

Excel Data 6: Pivot Charts, Slicers, and Dashboards



Excel Data 6: Pivot Charts, Slicers, and Dashboards

1.5 hour Classroom* / 1.0 hour Zoom Session

** Classroom sessions include time to repeat exercises for practice*

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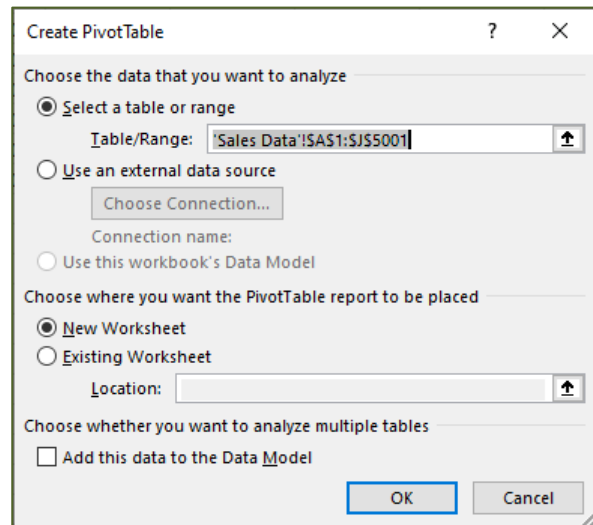
<http://media.news.health.ufl.edu/misc/training/Handouts/zoom/Excel/ExcelData6.zip>

Build Dashboard 1

Create PivotChart

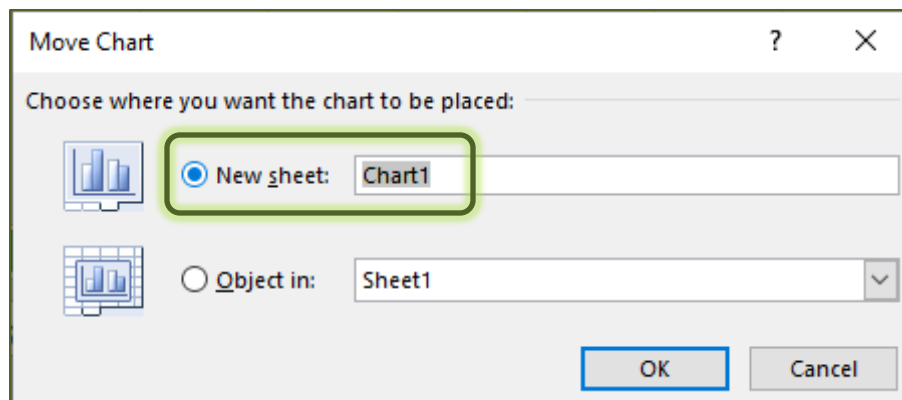
When you create a PivotChart, Excel will create a PivotTable to support the chart. I recommend building the PivotTable before creating the chart.

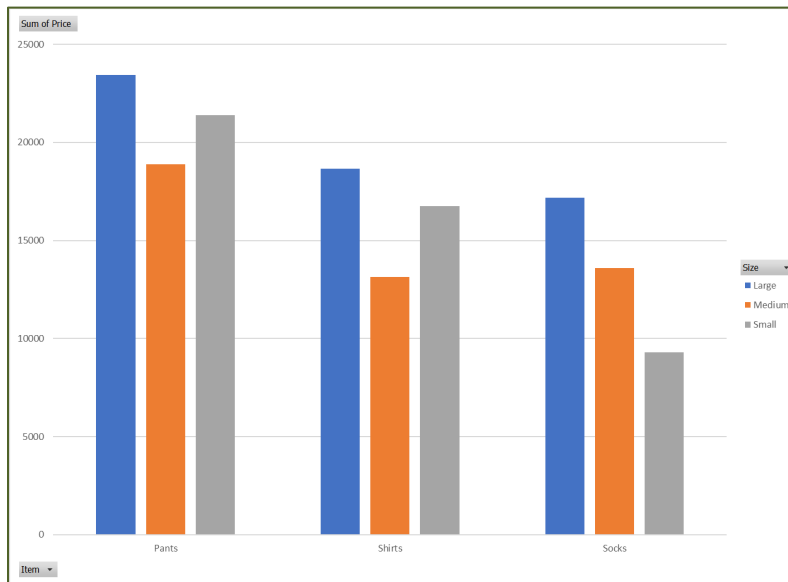
- 1) Open File: Data6-Sales.xlsx
- 2) From the **Insert** tab, choose **PivotTable**
 - Click **OK** to make a new PivotTable based on the current dataset on a new worksheet.
- 3) Build the table
 - Row: Items
 - Column: Size
 - Value: Sum Price



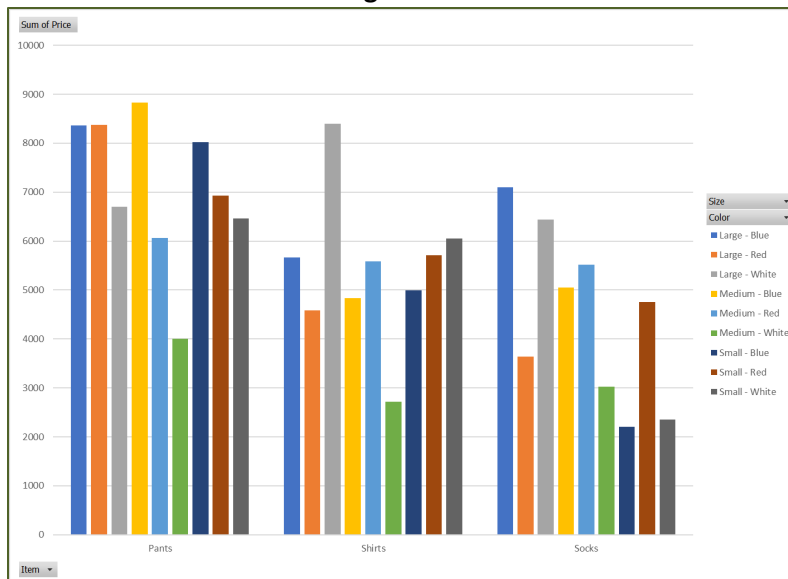
Sum of Price	Column Labels			
Row Labels	Large	Medium	Small	Grand Total
Pants	23433	18894	21402	63729
Shirts	18654	13131	16755	48540
Socks	17178	13594	9305	40077
Grand Total	59265	45619	47462	152346

