



University Information
Technology Services

Microsoft Office Excel 2016 for Mac

Ranges & Tables

University Information Technology Services

Learning Technologies, Training & Audiovisual Outreach

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Published by Kennesaw State University – UITs 2016

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University Information Technology Services

Microsoft Office: Excel 2016 for Mac

Ranges and Tables

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Introduction

The *Excel 2016: Ranges & Tables* document, is a continuation of the fundamentals learned in the previous *Excel* workshops and builds on this foundation to provide the user with the necessary skills to create more detailed and extensive spreadsheets, and enhance their impact while building your skill with the program.

Learning Objectives

After completing the instructions in this booklet, you will be able to:

- Edit and format large areas of a spreadsheet
- Effectively sort and arrange data
- Create and format tables to better organize data
- Use conditional formatting to highlight trends within data

Using Ranges

Working with a range allows you to perform operations such as moving, copying, or formatting much faster than working with one cell at a time. The following figure contains terms and definitions encountered when using ranges.

Term	Definition
Range	A group of cells.
Name Box	Allows you to enter a name for a range.
Formula Bar	A bar at the top of the Excel window that you use to enter formulas.

Figure 1 - Definitions

Selecting a Range

The following explains how to select a range:

1. Click and drag to select the **range of cells** you want to name.

	A	B	C	D	E	F
1	Sales	Jan	Feb	Mar	Apr	
2						
3	Eastern Region	\$ 30,648.09	\$ 57,634.33	\$ 45,720.86	\$ 28,637.45	
4	Western Region	\$ 16,892.88	\$ 1,651.60	\$ 3,830.44	\$ 18,196.50	
5	Southern Region	\$ 14,654.42	\$ 3,321.57	\$ 3,734.10	\$ 2,952.14	
6	Northern Region	\$ 28,153.00	\$ 79,268.78	\$ 46,218.48	\$ 49,450.63	

Figure 2 - Sample Range Selection

Naming a Range

A range can also be defined by giving a name to a group of cells. For example, we could name the selection of cells below (see Figure 3), *Eastern Region* by following the steps listed below:

1. Highlight cells **B4 through E4** (See Figure 3)
2. Click the **Name Box** (See Figure 3).

	A	B	C	D	E	F	G
1	Sales	Jan	Feb	Mar	Apr		Total
2							
3	Eastern Region	\$ 30,648.09	\$ 57,634.33	\$ 45,720.86	\$ 28,637.45		\$ 162,640.73
4	Western Region	\$ 16,892.88	\$ 1,651.60	\$ 3,830.44	\$ 18,196.50		\$ 40,571.42
5	Southern Region	\$ 14,654.42	\$ 3,321.57	\$ 3,734.10	\$ 2,952.14		\$ 24,662.23
6	Northern Region	\$ 28,153.00	\$ 79,268.78	\$ 46,218.48	\$ 49,450.63		\$ 203,090.89
7							
8	Total	\$ 90,348.39	\$ 141,876.28	\$ 99,503.88	\$ 99,236.72		\$ 430,965.27
9							

Figure 3 - Name Box Drop-Down

3. Type the name **Eastern** in the *Name Box* and press **Enter**.

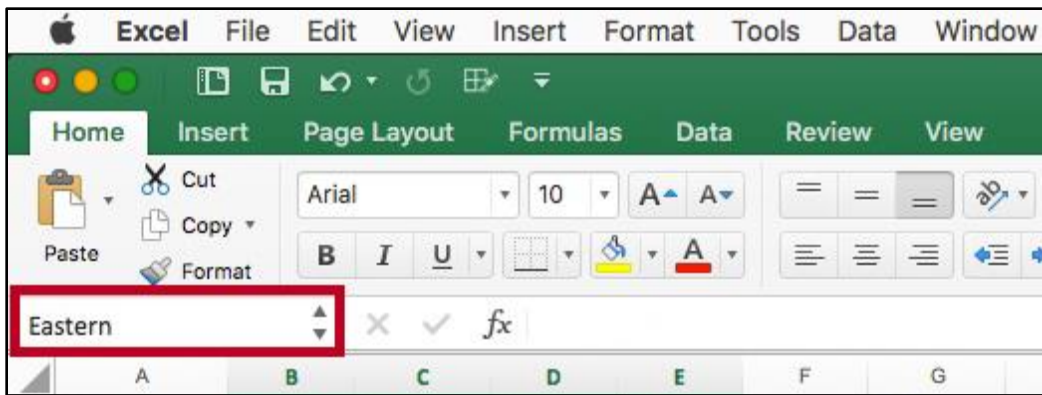


Figure 4 - Eastern Region

Note: The name can not contain spaces, or start with a number; however, you may use an underscore or dash to separate terms for the name.

