Kennesaw State University

University Information Technology Services

Microsoft Office Excel 2016 for Windows

Ranges & Tables

University Information Technology Services

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Microsoft Office: Excel 2016
Ranges & 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.

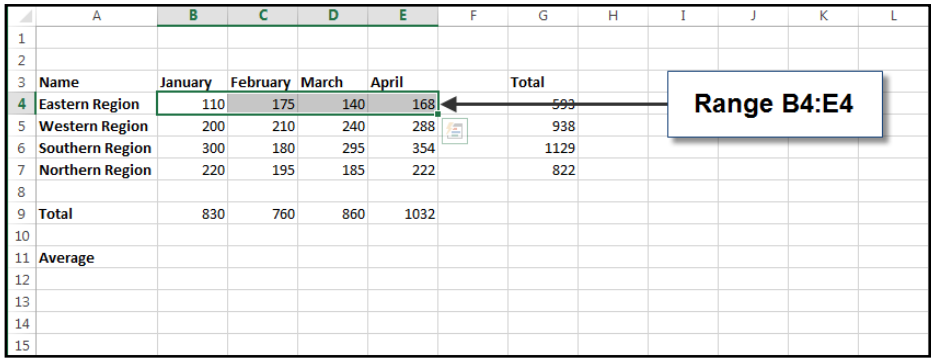
Term	Definition
Range	A group of cells.
Name Box	Allows you to enter a name for a range.
Formula Bar	A bar at the top of the Excel window that you use to enter formulas.

Figure 1 - Definitions

Selecting a Range

The following explains how to select a range.

1. Click the first **cell** that you want to select.
2. Highlight the **cells** that you want to include in the range.



	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3	Name	January	February	March	April		Total					
4	Eastern Region	110	175	140	168		593					
5	Western Region	200	210	240	288		938					
6	Southern Region	300	180	295	354		1129					
7	Northern Region	220	195	185	222		822					
8												
9	Total	830	760	860	1032							
10												
11	Average											
12												
13												
14												
15												

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 above (see Figure 2), *Eastern Region* by following the steps listed below.