- 4) On the PivotTable Analyze tab, choose **PivotChart**.
 - If needed, click **OK** to accept the **Clustered Column** chart
- 5) Move the chart to a new sheet
 - Option is the last button on the **Design** tab and can be found on the right-click menu
 - If you don't see the Design and Format tabs in the ribbon, click on the chart again





6) Add the field **Color** to the PivotChart's **Legend** area



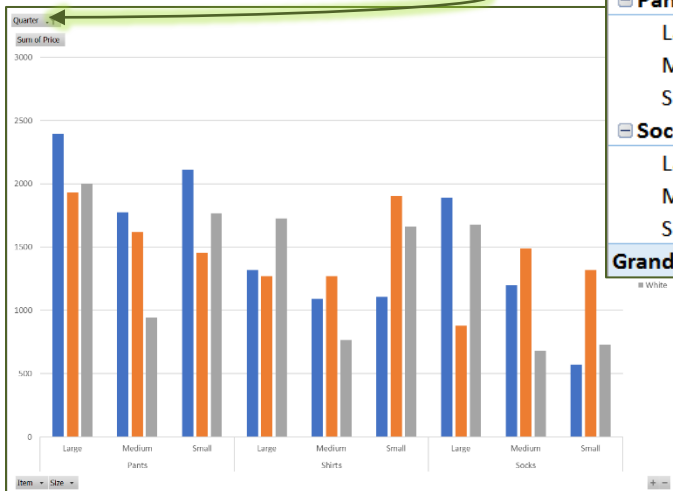
7) Return to PivotTable, move **Color** from Columns into Rows

Sum of Price									
Column Labels									
Row Labels	Large			Large Total	Medium			Medium Total	Small Total
	Blue	Red	White		Blue	Red	White		
Pants	8364	8372	6697	23433	8832	6060	4002	18894	21402
Shirts	5670	4584	8400	18654	4836	5580	2715	13131	16755
Socks	7098	3640	6440	17178	5050	5518	3026	13594	9305
Grand Total	21132	16596	21537	59265	18718	17158	9777	45619	47462

Sum of Price				
Column Labels				
Row Labels	Large			Grand Total
	Blue	Red	White	
Pants	23433	18894	21402	63729
Blue	8364	8832	8016	25212
Red	8372	6060	6926	21358
White	6697	4002	6460	17159
Shirts	18654	13131	16755	48540
Blue	5670	4836	4995	15501
Red	4584	5580	5712	15876
White	8400	2715	6048	17163
Socks	17178	13594	9305	40077
Blue	7098	5050	2200	14348
Red	3640	5518	4752	13910
White	6440	3026	2353	11819
Grand Total	59265	45619	47462	152346

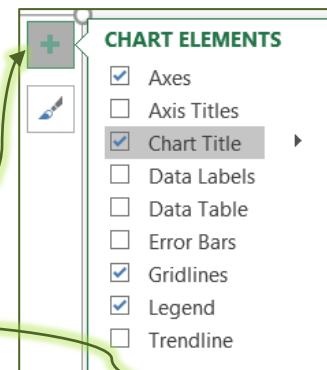
PivotChart Filtered Title

- 1) Add the field **Quarter** to the PivotChart's **Filters** area
- 2) Filter the chart to only show 1st Quarter
- 3) We can see the filtered value above the table but not on the chart.



Quarter	1st Quarter			
Sum of # Sold	Column Labels			
Row Labels	Blue	Red	White	Grand Total
Blouses	161	146	159	466
Large	88	10	92	190
Medium	23	78	25	126
Small	50	58	42	150
Pants	167	129	200	496
Large	15	85	75	175
Medium	63	17	64	144
Small	89	27	61	177
Socks	201	216	123	540
Large	83	45	43	171
Medium	26	76	64	166
Small	92	95	16	203
Grand Total	529	491	482	1502

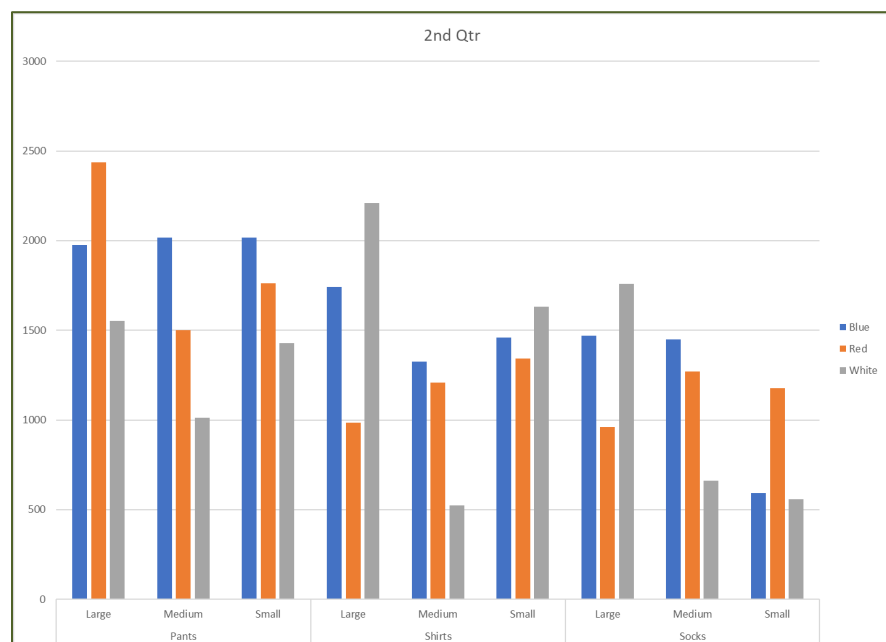
- 4) Click anywhere in the chart. Look for the big plus sign in the upper right-hand corner. Click on it and choose **Chart Title**
- 5) Click on the newly created Chart Title. Do not type inside the title, instead once it is selected click in the formula bar.
- 6) Press the equal sign on the keyboard, use your mouse to move back to the PivotTable, click in Cell B1 and press Enter