4. The name *Eastern* appears in the *Name Box* for the range selected.

 A screenshot of the Microsoft Excel interface showing a spreadsheet with a named range. The Name Box is highlighted with a red border and contains the text 'Eastern'. The spreadsheet data is as follows:

	A	B	C	D	E	F
1	Sales	Jan	Feb	Mar	Apr	
2						
3	Eastern Region	\$ 30,648.09	\$ 57,634.33	\$ 45,720.86	\$ 28,637.45	
4	Western Region	\$ 16,892.88	\$ 1,651.60	\$ 3,830.44	\$ 18,196.50	
5	Southern Region	\$ 14,654.42	\$ 3,321.57	\$ 3,734.10	\$ 2,952.14	
6	Northern Region	\$ 28,153.00	\$ 79,268.78	\$ 46,218.48	\$ 49,450.63	
7						
8	Total	\$ 90,348.39	\$ 141,876.28	\$ 99,503.88	\$ 99,236.72	
9						

Figure 5 - Named Range

Copy and Paste a Range

The following explains how to copy and paste a range of data.

1. Highlight the **cell range** that you wish to copy.

	A	B	C	D	E	F	G
1	Sales	Jan	Feb	Mar	Apr	May	Total
2							
3	Eastern Region	\$ 30,648.09	\$ 57,634.33	\$ 45,720.86	\$ 28,637.45		\$ 162,640.73
4	Western Region	\$ 16,892.88	\$ 1,651.60	\$ 3,830.44	\$ 18,196.50		\$ 40,571.42
5	Southern Region	\$ 14,654.42	\$ 3,321.57	\$ 3,734.10	\$ 2,952.14		\$ 24,662.23
6	Northern Region	\$ 28,153.00	\$ 79,268.78	\$ 46,218.48	\$ 49,450.63		\$ 203,090.89
7							
8	Total	\$ 90,348.39	\$ 141,876.28	\$ 99,503.88	\$ 99,236.72		\$ 430,965.27
9							

Figure 6 - Select a Range to Copy

2. On the *Home* tab of the ribbon, click the **Copy** button.

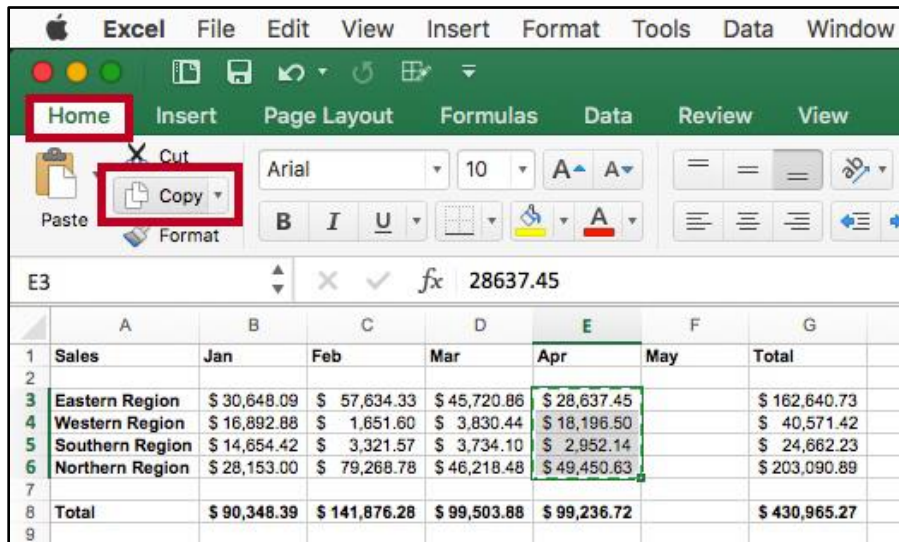


Figure 7 - Copy Button

3. Left-click in the **beginning cell** where you want the range to be copied.

	A	B	C	D	E	F	G
1	Sales	Jan	Feb	Mar	Apr	May	Total
2							
3	Eastern Region	\$ 30,648.09	\$ 57,634.33	\$ 45,720.86	\$ 28,637.45		\$ 162,640.73
4	Western Region	\$ 16,892.88	\$ 1,651.60	\$ 3,830.44	\$ 18,196.50		\$ 40,571.42
5	Southern Region	\$ 14,654.42	\$ 3,321.57	\$ 3,734.10	\$ 2,952.14		\$ 24,662.23
6	Northern Region	\$ 28,153.00	\$ 79,268.78	\$ 46,218.48	\$ 49,450.63		\$ 203,090.89
7							
8	Total	\$ 90,348.39	\$ 141,876.28	\$ 99,503.88	\$ 99,236.72		\$ 430,965.27
9							

