content allows you to choose how the content is displayed in any cell, which can make your cell content easier to read.



Vertical Text Alignment Buttons. (Top, Center, and Bottom)

Horizontal Text Alignment Buttons (Left, Center, and Right)

1. Select the same merged title cell you selected above.
2. Practice alignment by using the **Horizontal Center Alignment** button to make the title horizontally centered.
3. Next, use the **Vertical Center Alignment** button to make the title vertically centered.



## Other Alignment Options:

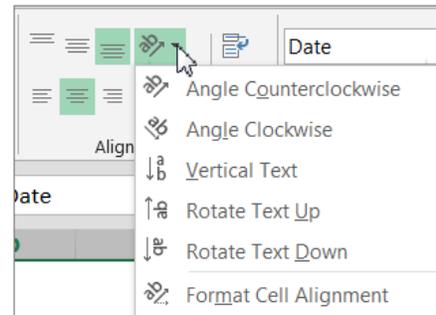
**Orientation:** You can rotate your text diagonally or vertically to label narrow columns by using this function.

**Exercise:** Continue using the same worksheet opened above.

1. Expand the height of the Row 2 up to about 90 pixels as shown.



2. Select Cells D2 through G2.
3. Click the drop-down arrow from the **Orientation** button under the **Home tab** and select any of the orientation style to test. If you do not like the result, click on the same style to turn it off and the text should go back to horizontal style.



**Indentation:** Use this function to move the content further away or closer to the Cell border.

Select a few cells under the **Starting** or **Ending** header columns. Use either decrease or increase indentation buttons to test.

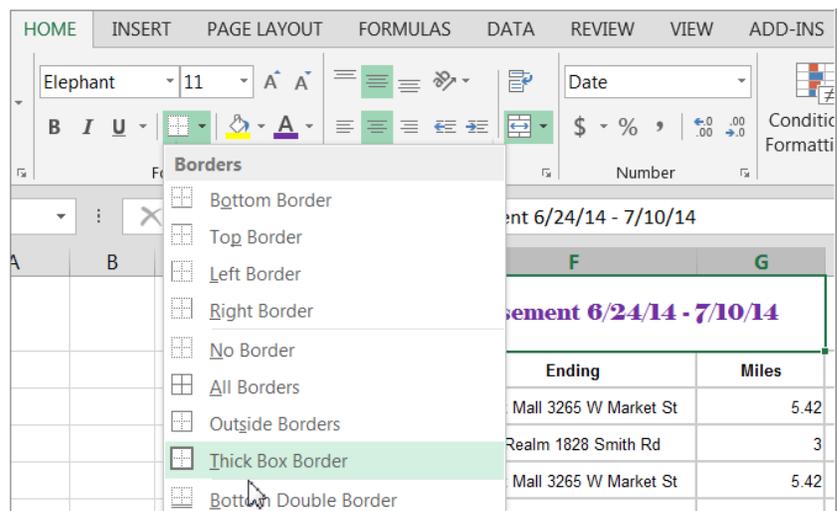


## Cell borders and fill colors

**Cell borders** and **fill colors** allow you to create clear and defined boundaries for different sections of your worksheet. In our examples below, we'll add cell borders and fill color to our merged **title cell** to help distinguish them from the rest of the worksheet.

### To add a border:

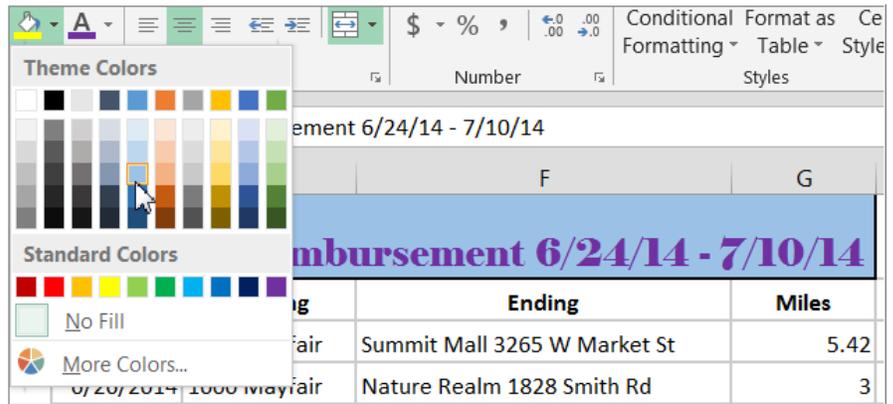
1. Select the same merged title cell you selected above.
2. Click the **drop-down** arrow next to the Borders command on the **Home tab**. The Borders drop-down menu will appear.
3. Select the border style you want to use. In our example, we will choose to display **Thick Box Border**.
4. The selected border style will appear.