1. Highlight cells **B4 through E4**.
2. Click the **Name Box**.

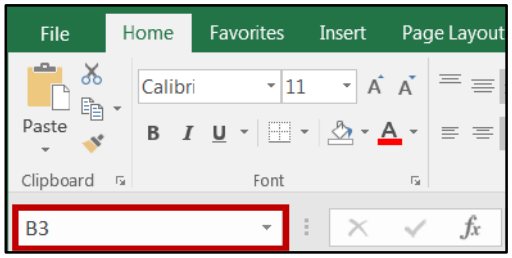


Figure 3 - Name Box Drop-Down

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

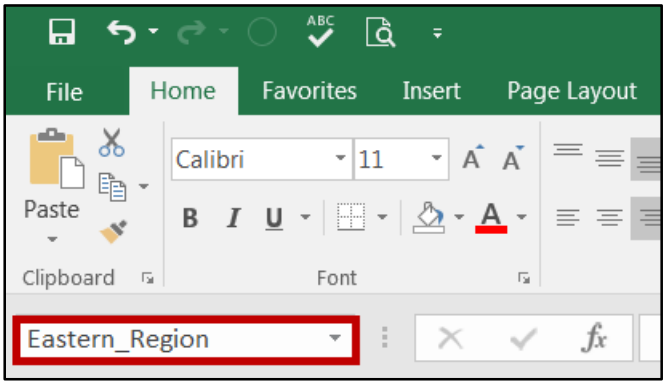
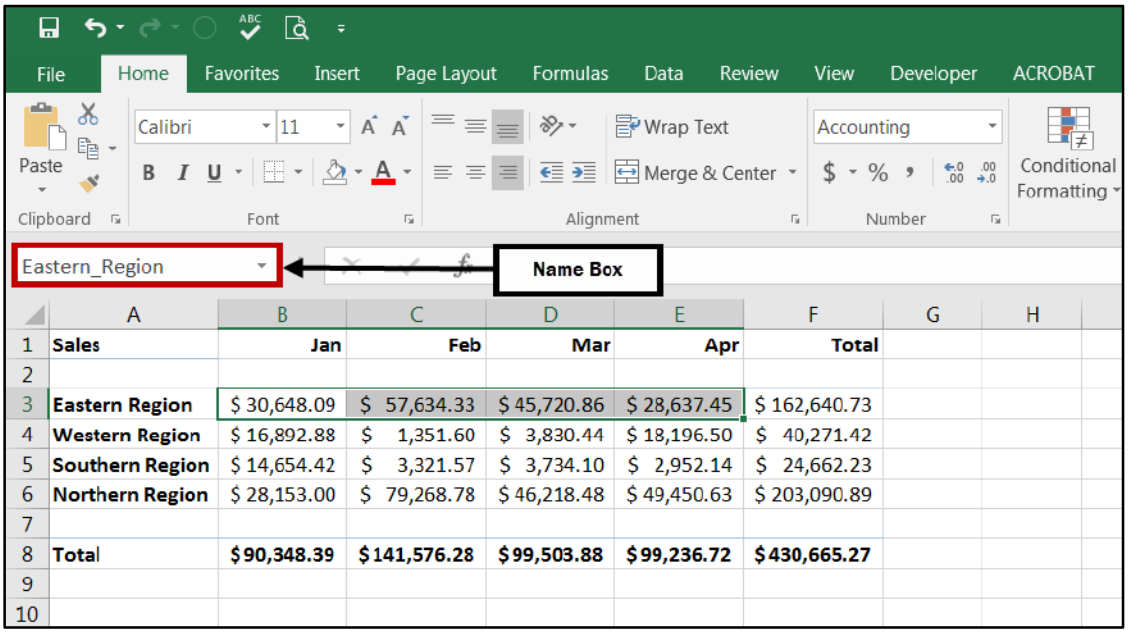


Figure 4 – Eastern Region

Note: The name may 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_Region* appears in the *Name Box* for the range selected.



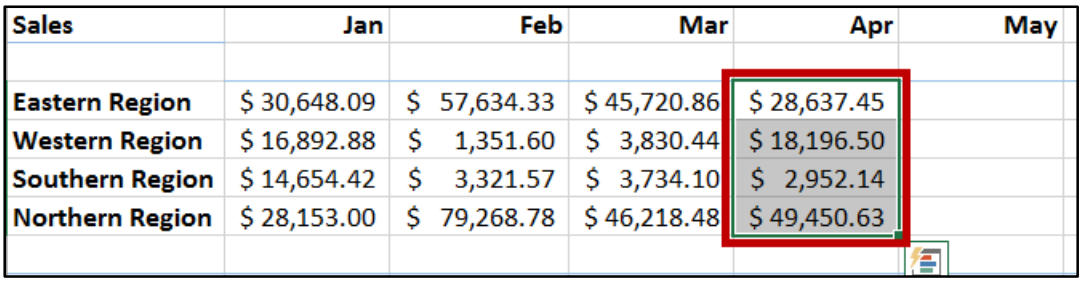
	A	B	C	D	E	F	G	H
1	**Sales**	**Jan**	**Feb**	**Mar**	**Apr**	**Total**		
2								
3	**Eastern Region**	$ 30,648.09	$ 57,634.33	$ 45,720.86	$ 28,637.45	$ 162,640.73		
4	**Western Region**	$ 16,892.88	$ 1,351.60	$ 3,830.44	$ 18,196.50	$ 40,271.42		
5	**Southern Region**	$ 14,654.42	$ 3,321.57	$ 3,734.10	$ 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**	**$ 141,576.28**	**$ 99,503.88**	**$ 99,236.72**	**$ 430,665.27**		
9								
10								

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.