Figure 8 - Copy Destination

4. On the *Home* tab of the ribbon, click the **Paste** button.

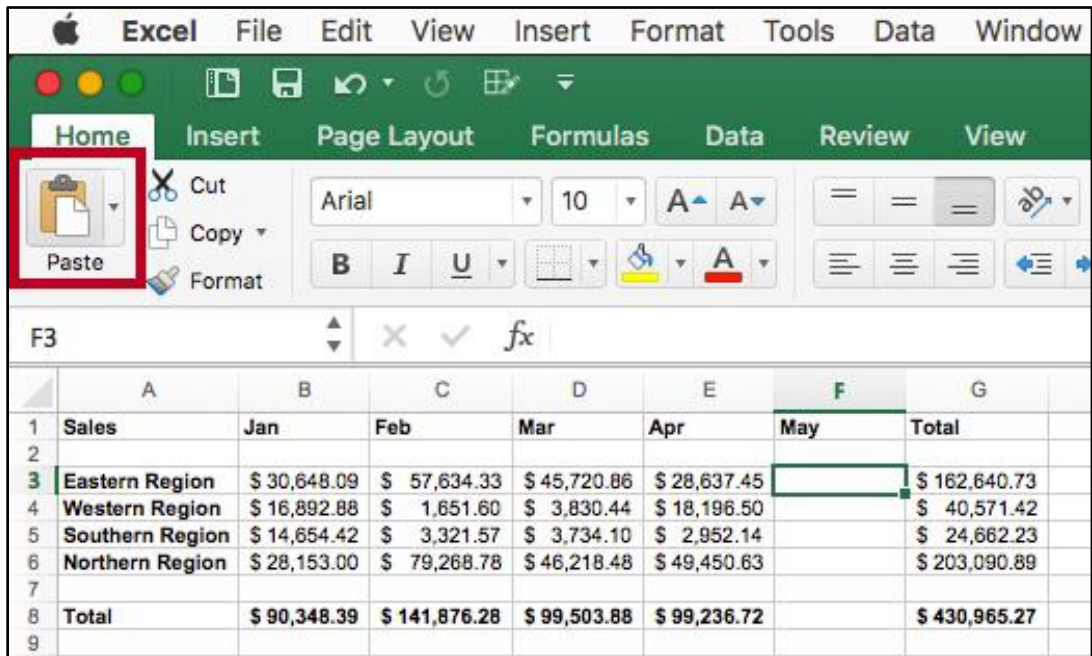


Figure 9 - Paste Button

5. The data will be copied into the destination cells.

	A	B	C	D	E	F	G
1	Sales	Jan	Feb	Mar	Apr	May	Total
2							
3	Eastern Region	\$ 30,648.09	\$ 57,634.33	\$ 45,720.86	\$ 28,637.45	\$ 28,637.45	\$ 162,640.73
4	Western Region	\$ 16,892.88	\$ 1,651.60	\$ 3,830.44	\$ 18,196.50	\$ 18,196.50	\$ 40,571.42
5	Southern Region	\$ 14,654.42	\$ 3,321.57	\$ 3,734.10	\$ 2,952.14	\$ 2,952.14	\$ 24,662.23
6	Northern Region	\$ 28,153.00	\$ 79,268.78	\$ 46,218.48	\$ 49,450.63	\$ 49,450.63	\$ 203,090.89
7							
8	Total	\$ 90,348.39	\$ 141,876.28	\$ 99,503.88	\$ 99,236.72		65.27
9							

Figure 10 - Copied Data

Sorting

Sorting with the Sort & Filter Button

Excel gives you the ability to sort a list of items, names, or numbers. You can select which headers you want to use for the sort, and whether to sort in ascending or descending order. The following explains how to sort the *Last Names* in a table.

1. Click in the **cell** you want to use for sorting to make it an active cell. In this example, cell *B2* has been selected to sort by *Last Name* (see Figure 11).
2. On the *Home* tab, click the **Sort & Filter** button (see Figure 11).

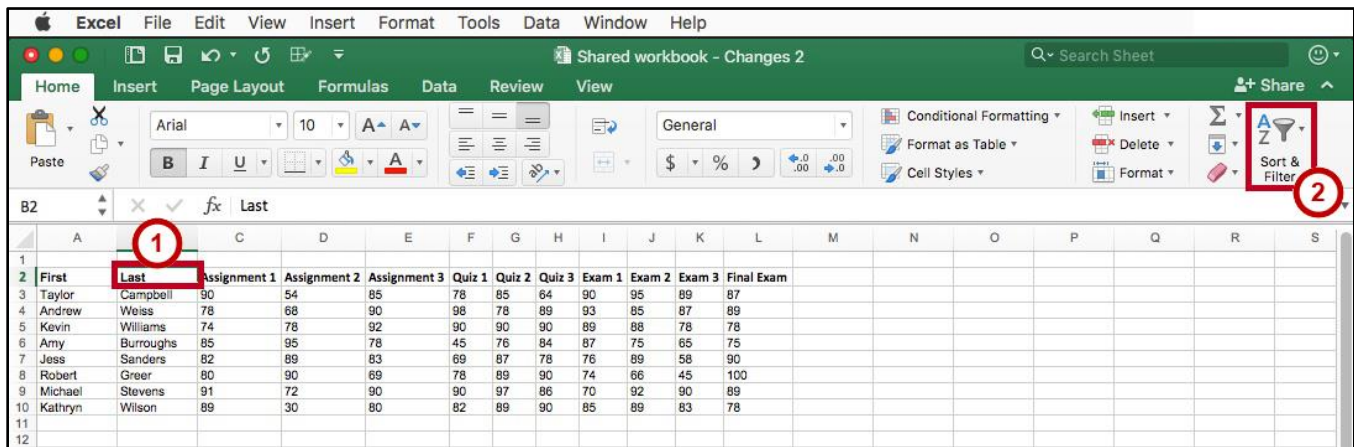


Figure 11 - Sort & Filter

3. Select **Sort A to Z**. This will sort the list alphabetically by *Last Name*, since the active cell was in the *Last Name* header column.