**Note:** You can draw borders and change the line style and color of borders with the **Draw Borders** tools at the bottom of the Borders drop-down menu. Once you have selected your desired color and style of your border, your mouse will turn into a drawing pencil mode. You can point and click on multiple cells to draw a border or click on each cell border to draw border of each cell. **Turn off** the draw border function by clicking on **Borders** command on the **Home** tab.

**To add a fill color:**

1. Select the same merged title cell you selected above.
2. Click the **drop-down** arrow next to the **Fill Color** command on the **Home** tab. The **Fill Color** menu will appear.
3. Select the **fill color** you want to use. A live preview of the new fill color will appear as you hover the mouse over different options. In our example, we'll choose Light Blue.

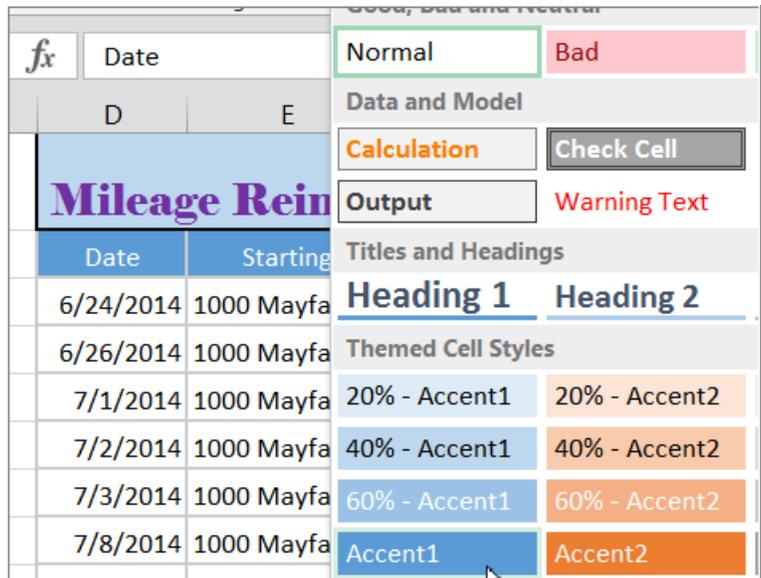


**Cell styles**

Rather than formatting cells manually, you can use Excel's **predesigned cell styles**. **Cell styles** are a quick way to include professional formatting for different parts of your workbook, such as **titles** and **headers**.

1. Select the cells with headers in them: Date, Starting, Ending, Miles.
2. Click the **Cell Styles** command on the **Home** tab, then choose the desired style from the drop-down menu. In our example, we'll choose **Accent 1**.
3. The selected cell style will appear.
4. Select Cells D3 through G13 and apply the **Note Cell Style**.

**Note:** Applying a **cell style** will replace any existing cell formatting **except** for text alignment. You may not want to use cell styles if you've already added a lot of formatting to your workbook.



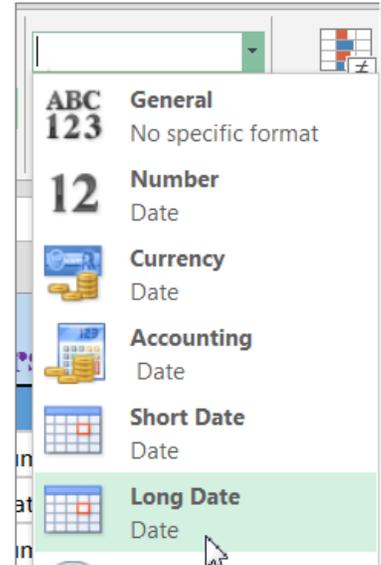
## Formatting text and numbers

In Excel, you can apply specific formatting for text and numbers instead of displaying all cell content in exactly the same way. Use formatting to change the appearance of *dates*, *times*, *decimals*, *percentages (%)*, *currency* (\$), etc.