	A	B	C	D
1	Quarter	1st Quarter		
2				

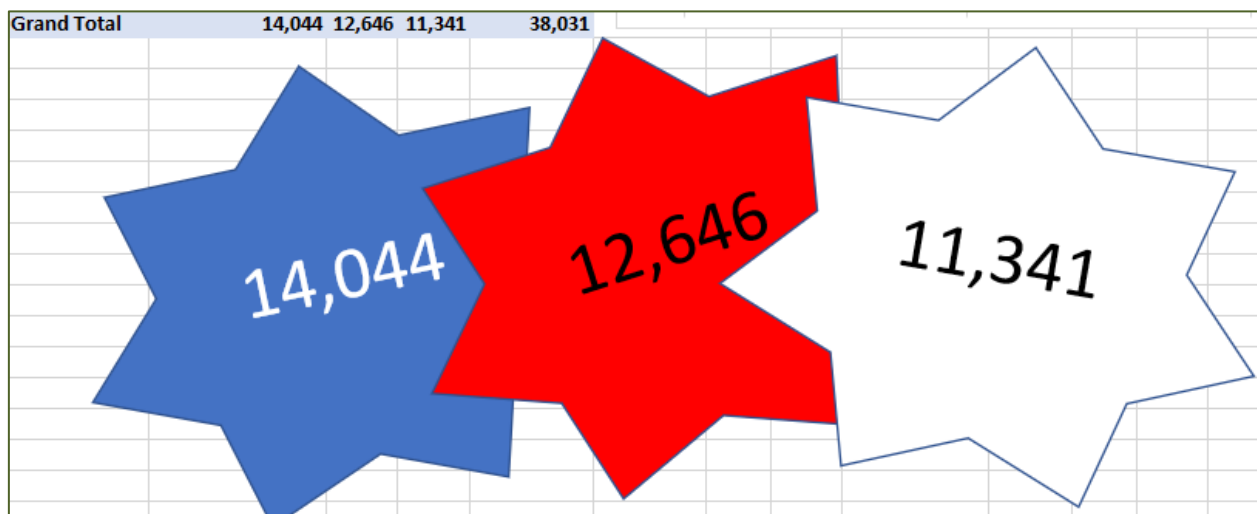
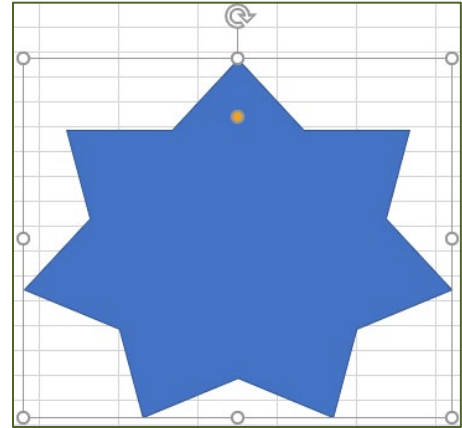
- 7) Change the Filter to **2nd Quarter**

RESULT



Add Dynamic Shapes

- 1) Move Chart back to Sheet 1
 - Option is the last button on the Design tab and can be found on the right-click menu
 - If you don't see the Design and Format tabs in the ribbon, click on the chart again
- 2) Resize the chart to fill the space
- 3) From the **Insert** tab, choose **Shapes**
- 4) Click on a shape, and drag across the window
- 5) Copy and paste the shape twice so you have three shapes, or make two new shapes from the **Insert** tab
- 6) Color them Red, White, and Blue
- 7) Click on the Blue shape and in the Formula bar put =B17
 - Or where your Color Red Total is in the worksheet
 - Do not click in the cell this time, it needs to be the address, not the PivotTable
- 8) Repeat for the Red and White shapes
- 9) You can format the Font and Alignment from the Home tab, but if you want the number to be formatted you have to change the cell.
- 10) Arrange and rotate
- 11) Change the Quarter filter and see the numbers change



Dashboard 1



Build Dashboard 2

Create Pivot Tables

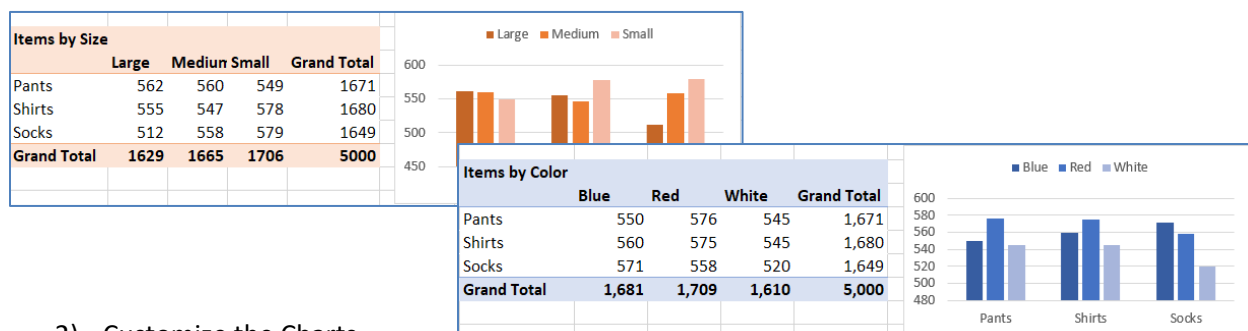
- 1) If needed, open the Data6-Sales.xlsx file
- 2) From sheet Sales data, Insert a Pivot table on a new sheet
- 3) Create the PivotTable as shown here →
- 4) Then use the PivotTable Tool Tabs to modify the look of the table.

Count of Item		Column Labels			
Row Labels		Large			
		Medium	Small	Grand Total	
Pants		562	560	549	1671
Shirts		555	547	578	1680
Socks		512	558	579	1649
Grand Total		1629	1665	1706	5000

- 5) Customize if desired
 - Remove Field Headers (Analyze tab)
 - Change **Count of Item** to **# of Items by Color**
- 6) Copy the # of Items by Color PivotTable and paste several columns over
 - Paste in Cell J3
- 7) From the column headings, remove the **Color** and add **Size**
- 8) Rename to **# of Items by Size**

Create Pivot Charts

- 1) Build a (clustered) column chart for each table.
 - Click in the table
 - Go to the Insert Tab
 - Choose Recommended Chart
 - Click OK



- 2) Customize the Charts
 - Remove the Field buttons (Analyze tab)
 - Move the Legend to the top of the charts (Add Chart Element on the Design tab)
 - Change the color scheme of each chart to be different (**Design** tab)

- 3) Resize both charts at once
 - Use the **Shift** key to select both charts at the same time (select one, shift-click the other)
 - Change the Height to 1.5", the Width to 3" (far right side of the *Format* tab)
 - Align the charts to the top of each other (*Format* tab)

SAVE YOUR FILE!