Sales	Jan	Feb	Mar	Apr	May
Eastern Region	$ 30,648.09	$ 57,634.33	$ 45,720.86	$ 28,637.45	
Western Region	$ 16,892.88	$ 1,351.60	$ 3,830.44	$ 18,196.50	
Southern Region	$ 14,654.42	$ 3,321.57	$ 3,734.10	$ 2,952.14	
Northern Region	$ 28,153.00	$ 79,268.78	$ 46,218.48	$ 49,450.63	

Figure 6 - Select a Range to Copy

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

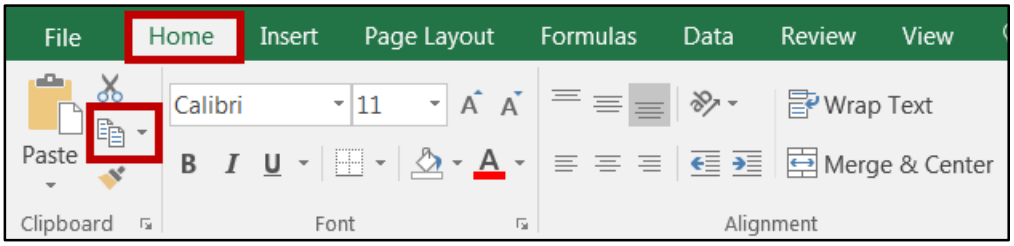
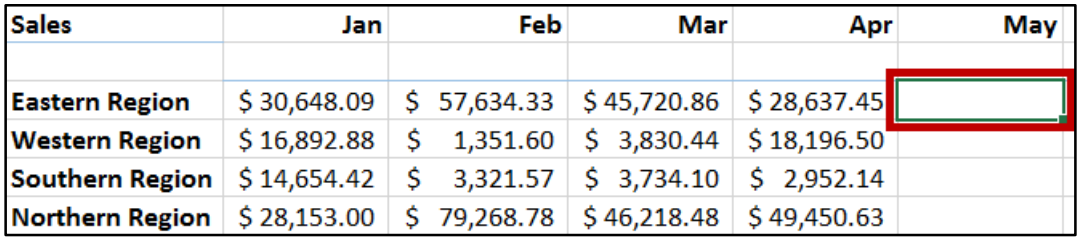


Figure 7 – Copy Button

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



Sales	Jan	Feb	Mar	Apr	May
Eastern Region	$ 30,648.09	$ 57,634.33	$ 45,720.86	$ 28,637.45	
Western Region	$ 16,892.88	$ 1,351.60	$ 3,830.44	$ 18,196.50	
Southern Region	$ 14,654.42	$ 3,321.57	$ 3,734.10	$ 2,952.14	
Northern Region	$ 28,153.00	$ 79,268.78	$ 46,218.48	$ 49,450.63	

Figure 8 - Copy Destination

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

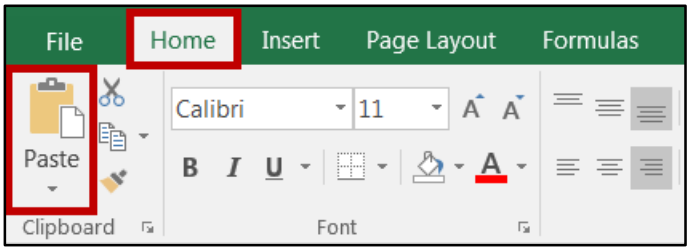


Figure 9 – Paste Button

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

Sales	Jan	Feb	Mar	Apr	May
Eastern Region	$ 30,648.09	$ 57,634.33	$ 45,720.86	$ 28,637.45	$ 28,637.45
Western Region	$ 16,892.88	$ 1,351.60	$ 3,830.44	$ 18,196.50	$ 18,196.50
Southern Region	$ 14,654.42	$ 3,321.57	$ 3,734.10	$ 2,952.14	$ 2,952.14
Northern Region	$ 28,153.00	$ 79,268.78	$ 46,218.48	$ 49,450.63	$ 49,450.63