### To apply number formatting:

We will use same *FormattingCellsExample* worksheet. We'll change the number format for the cells to modify the way dates are displayed.

1. Select the entire Column D to modify.
2. Click the **drop-down** arrow next to the **Number Format** command on the **Home** tab. The **Number Formatting** drop-down menu will appear.
3. Select the desired formatting option. In our example, we will change the formatting to **Long Date**. The selected cells will change to the new formatting style. In our example, the width of Column D is not wide enough to fit the style of the format as the Error values ##### appear in every cell in that column. Just simply adjust the width of the column D and now you should see the content of the cells in the new formatting style – **Long Date**.

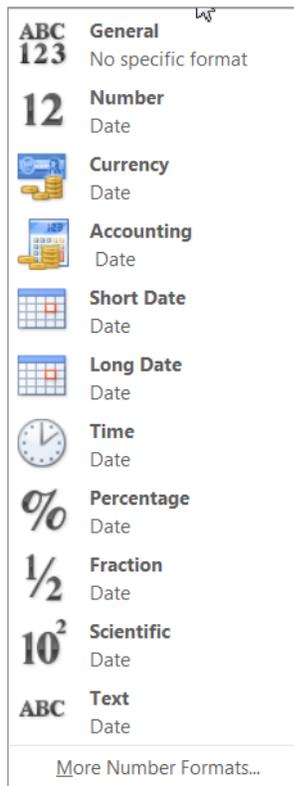


| D                        | E          |
|--------------------------|------------|
| <b>Mileage Reimburse</b> |            |
| Date                     | Starting   |
| #####                    | 1000 Mayfa |

→

| D                        | E            |
|--------------------------|--------------|
| <b>Mileage Reimburse</b> |              |
| Date                     | Starting     |
| Tuesday, June 24, 2014   | 1000 Mayfair |
| Thursday, June 26, 2014  | 1000 Mayfair |
| Tuesday, July 01, 2014   | 1000 Mayfair |
| Wednesday, July 02, 2014 | 1000 Mayfair |
| Thursday, July 03, 2014  | 1000 Mayfair |
| Tuesday, July 08, 2014   | 1000 Mayfair |
| Wednesday, July 09, 2014 | 1000 Mayfair |
| Thursday, July 10, 2014  | 1000 Mayfair |

## Other Number Formatting:



**General:** It is the default format for any cell. When you enter a number into the cell, Excel will guess the number format that is most appropriate. If you enter "1-5", the cell will display the number as a Short Date, "1/5/Year" (year representing the current year in 4 digits such as 2014).

**Number:** Formats numbers with decimal places. If you enter "4" into the cell, the cell will display the number as "4.00". For our practice, select Cells G3 through G11, change the range into **Number** format to see the mileage figures to show in two decimal points.

**Currency:** Formats numbers as currency with a currency symbol. If you enter "4" into the cell, the cell will display the number as "\$4.00". For our practice, select Cell G13 and change the format to **Currency**.

**Accounting:** Formats numbers as monetary values like the Currency format, but it also aligns currency symbols and decimal places within columns. This format makes it easier to read long lists of currency figures.

**Short Date:** Formats numbers as M/D/YYYY. August 8th, 2013 would be "8/8/2013".

**Long Date:** Formats numbers as Weekday, Month DD, YYYY. 7/28/14 will be "Monday, July 28, 2014".

**Time:** Formats numbers as HH/MM/SS and notes AM or PM. For example, "10:25:00 AM". You must enter PM or else all time without AM or PM will default to AM.

**Percentage:** Formats numbers with decimal places and the percent sign. If you enter "0.75" into the cell, the cell will display the number as "75.00%".