- 4) Make the final PivotTable
 - Copy one of the pivot tables and paste into cell A11

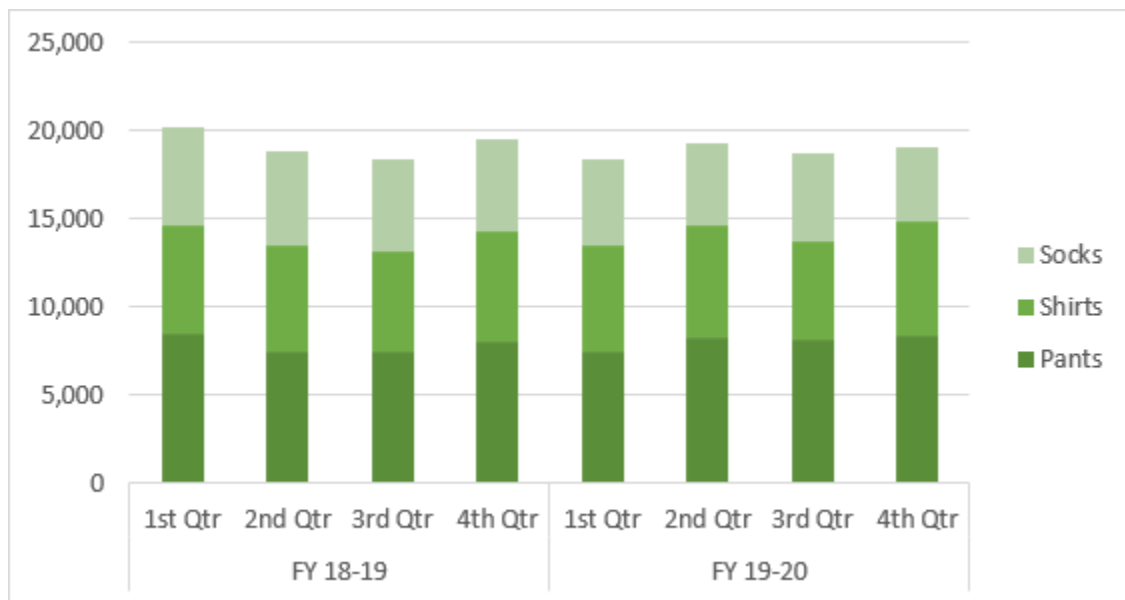
- 5) Set up the Pivot Table
 - Row: Fiscal Years, Quarter
 - Column: Item

- Values: Sum of Price

- 6) Modify the table
 - Hide the +/- buttons (*Analyze* tab)

Sum of Price	Pants	Shirts	Socks	Grand Total
FY 18-19	31,505	24,095	21,262	76,862
1st Qtr	8,544	6,091	5,563	20,198
2nd Qtr	7,438	6,093	5,248	18,779
3rd Qtr	7,511	5,693	5,221	18,425
4th Qtr	8,012	6,218	5,230	19,460
FY 19-20	32,224	24,445	18,815	75,484
1st Qtr	7,453	6,032	4,875	18,360
2nd Qtr	8,264	6,333	4,655	19,252
3rd Qtr	8,155	5,590	5,020	18,765
4th Qtr	8,352	6,490	4,265	19,107
Grand Total	63,729	48,540	40,077	152,346

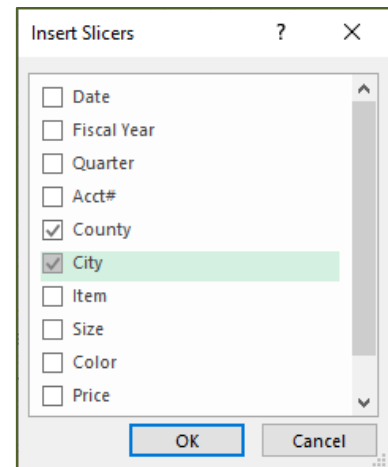
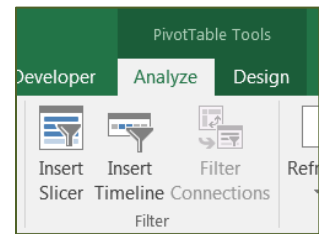
- 7) Create a Stacked Column chart
 - Remove the Field buttons (*Analyze* tab)
 - Move the Legend to the top of the charts (Add Chart Element on the *Design* tab)



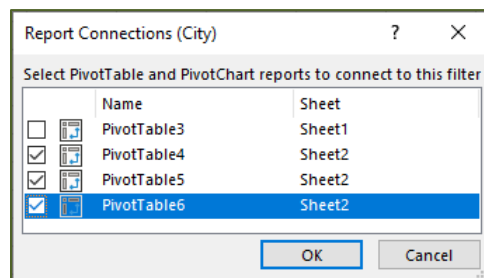
Insert Slicers

We can add a filter to each of the tables, but a **Slicer** can filter all three at once.

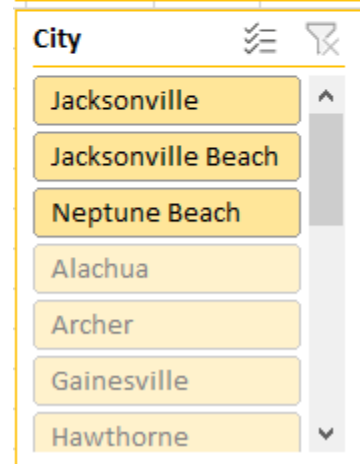
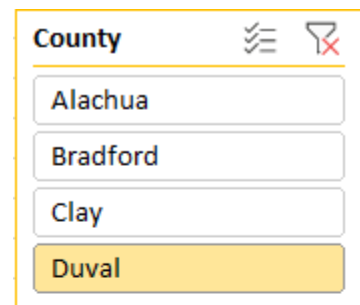
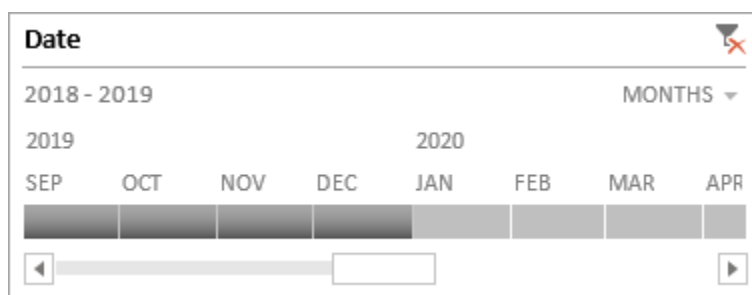
- 1) Click inside any PivotTable
- 2) **Insert Slicer** from the *Analyze* tab
- 3) Click the check box for **County** and **City**, click **OK**
- 4) Notice these values are not in our tables, but we can still use the slicer to filter by the values we choose.
- 5) While the slicer is selected choose **Report Connections** from the *Options* tab