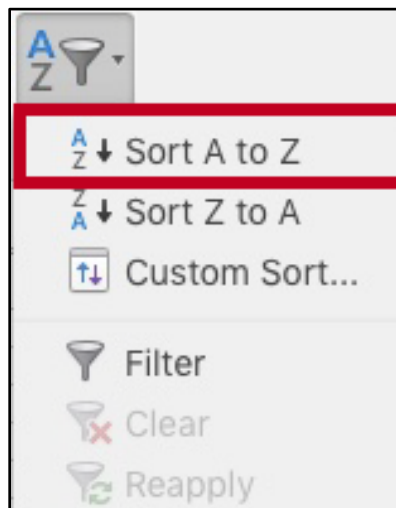


Figure 12 - Sort A to Z

4. The list is now sorted in alphabetical order by *Last Name*.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2	First	Last	Assignment 1	Assignment 2	Assignment 3	Quiz 1	Quiz 2	Quiz 3	Exam 1	Exam 2	Exam 3	Final Exam
3	Amy	Burroughs	85	95	78	45	76	84	87	75	65	75
4	Taylor	Campbell	90	54	85	78	85	64	90	95	89	87
5	Robert	Greer	80	90	69	78	89	90	74	66	45	100
6	Jess	Sanders	82	89	83	69	87	78	76	89	58	90
7	Michael	Stevens	91	72	90	90	97	86	70	92	90	89
8	Andres	Weiss	78	68	90	98	78	89	93	85	87	89
9	Kevin	Williams	74	78	92	90	90	90	89	88	78	78
10	Kathryn	Wilson	89	30	80	82	89	90	85	89	83	78
11												

Figure 13 - Sorting

Sorting with the Data Sort Menu

Another way to sort in Excel is with the *Data Sort* menu. The following explains how to sort by *Last Name* using **Data Sort**.

1. Click the heading labeled **Last** to select the *Last Name* column.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2	First	Last	Assignment 1	Assignment 2	Assignment 3	Quiz 1	Quiz 2	Quiz 3	Exam 1	Exam 2	Exam 3	Final Exam	
3	Taylor	Campbell	90	54	85	78	85	64	90	95	89	87	
4	Andres	Weiss	78	68	90	98	78	89	93	85	87	89	
5	Kevin	Williams	74	78	92	90	90	90	89	88	78	78	
6	Amy	Burroughs	85	95	78	45	76	84	87	75	65	75	
7	Jess	Sanders	82	89	83	69	87	78	76	89	58	90	
8	Robert	Greer	80	90	69	78	89	90	74	66	45	100	
9	Michael	Stevens	91	72	90	90	97	86	70	92	90	89	
10	Kathryn	Wilson	89	30	80	82	89	90	85	89	83	78	
11													

Figure 14 - Selecting the Last Name Column

2. From the *Data* tab, click the **Sort** button.

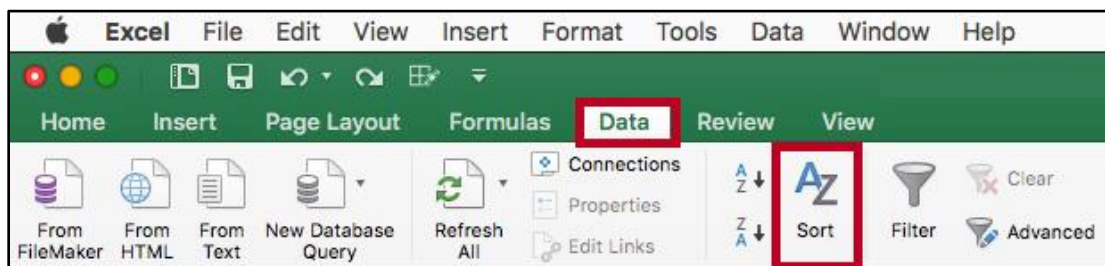


Figure 15 - Data Sort

3. The *Sort* dialog box appears. Select the **Column** that you want to sort by from the *Sort by* field (See Figure 16).
4. In the *Sort On* drop-down, make sure **Values** is selected (See Figure 16).
5. In the *Order* drop-down, select **A-Z** to sort your data by alphabetical order (See Figure 16).
6. Click **OK**. The data will be sorted by alphabetical order (See Figure 16).