Figure 10 - Copied Data

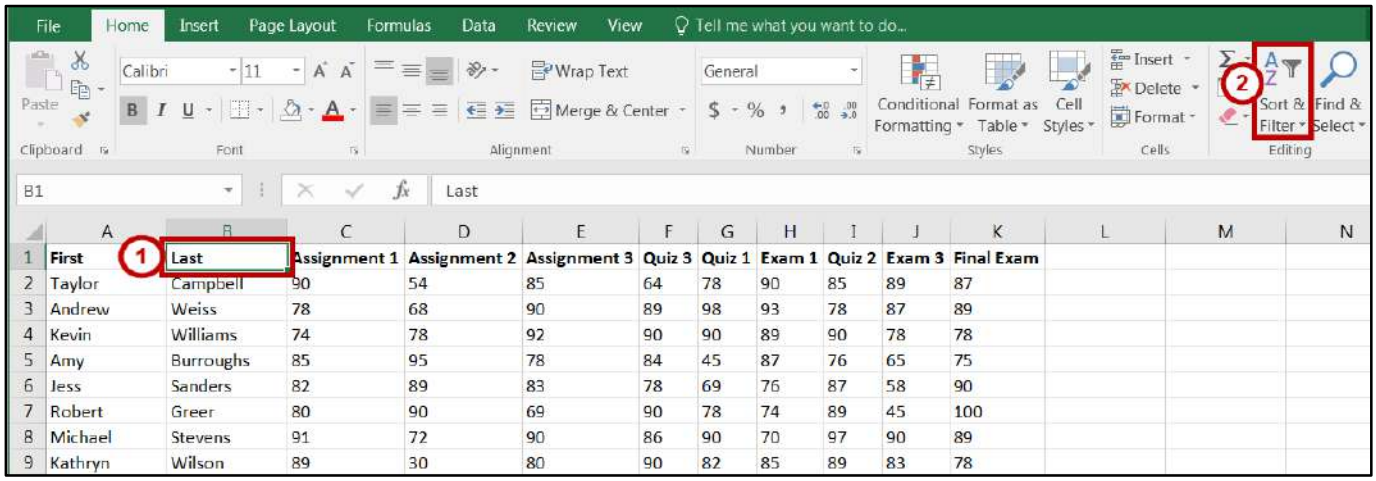
Sorting

Sorting with the Sort & Filter Button

Excel gives you the ability to sort a list of items, names, or numbers. You can select which field or fields you want to use for the sort, and whether to sort in ascending or descending order. The following explains how to sort the First 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 *B1* has been selected to sort by *Last Name* (see Figure 11).

2. On the *Home* tab, click the **Sort & Filter** button (see Figure 11).



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

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* column.

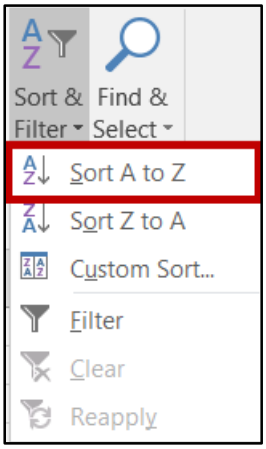


Figure 12 - Sort A to Z

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

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

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 L*ast Name* column.