- 6) Check all three tables on the list for this worksheet and click **OK**

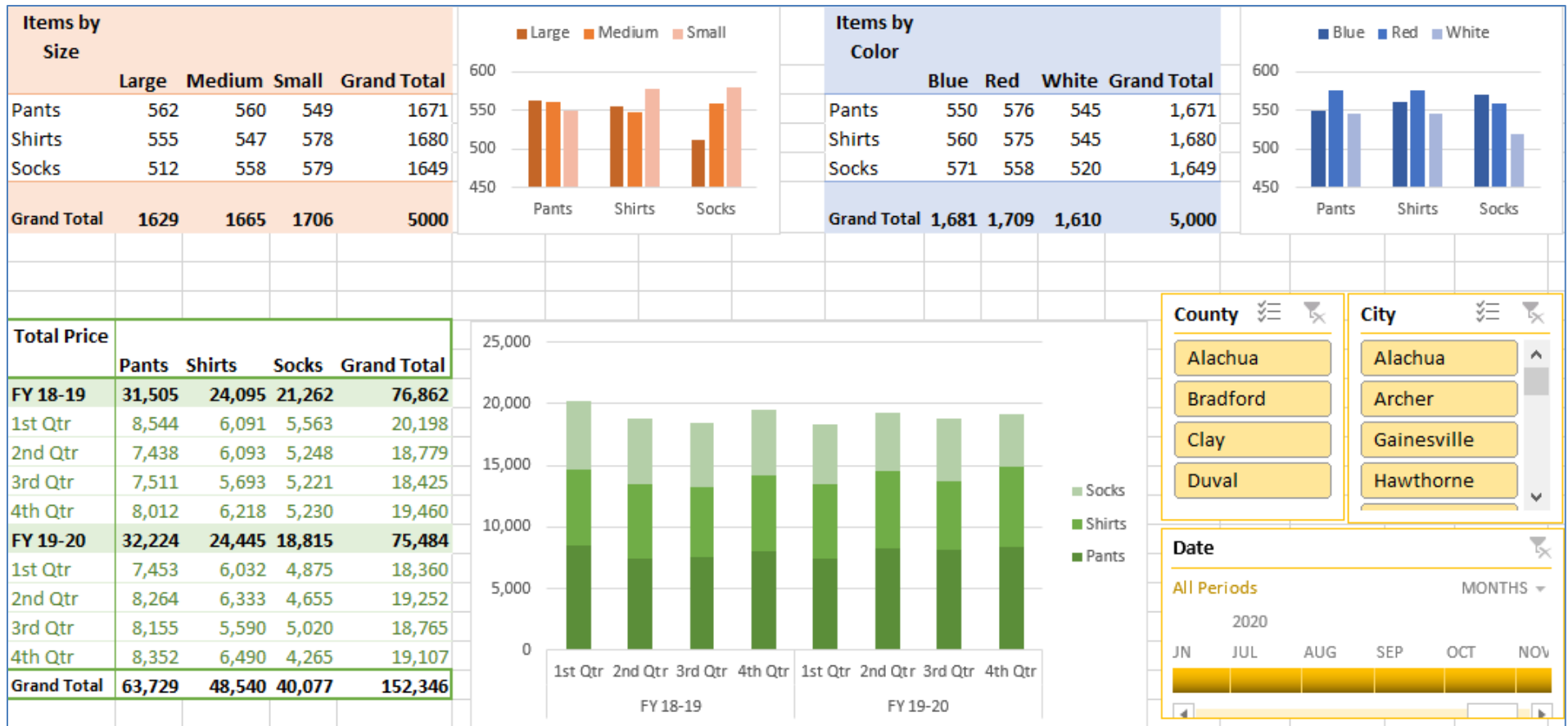


- 7) Repeat for the other Slicer, so both are tied to all three tables
- 8) Click inside a table
- 9) From the *Analyze* tab choose **Insert Timeline**
 - Choose Date from the list



SAVE YOUR FILE!

Dashboard 2



What are Slicers? (Excel Help File)

Slicers are easy-to-use filtering components that contain a set of buttons that enable you to quickly filter the data in a PivotTable report, without the need to open drop-down lists to find the items that you want to filter.

When you use a regular PivotTable report filter to filter on multiple items, the filter indicates only that multiple items are filtered, and you have to open a drop-down list to find the filtering details. However, a slicer clearly labels the filter that is applied and provides details so that you can easily understand the data that is displayed in the filtered PivotTable report.

A slicer typically displays the following elements:



1. A slicer header indicates the category of the items in the slicer.
2. A filtering button that is not selected indicates that the item is not included in the filter.
3. A filtering button that is selected indicates that the item is included in the filter.
4. A Clear Filter button removes the filter by selecting all items in the slicer.
5. A scroll bar enables scrolling when there are more items than are currently visible in the slicer.
6. Border moving and resizing controls allow you to change the size and location of the slicer.

Using Slicers

There are several ways to create slicers to filter your PivotTable data. In an existing PivotTable, you can:

Because each slicer that you create is designed to filter on a specific PivotTable field, it is likely that you will create more than one slicer to filter a PivotTable report.

After you create a slicer, it appears on the worksheet alongside the PivotTable, in a layered display if you have more than one slicer. You can move a slicer to another location on the worksheet, and resize it as needed.

To filter the PivotTable data, simply click one or more of the buttons in the slicer.

Formatting Slicers for a Consistent Look

To create professional looking reports or simply to match the format of a slicer to the format of the associated PivotTable report, you can apply slicer styles for a consistent look. By applying one of the various predefined styles that are available for slicers, you can closely match the color theme that is applied to a PivotTable.