**Fraction:** Formats numbers as fractions separated by the forward slash. For example, if you enter "1/4" into the cell formatted as Fraction, the cell will display the number as "1/4". If you enter "1/4" into a cell that is formatted as General, the cell will display the number as a date, "4-Jan". **Note: Format the cells to show Fraction first before entering the data.**

**Scientific:** Formats numbers in scientific notation. For example, if you enter more than 11 digit numbers such as "140000000000" into the cell, then the cell will display the number as "1.40E+11".

**Note:** by default, Excel will format the cell in scientific notation if it contains a large integer. If you do not want Excel to format large integers with scientific notation, use the **Number** format.

**Text:** Formats numbers as text, meaning that what you enter into the cell will appear exactly as it was entered. Text is left-aligned while numbers are right-aligned by default. **If a cell contains both text and numbers Excel defaults to left-aligned.**

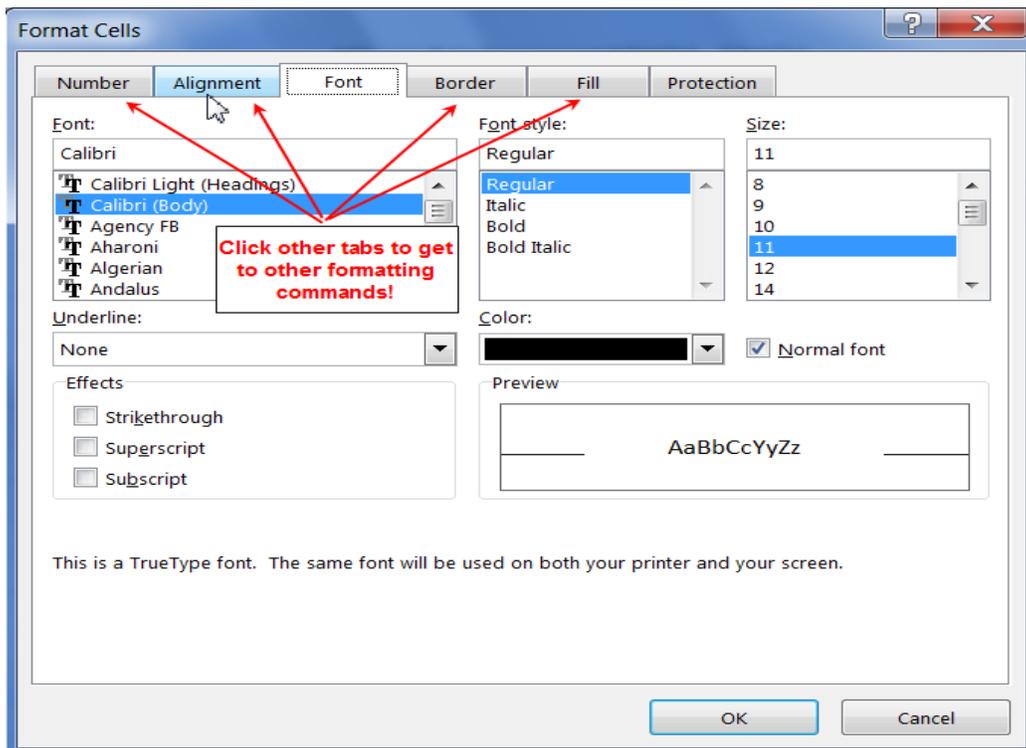
**More Number Formats:** Clicking on this will open up the **Format Cells** dialogue box with the **Number** tab where you can find more specific style of each format style explained above.

Your finished spreadsheet should look like the one shown on next page. Save and close the workbook.

| Date                     | Starting     | Ending                       | Miles      |
|--------------------------|--------------|------------------------------|------------|
| Tuesday, June 24, 2014   | 1000 Mayfair | Summit Mall 3265 W Market St | 5.42       |
| Thursday, June 26, 2014  | 1000 Mayfair | Nature Realm 1828 Smith Rd   | 3.00       |
| Tuesday, July 01, 2014   | 1000 Mayfair | Summit Mall 3265 W Market St | 5.42       |
| Wednesday, July 02, 2014 | 1000 Mayfair | Nature Realm 1828 Smith Rd   | 3.00       |
| Thursday, July 03, 2014  | 1000 Mayfair | Summit Mall 3265 W Market St | 5.42       |
| Tuesday, July 08, 2014   | 1000 Mayfair | SUPER 1584 Wilson Ave        | 12.58      |
| Wednesday, July 09, 2014 | 1000 Mayfair | Nature Realm 1828 Smith Rd   | 3.00       |
| Thursday, July 10, 2014  | 1000 Mayfair | Summit Mall 3265 W Market St | 5.42       |
| Total Driven 6/24-7/10   |              |                              | 110.46     |
| Standard Mileage Rate    |              |                              | \$.56/mile |
| Total amount 6/24-7/10   |              |                              | \$ 61.86   |