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

Figure 14 - Selecting the Last Name Column

2. From the *Data t*ab, click the **Sort** button.

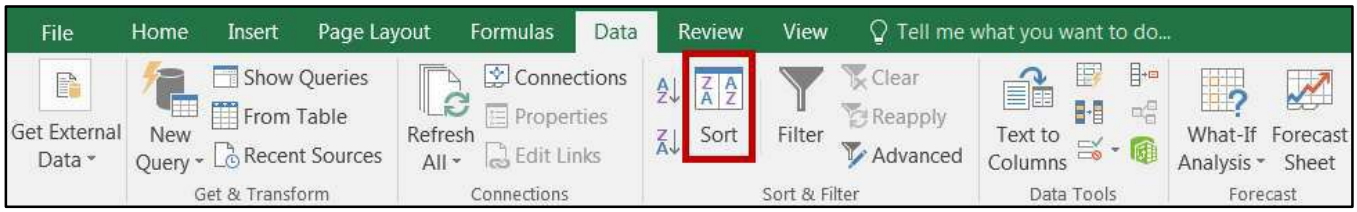


Figure 15 - Data Sort

3. The *Sort* dialog box appears. Select the **column heading** that you want to sort by from the *Sort by* field.

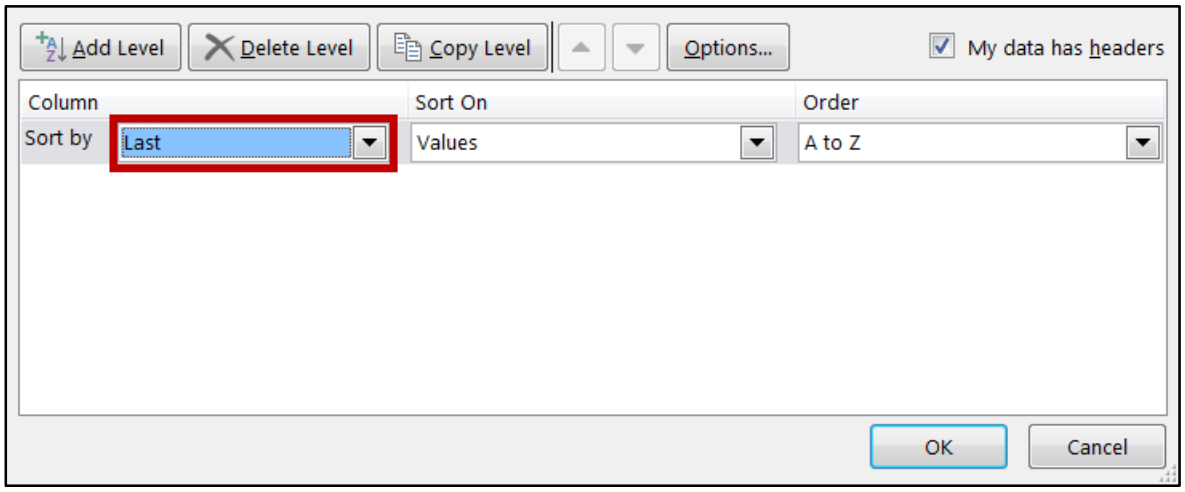


Figure 16 - Sort by field

4. In the *Sort On* drop-down, make sure **Values** is selected.
5. In the *Order* drop-down, select **A-Z** to sort your data by alphabetical order.