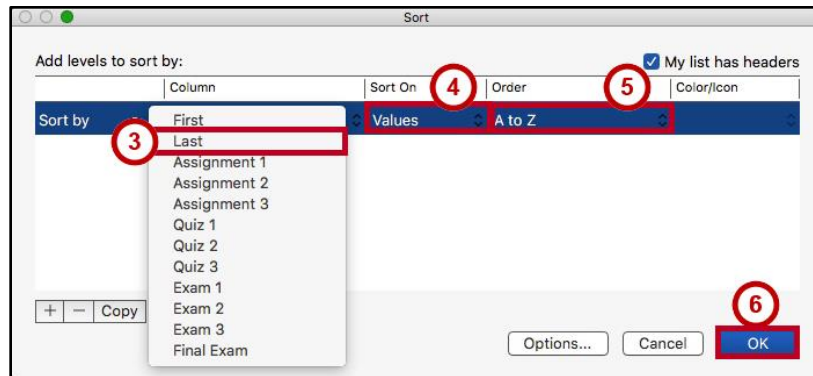


Figure 16 - Sort Dialog Box

7. To add additional sort levels, click the **Add** button.

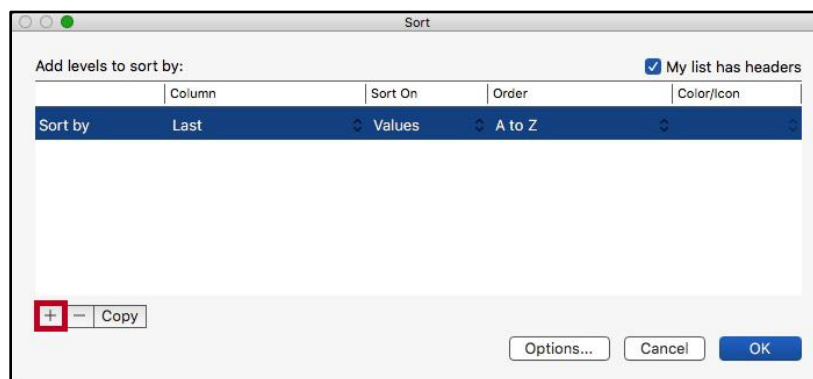


Figure 17 - Add Sort Level

8. Once the second level has been inserted, select the **Column**, how it is sorted, and in what order.

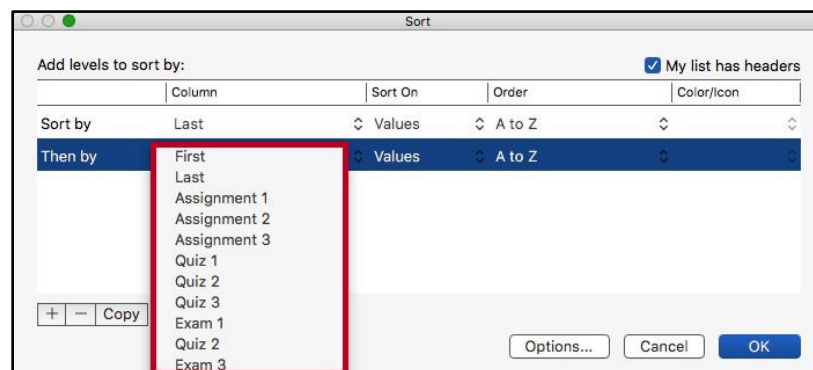


Figure 18 - Select the Column

9. Then, add other levels or modify levels and their criteria as needed to sort in the manner that is needed.
10. Click **OK** when you have made all necessary changes.

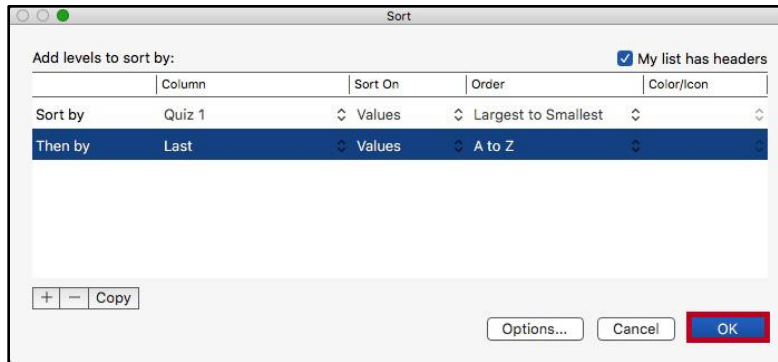


Figure 19 - Sort Level Changes.

Formatting

Formatting as a Table

With *Excel*, you have the ability to format data as a table. With these tables, you may readily organize, sort, and filter your data while also easily making your cells visually appealing. The following explains how to format your data as a table.