### Menu Version on Formatting Cells:

You can perform all of the formatting examples we went through above by using Menu Version of those commands rather than shortcuts on the Ribbon we used. A few extra commands not available on the Ribbon could be found here. Regardless of from which group on the **Home tab**: *Font*, *Alignment*, or *Number* you launch a dialogue box, the **Format Cells** dialogue box will open. Once it opens, you can freely click on other tabs to get to a particular command. See below.



## Worksheets

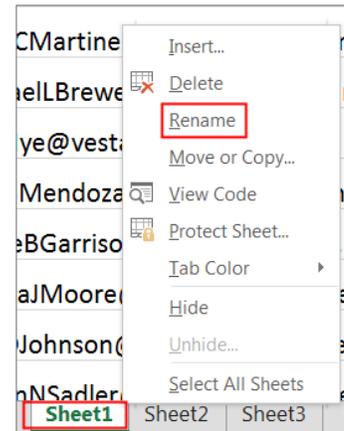
Every workbook should begin with at least one worksheet in it which by default named as Sheet1. A workbook can contain multiple worksheets. As you build your workbook, you may like to add, delete or rename your worksheets or re-arrange the worksheet locations.

**Exercise:** Open *WorksheetPractice.xlsx* to practice. [Example from *gcfllearnfree.org*]

### Renaming Worksheets

We will rename the worksheets to organize the worksheets by months.

1. Right-click the **Sheet1** and select rename from the menu.
2. Type in *January*.
3. Click anywhere outside of the worksheet, or press **Enter** on your keyboard. The worksheet will be renamed.
4. Alternatively, you can double-click and rename a worksheet. Double-click on **Sheet2**. The name **Sheet2** will be highlighted. Then type in *February*. Do the same for **Sheet3** renaming as *March*.



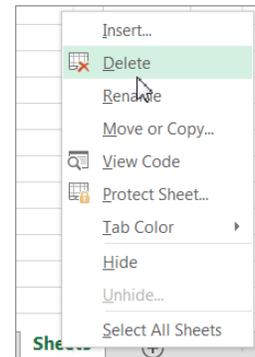
### Adding and Deleting Worksheets

Simply click on the plus sign “+” at the end of all worksheets to add a new worksheet.

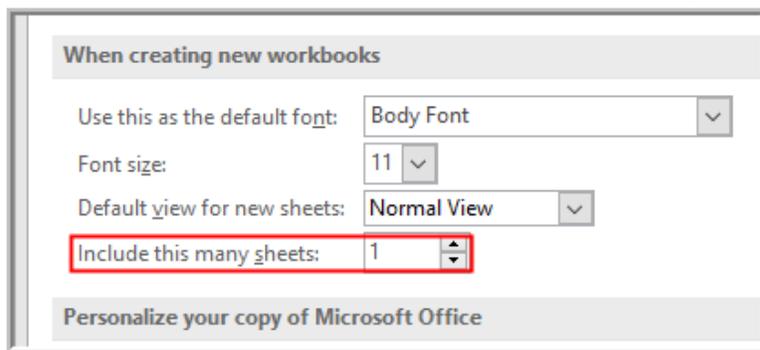


You may also use **Insert** from the right-click menu to insert a new worksheet. Doing so will add a new worksheet in front of the sheet you right-clicked.

To delete a worksheet, right-click on the sheet to be deleted. Select **Delete** from the menu.