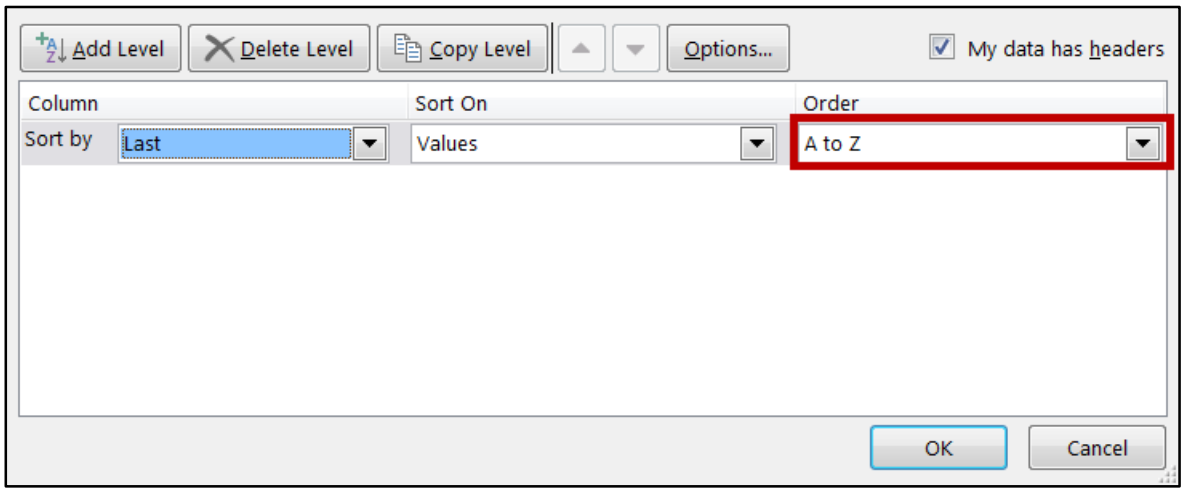


Figure 17 - Order

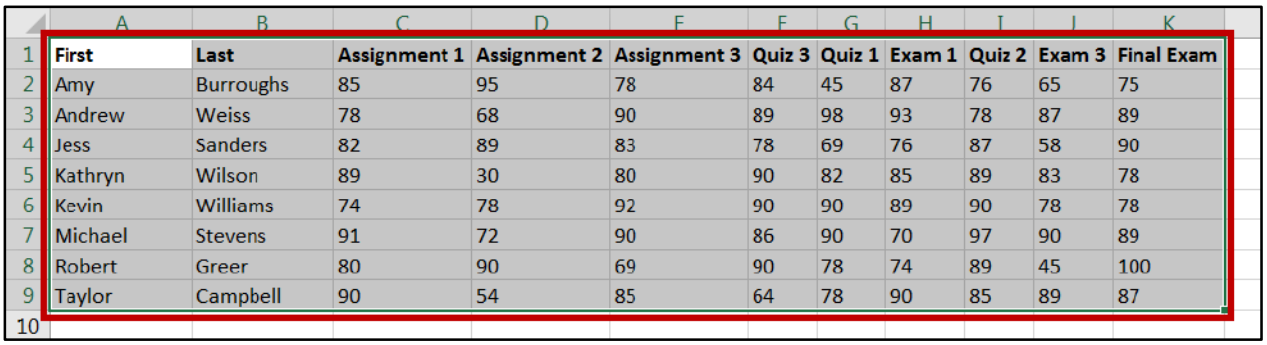
6. Click **OK**. The data will be sorted by alphabetical order.

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
1	First	Last	Assignment 1	Assignment 2	Assignment 3	Quiz 3	Quiz 1	Exam 1	Quiz 2	Exam 3	Final Exam
2	Amy	Burroughs	85	95	78	84	45	87	76	65	75
3	Andrew	Weiss	78	68	90	89	98	93	78	87	89
4	Jess	Sanders	82	89	83	78	69	76	87	58	90
5	Kathryn	Wilson	89	30	80	90	82	85	89	83	78
6	Kevin	Williams	74	78	92	90	90	89	90	78	78
7	Michael	Stevens	91	72	90	86	90	70	97	90	89
8	Robert	Greer	80	90	69	90	78	74	89	45	100
9	Taylor	Campbell	90	54	85	64	78	90	85	89	87
10											

Figure 18 - Select Range

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

Figure 19 - Format as Table

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

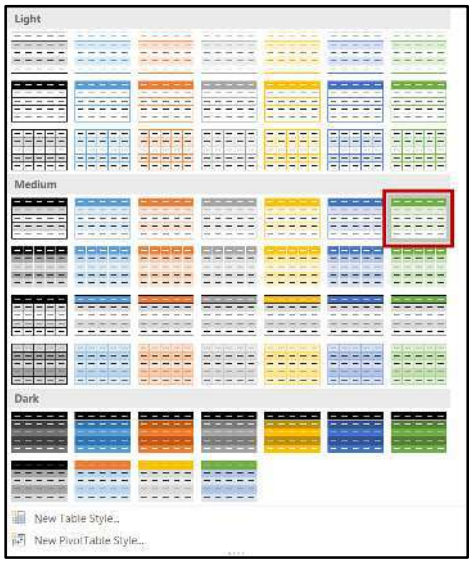


Figure 20 - Table Style

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

Figure 21 - 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
1	First	Last	Assignment 1	Assignment 2	Assignment 3	Quiz 3	Quiz 1	Exam 1	Quiz 2	Exam 3	Final Exam
2	Amy	Burroughs	85	95	78	84	45	87	76	65	75
3	Andrew	Weiss	78	68	90	89	98	93	78	87	89
4	Jess	Sanders	82	89	83	78	69	76	87	58	90
5	Kathryn	Wilson	89	30	80	90	82	85	89	83	78
6	Kevin	Williams	74	78	92	90	90	89	90	78	78
7	Michael	Stevens	91	72	90	86	90	70	97	90	89
8	Robert	Greer	80	90	69	90	78	74	89	45	100
9	Taylor	Campbell	90	54	85	64	78	90	85	89	87
10											