1. Select the **desired cell range** that you wish to format as a table.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2	First	Last	Assignment 1	Assignment 2	Assignment 3	Quiz 1	Quiz 2	Quiz 3	Exam 1	Exam 2	Exam 3	Final Exam	
3	Amy	Burroughs	85	95	78	45	76	84	87	75	65	75	
4	Taylor	Campbell	90	54	85	78	85	64	90	95	89	87	
5	Robert	Greer	80	90	69	78	89	90	74	66	45	100	
6	Jess	Sanders	82	89	83	69	87	78	76	89	58	90	
7	Michael	Stevens	91	72	90	90	97	86	70	92	90	89	
8	Andres	Weiss	78	68	90	98	78	89	93	85	87	89	
9	Kevin	Williams	74	78	92	90	90	90	89	88	78	78	
10	Kathryn	Wilson	89	30	80	87	89	90	85	89	83	78	
11													
12													

Figure 20 - Select Range

2. Click the **Format as Table** button located on the *Home* tab on the ribbon.

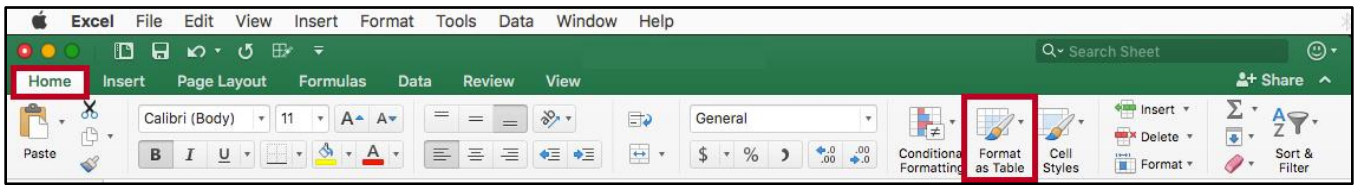


Figure 21 - Format as Table

3. In the *drop-down* that appears, select your desired **Table style**.

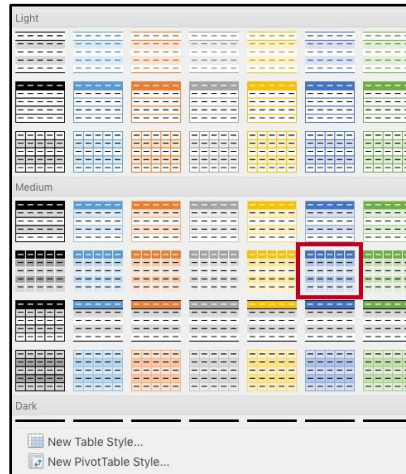


Figure 22 - Table Style

4. In the *Format as Table* window, the cells you selected in step 1 will appear. Click **OK**.

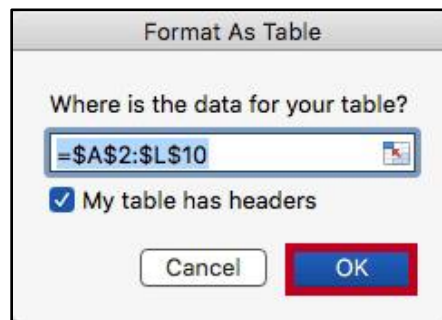


Figure 23 - Click Ok

5. The data will be formatted as a table according to your specifications.

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2	First	Last	Assignment 1	Assignment 2	Assignment 3	Quiz 1	Quiz 2	Quiz 3	Exam 1	Exam 2	Exam 3	Final Exam
3	Amy	Burroughs	85	95	78	45	76	84	87	75	65	75
4	Taylor	Campbell	90	54	85	78	85	64	90	95	89	87
5	Robert	Greer	80	90	69	78	89	90	74	66	45	100
6	Jess	Sanders	82	89	83	69	87	78	76	89	58	90
7	Michael	Stevens	91	72	90	90	97	86	70	92	90	89
8	Andres	Weiss	78	68	90	98	78	89	93	85	87	89
9	Kevin	Williams	74	78	92	90	90	90	89	88	78	78
10	Kathryn	Wilson	89	30	80	82	89	90	85	89	83	78
11												

Figure 24 - Formatted Tables

Conditional Formatting

Conditional formatting is a very useful tool that will allow you to automatically format your data in order to provide a useful way to visualize information and make your worksheet easier to understand. With conditional formatting, you will be able to apply formatting such as different colors to one or more cells based on cell value. The following explains how to apply *Conditional Formatting* to your spreadsheet.

1. Select the **desired cell range** that you wish to apply the conditional formatting rule.

	A	B	C	D	E	F	G
1							
2	Goodman State	20455	25802	26901	27011	Average	
3	University of East Georgia	33580	33830	34020	34500	33983	
4	Fayetteville State Univ.	10345	10743	10982	11002	10768	
5	Wilson Institute of Tech	25902	26834	27023	28043	26951	
6	Southern Chattahoochie State	5180	5243	5620	5832	5469	
7	Klendagon University	7232	6482	5234	6013	6240	
8	Aegis State	3500	3208	3401	3580	3422	
9	Taylor College	294	301	312	298	301	
10	Total	106488	112443	113493	116279	112176	
11							