*This page is modified
from the Excel Help file*

Sharing slicers between PivotTables

When you have many different PivotTables in one report, such as a Business Intelligence (BI) report that you are working with, it is likely that you will want to apply the same filter to some or all of those PivotTables. You can share a slicer that you created in one PivotTable with other PivotTables. No need to duplicate the filter for each PivotTable!


When you share a slicer, you are creating a connection to another PivotTable that contains the slicer that you want to use. Any changes that you make to a shared slicer are immediately reflected in all PivotTables that are connected to that slicer. For example, if you use a Country slicer in PivotTable1 to filter data for a specific country, PivotTable2 that also uses that slicer will display data for the same country.

Create a slicer in an existing PivotTable



1. Click anywhere in the PivotTable report for which you want to create a slicer. This displays the PivotTable Tools, adding an Options and a Design tab.
2. On the Options tab, in the Sort & Filter group, click Insert Slicer.
3. In the Insert Slicers dialog box, select the check box of the PivotTable fields for which you want to create a slicer.
4. Click OK.
A slicer is displayed for every field that you selected.
5. In each slicer, click the items on which you want to filter.
To select more than one item, hold down CTRL, and then click the items on which you want to filter.

Format a slicer

1. Click the slicer that you want to format. This displays the Slicer Tools, adding an Options tab.
2. On the Options tab, in the Slicer Styles group, click the style that you want. To see all available styles, click the More button .

Disconnect or delete a slicer

If you no longer need a slicer, you can disconnect it from the PivotTable report, or you can delete it.

Disconnect a slicer

1. Click anywhere in the PivotTable report for which you want to disconnect a slicer. This displays the PivotTable Tools, adding an Options and a Design tab.
2. On the Options tab, in the Sort & Filter group, click the Insert Slicer arrow, and then click Slicer Connections.
3. In the Slicer Connections dialog box, clear the check box of any PivotTable fields for which you want to disconnect a slicer.

Delete a slicer

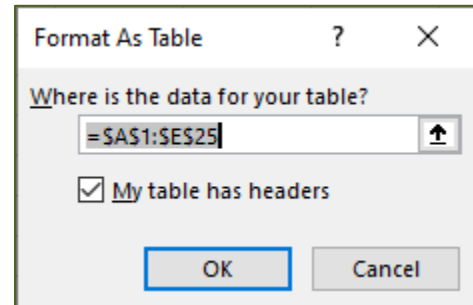
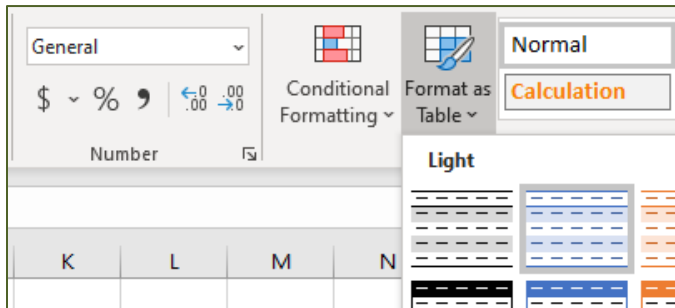
Click the slicer, and then press DELETE; or Right-click the slicer, and then click Remove <Name of slicer>.

*This page is modified
from the Excel Help file*

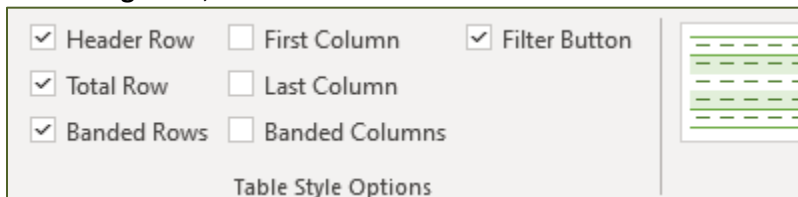
Build Dashboard 3

Format as a Table

- 1) Open File **Data6-Staff.xlsx**
- 2) Click inside the dataset
- 3) From the *Home* tab choose **Format as Table** and choose a style and click **OK**



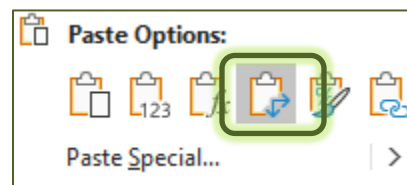
- 4) From the **Table Design** tab, turn on the **Totals**



- 5) Change each total to be a SUM

Create Summary by Employee

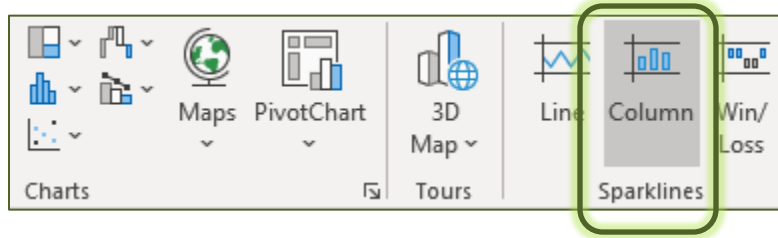
- 1) Copy the names of the employees
- 2) Right-click in an empty cell
 - Suggest G2
- 3) Choose **Paste Transpose**
- 4) Link Ann to the corresponding Sum
 - Click next to the title **Ann**
 - Type the equal sign =
 - And click, or type in, Ann's total
 - Probably B26
- 5) Repeat for the other three employees



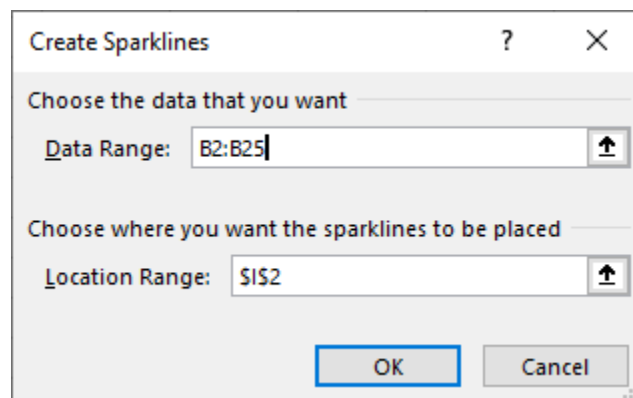
Ann	=Table1[#Totals],[Ann]]
Bob	=Table1[#Totals],[Bob]]
Cal	=Table1[#Totals],[Cal]]
Dan	=Table1[#Totals],[Dan]]