Figure 22 - 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	H	I
1		Jan	Feb	Mar	Apr	May	Jun		Average
2	Wilson	3042	4245	4235	5678	6890	7053		5190.50
3	Murray	5676	3574	4263	6045	5267	4352		4862.83
4	Smith	5325	4567	6542	5674	4246	4563		5152.83
5	Richards	4367	3467	4324	4256	5667	6423		4750.67
6	Andrew	2685	5425	4903	3464	3424	6346		4374.50
7	Marshall	3636	3267	1256	2357	4326	5423		3377.50
8	Total	24731	24545	25523	27474	29820	34160		27708.83
9									

Figure 23 - Select Desired Range

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

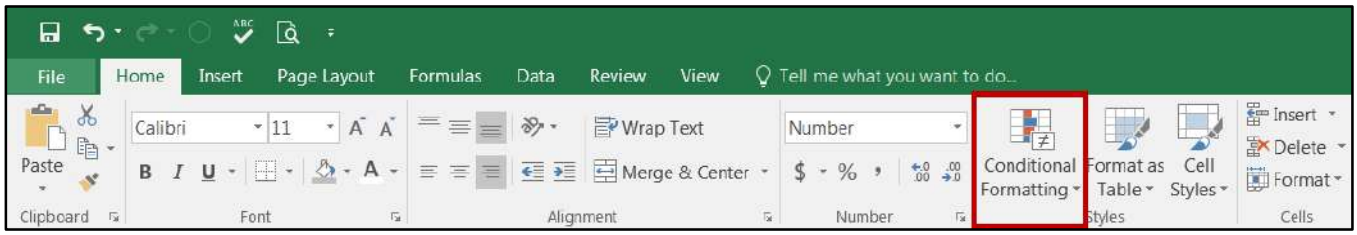


Figure 24 - Conditional Formatting

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

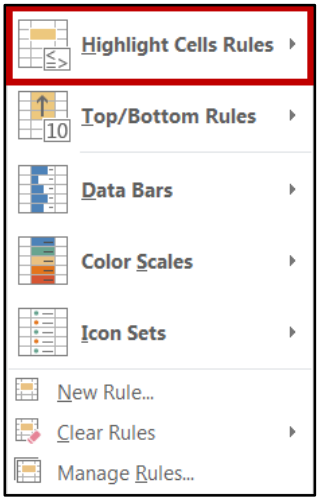


Figure 25 - Highlight Cell Rules

4. In this example, we want to highlight those values greater than $5000. To do so, click the **Greater Than** option.

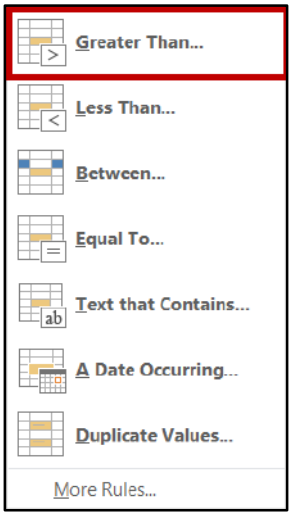


Figure 26 – Conditional Formatting Types: Greater Than

5. In the *Greater Than box* that appears, enter the **desired value** into the field. In this example, enter **5000**.

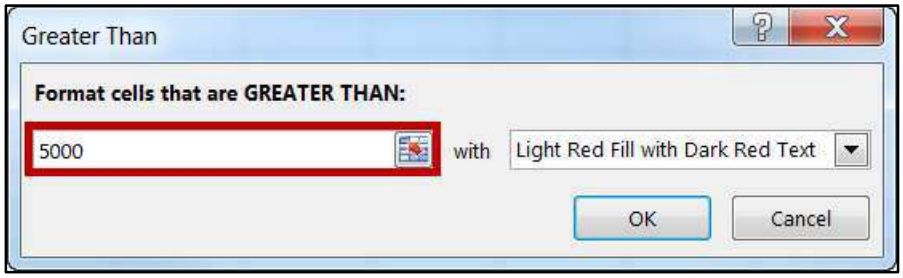


Figure 27 - Enter your desired value

6. In the *formatting style drop-down*, select your preferred **highlight colors**.