Figure 25 - Select Desired Range

2. From the *Home* tab, click **Conditional Formatting**.

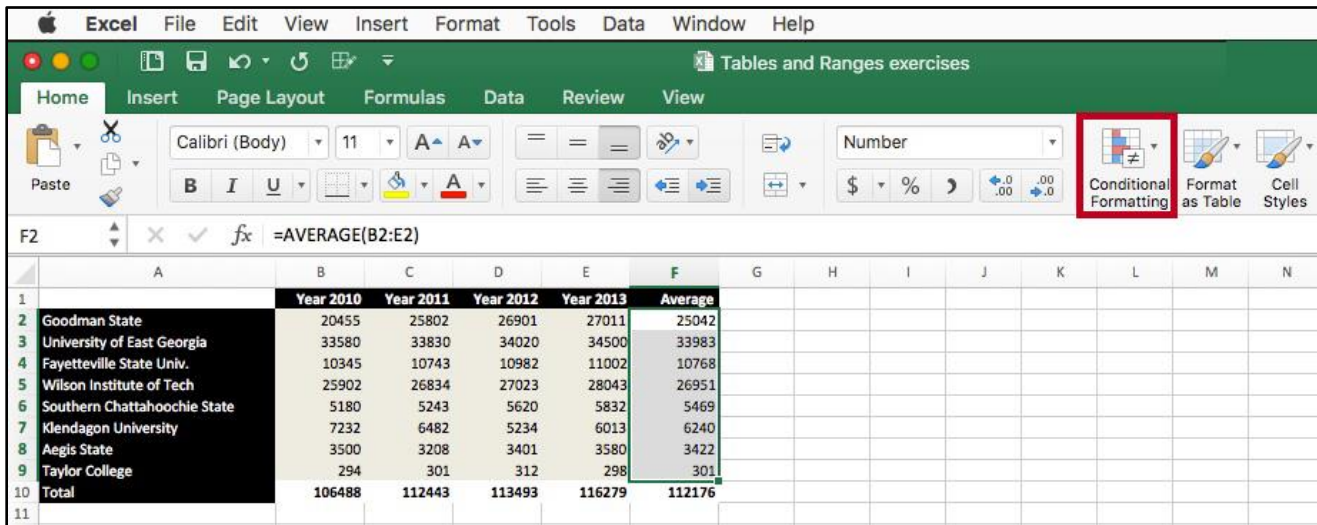


Figure 26 - Conditional Formatting

3. In the *drop-down menu*, hover your mouse over **Highlight Cell Rules** to display conditional formatting types.

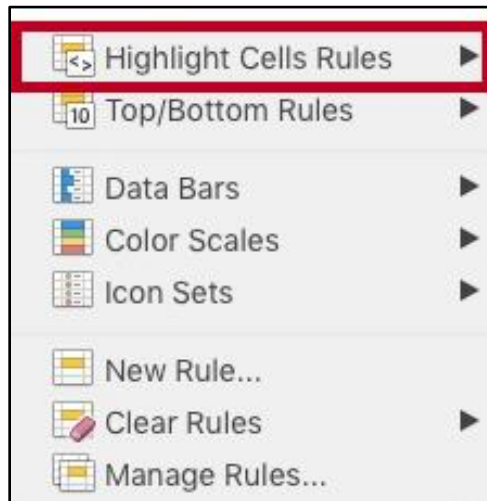


Figure 27 - Highlight Cell Rules

4. In this example, we want to highlight those values greater than \$10000. To do so, click the **Greater Than** option.

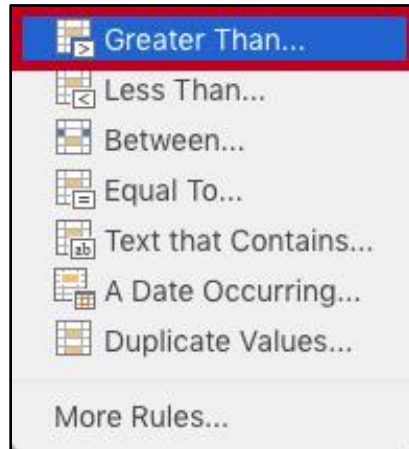


Figure 28 - Conditional Formatting Types: Greater Than

5. The *New Formatting Rule* dialog box opens with pre-filled selections for the rule. In the *Greater Than* box that appears, enter the **desired value** into the field. In this example, enter **10000**.