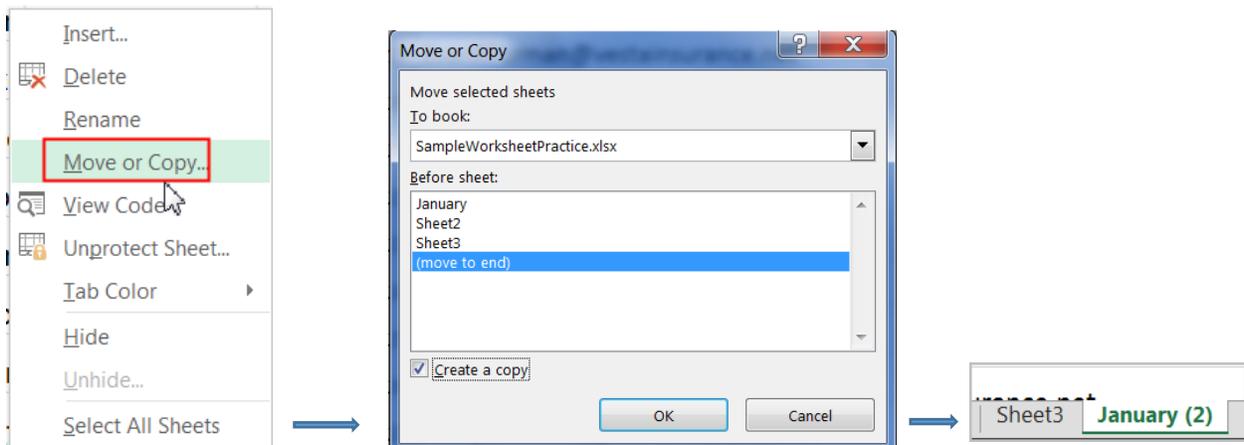
**Note:** You can change the default number of worksheets when creating new workbooks. Go to the Backstage view under **File>Options** and change the number of worksheets in section that says “When creating new workbooks”.



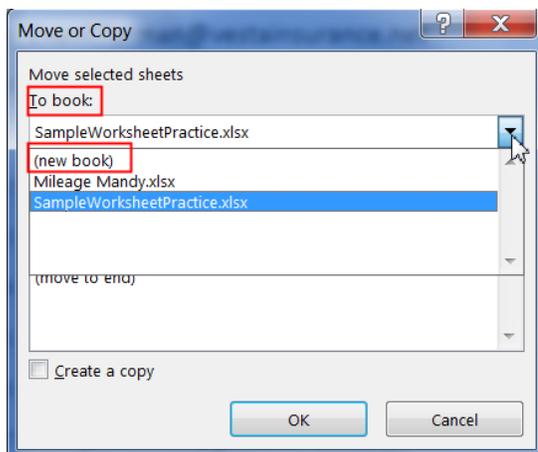
## Copy a Worksheet:

You can duplicate the content of a worksheet by using “Copy” function in Excel.

1. Right-click the worksheet you want to copy, then select **Move** or **Copy** from the worksheet menu.
2. The **Move or Copy** dialog box will appear. Choose where the sheet will appear in the **Before sheet:** field. In our example, we'll choose (move to end) to place the worksheet to the right of the existing worksheet.
3. Check the box next to **Create a copy**, then click **OK**. The worksheet will be added at the end of existing worksheets; given the same name with a new version number in parenthesis. You may rename the sheet as *April*.



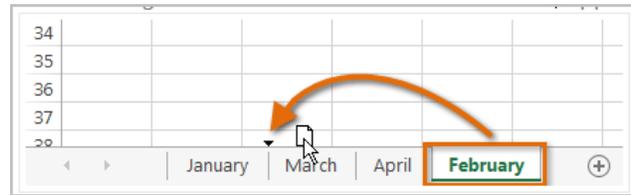
4. If you desire to move or copy a worksheet to an entirely different workbook, click on the drop-down arrow next to the section **To book:** and select (new book) or select any other workbook shown in the box. **Be sure to check the “Create a copy” box if you are copying the worksheet.**



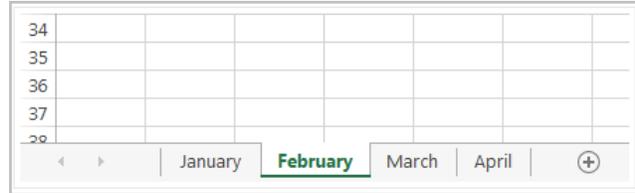
## Move a Worksheet:

1. Select the worksheet you wish to move. The cursor will become a small worksheet icon Mouse change. 

2. Hold and drag the mouse until a small black arrow Mouse change appears above the desired location.



3. Release the mouse. The worksheet will be moved.

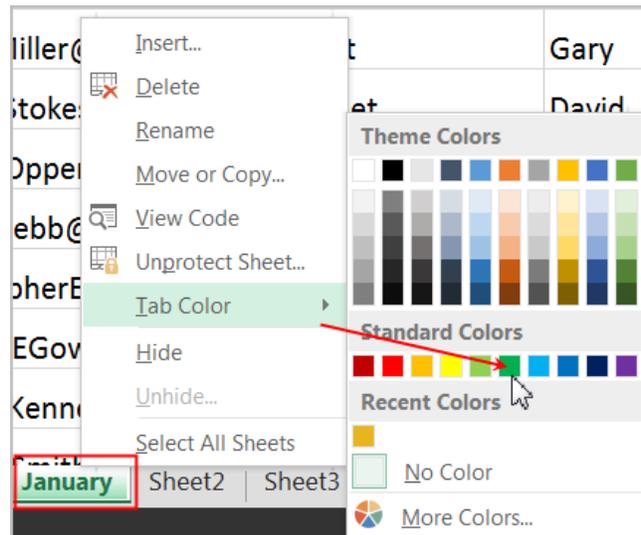


## Change the worksheet color:

You can change a worksheet's color to help organize your worksheets.

1. Right-click the desired worksheet, and hover the mouse over **Tab Color**. The **Color menu** will appear.
2. Select the desired color. A live preview of the new worksheet color will appear as you hover the mouse over different options. In our example, we'll choose Green.

3. The worksheet color will be changed. **Note:** The worksheet color is less noticeable when the worksheet is selected. However, once you select another worksheet, the color will appear more distinctively. See below.



## Grouping and ungrouping worksheets:

When you work with multiple worksheets at the same time, worksheets can be combined together into a **group**. Any changes made to one worksheet in a group will be made to every worksheet in the group.

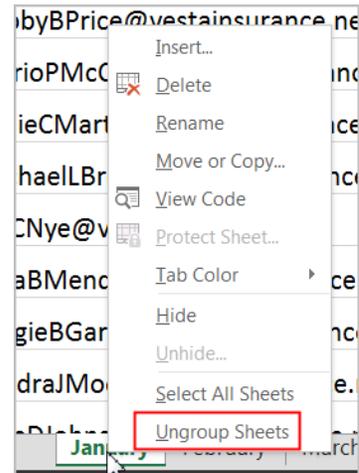
**Exercise:** Let's use the same workbook *WorksheetPractice.xlsx* and practice the following steps.

### Grouping non-adjacent worksheets:

- Select the first worksheet *January*
- Hold down the **Control** button on your keyboard and select the last worksheet *April*; let go off your **Control** button
- You will notice the word [Group] appears next to the title of the workbook on top of screen

WorksheetPractice.xlsx [Group] - Excel

- Now the *January* and *April* worksheets are selected, anything you change on *January* sheet will appear on the *April* sheet.
- Click Cell A1 and use Cell color fill to change to green color in that cell. Now Cell A1 should have the same color on both *January* and *April* worksheets.
- To ungroup those two sheets, you can either right-click on one of those two sheets and select **Ungroup Sheets** or just click on another sheet that was not in the original group.



### Grouping adjacent worksheets:

- Select the first worksheet *January*
- Hold down the **Shift** button and select the last worksheet *April* and let go off your **shift** button
- Now all the sheets are selected anything you change on one sheet will appear on all other selected sheets
- Select Cells A2:D2 (A2 through D2) and change the text color to Red.
- All the cell blocks A2:D2 on all sheets will now have text with font color red.
- Click on any sheets that was not chosen first to group or use **Ungroup Sheets** command from the menu by right-clicking on any sheet. **OR**

If you had chosen all worksheets from the beginning to the end by using the shift key, then you can click on the last sheet or any other sheet you did not select in the first place to ungroup.