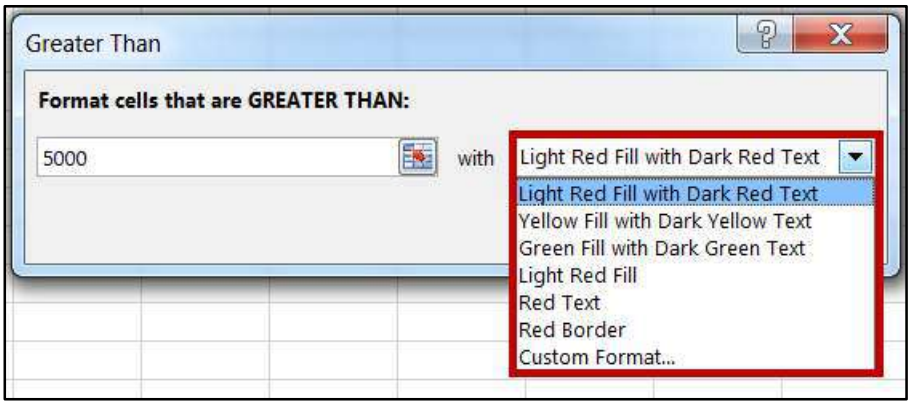


Figure 28 - Select your preferred highlight colors

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

	A	B	C	D	E	F	G	H	I
1		Jan	Feb	Mar	Apr	May	Jun		Average
2	Wilson	3042	4245	4235	5678	6890	7053		5190.50
3	Murray	5676	3574	4263	6045	5267	4352		4862.83
4	Smith	5325	4567	6542	5674	4246	4563		5152.83
5	Richards	4367	3467	4324	4256	5667	6423		4750.67
6	Andrew	2685	5425	4903	3464	3424	6346		4374.50
7	Marshall	3636	3267	1256	2357	4326	5423		3377.50
8	Total	24731	24545	25523	27474	29820	34160		27708.83

Figure 29 - 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**.

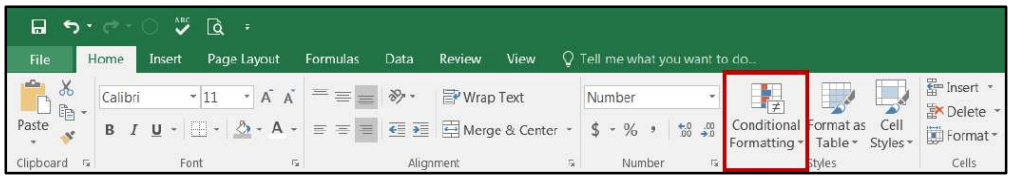


Figure 30 - Conditional Formatting

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

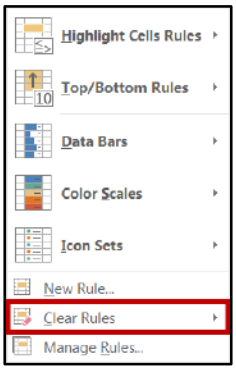


Figure 31 - Clear Rules

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

Figure 32 - Clear Rules from the Entire Sheet

Additional Help

For additional support, please contact the KSU Service Desk:

KSU Service Desk for Faculty & Staff

- Phone: 470-578-6999
- Email: service@kennesaw.edu
- Website: http://uits.kennesaw.edu

KSU Student Helpdesk

- Phone: 470-578-3555
- Email: studenthelpdesk@kennesaw.edu
- Website: http://uits.kennesaw.edu