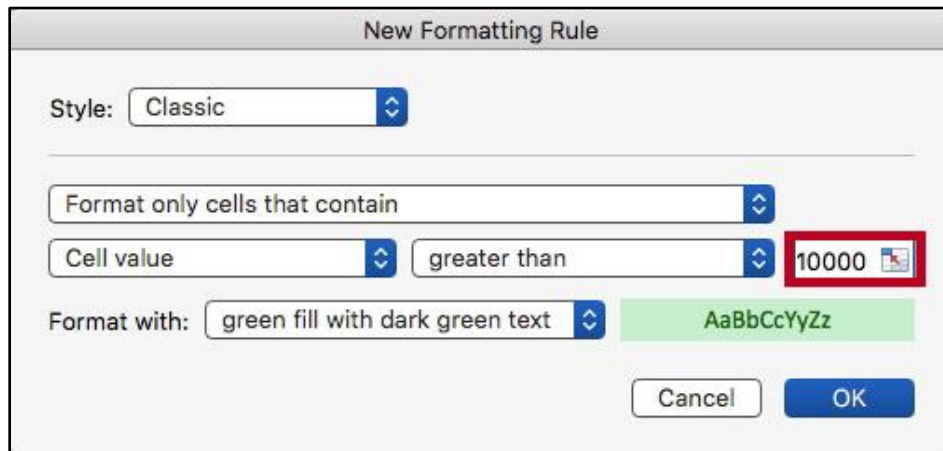


Figure 29 - Enter your desired value

6. In the *Format with* drop-down box, select your preferred **highlight colors**.

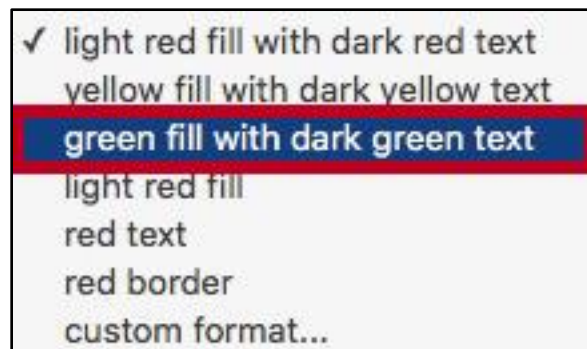


Figure 30 - Select your preferred highlight colors

7. The *conditional formatting style* will be applied to the selected cells.

	A	B	C	D	E	F	G
1		Year 2010	Year 2011	Year 2012	Year 2013	Average	
2	Goodman State	20455	25802	26901	27011	25042	
3	University of East Georgia	33580	33830	34020	34500	33983	
4	Fayetteville State Univ.	10345	10743	10982	11002	10768	
5	Wilson Institute of Tech	25902	26834	27023	28043	26951	
6	Southern Chattahoochie State	5180	5243	5620	5832	5469	
7	Klendagon University	7232	6482	5234	6013	6240	
8	Aegis State	3500	3208	3401	3580	3422	
9	Taylor College	294	301	312	298	301	
10	Total	106488	112443	113493	116279	112176	
11							
12							

Figure 31 - Conditional Formatting Applied

Removing Conditional Formatting

The following explains how to remove conditional formatting from your entire spreadsheet:

1. From the *Home* tab, click **Conditional Formatting**.

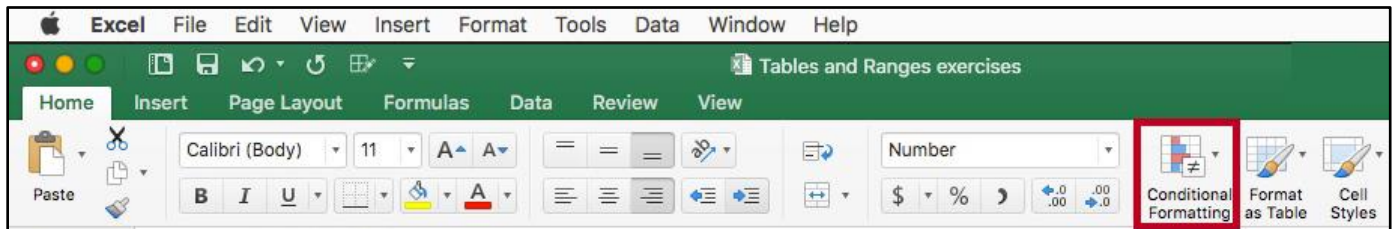


Figure 32 - Conditional Formatting

2. A drop-down box appears. Hover your mouse over **Clear Rules** to view a list of options for removal of rules.

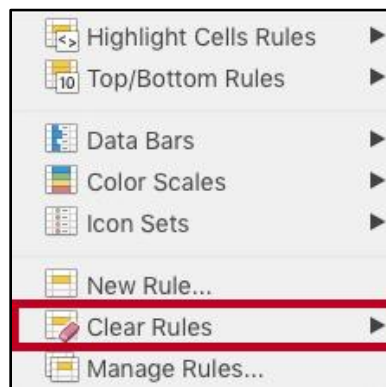


Figure 33 - Clear Rules

3. To clear rules from the entire sheet, click **Clear Rules from Entire Sheet**. Your *Conditional Formatting* rules will be cleared.

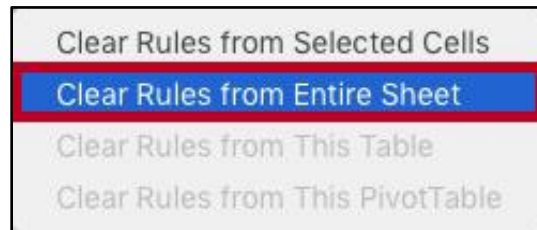


Figure 34 - Clear Rules from the Entire Sheet

Additional Help

For additional support, please contact the KSU Service Desk:

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