Create Summary Sparklines

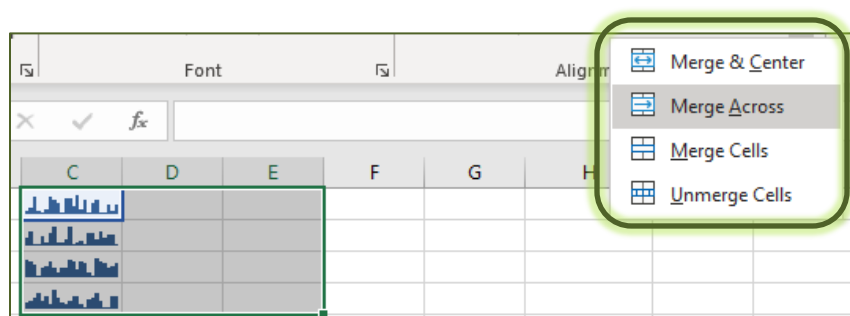
- 1) Click in the cell next to Ann's Total
- 2) From the *Insert* tab, choose Column from the **Sparkline** group



- 3) Select all of Ann's numbers and click **OK**



- 4) Repeat for the other three employees
- 5) Filter out 2020, numbers and charts change
- 6) Filter out 2018, numbers disappear as those rows hide
- 7) Insert five rows at the top of the sheet
- 8) Cut and paste your summary table above the data table
- 9) Try the filters again
- 10) Select the Sparklines (columns) and the cells next to them
- 11) From the Home tab, open the Merge and Center menu and choose Merge Across



Create a Pie Chart

- 1) Select the names and numbers from your summary table
- 2) From the Create tab, choose a simple Pie chart
- 3) Format and resize as desired

Create Summary by Fiscal Year

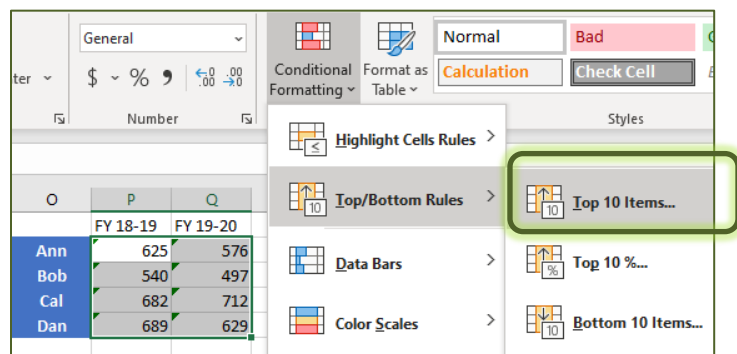
- 1) Staying in the top five rows create a table to sum the Fiscal Years for each employee

	FY 18-19	FY 19-20
Ann	=SUM(B7:B18)	=SUM(B19:B30)
Bob	=SUM(C7:C18)	=SUM(C19:C30)
Cal	=SUM(D7:D18)	=SUM(D19:D30)
Dan	=SUM(E7:E18)	=SUM(E19:E30)

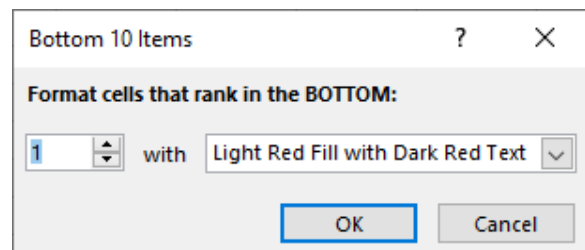
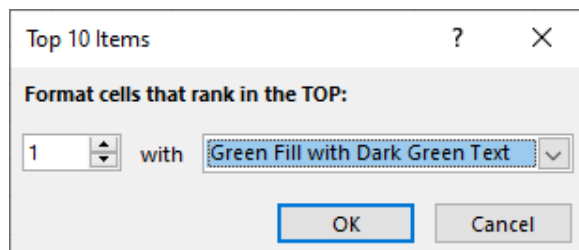
- 2) Ignore the green triangles, Excel is concerned the formulas may be incorrect because they are not following a pattern.
- 3) For a "Dynamic" interface, Use Find/Replace to fix formulas.
 - Find **SUM(** replace with **SUBTOTAL(9,**

Conditional Formatting for the top/bottom value

- 1) Select all the sums in the new summary
- 2) From the *Home* tab, choose **Conditional Formatting**
- 3) Choose Top 10 values and change the 10 to 1
- 4) Change the format to Green Fill with Dark Green text



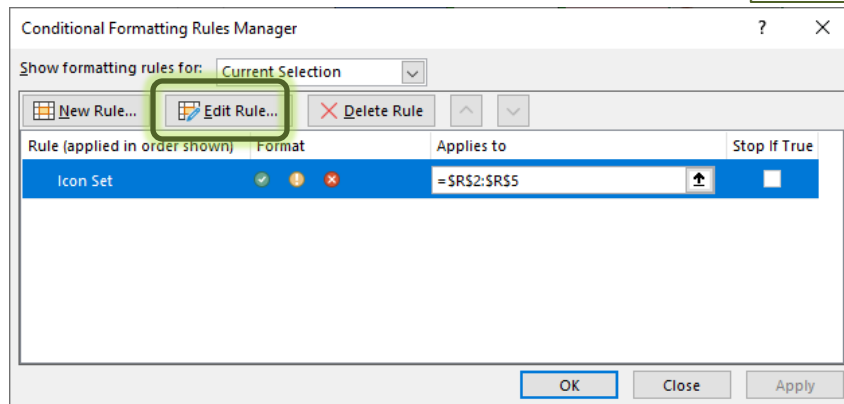
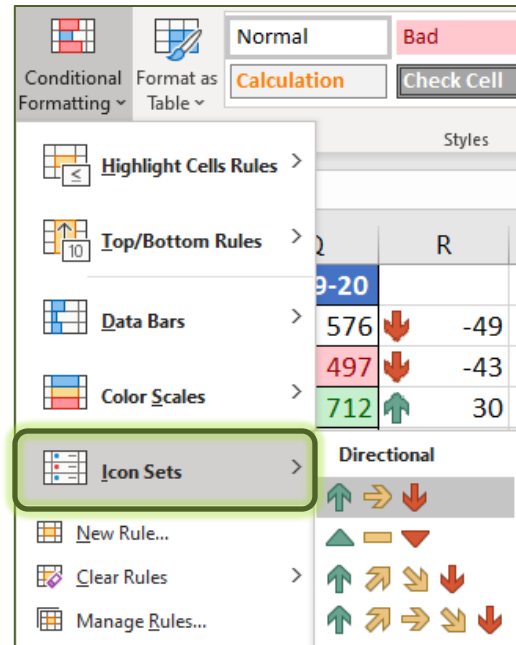
- 5) Add another conditional format for the Bottom 1 value, and format Light Red with Dark Red Text



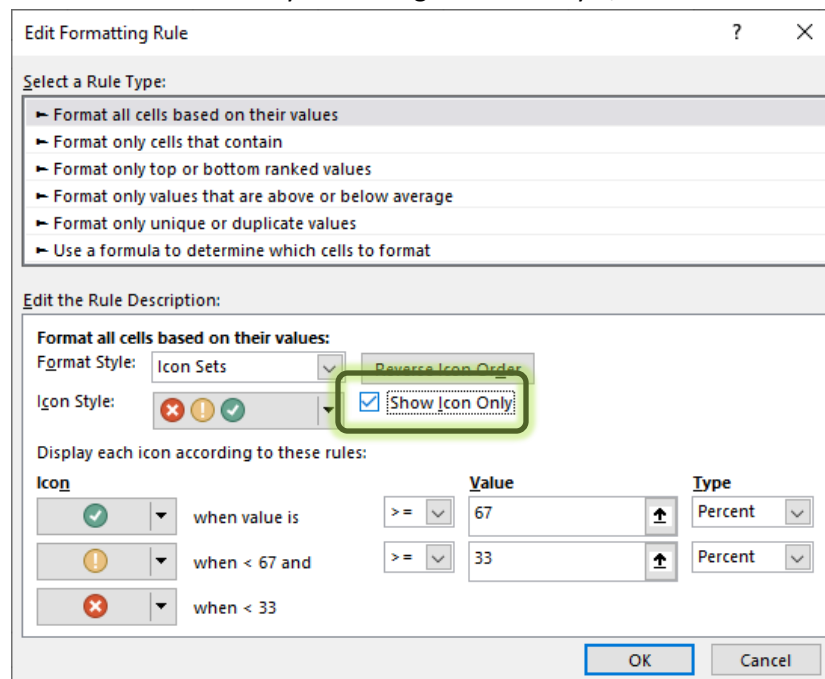
	FY 18-19	FY 19-20
Ann	625	576
Bob	540	497
Cal	682	712
Dan	689	629

Conditional Formatting with Icons

- 1) In the cell next to Ann's FY 19-20 value, set an equation to find the difference between the Fiscal Year cells
- =Q2-P2
- 2) Fill the formula down
- 3) Select the four numbers and open the Conditional Formatting menu
- 4) Choose an **Icon Set**
- 5) Open the **Conditional formatting** menu again and choose **Manage Rules**
- 6) Choose the option Edit Rules

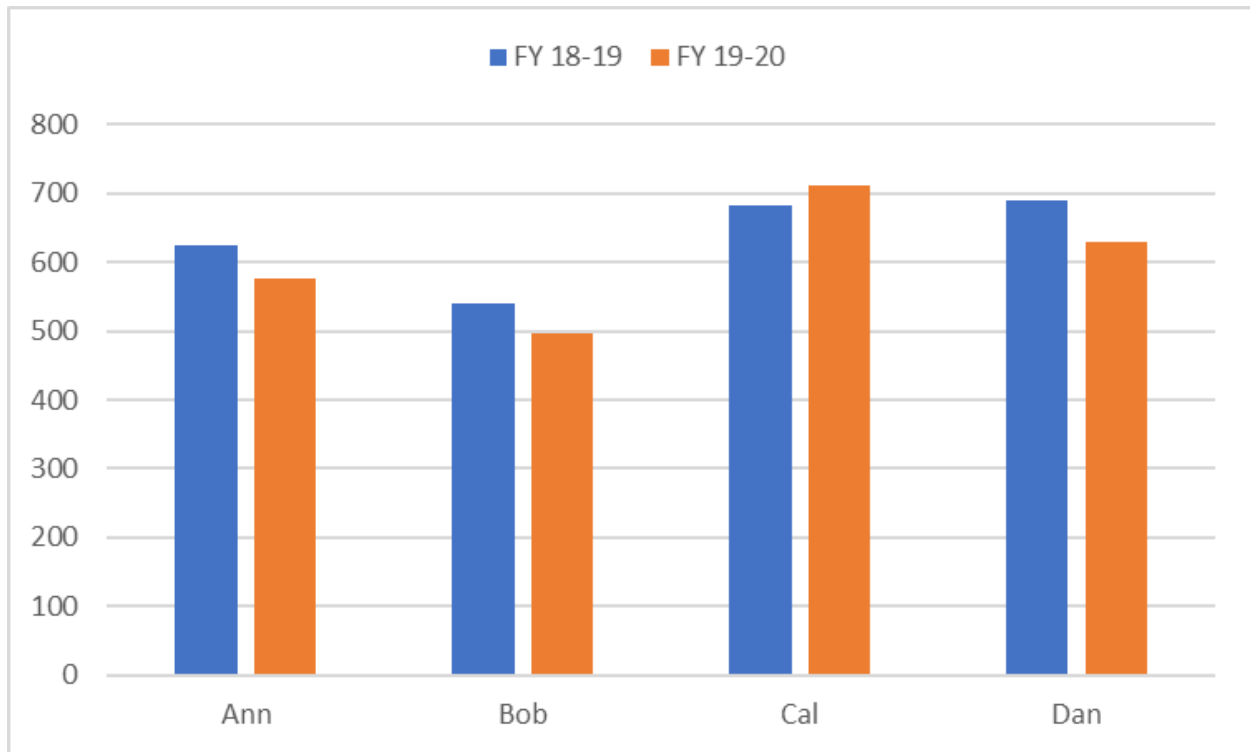


- 7) Check the box for Show Icon Only and change the Icon Style, if desired

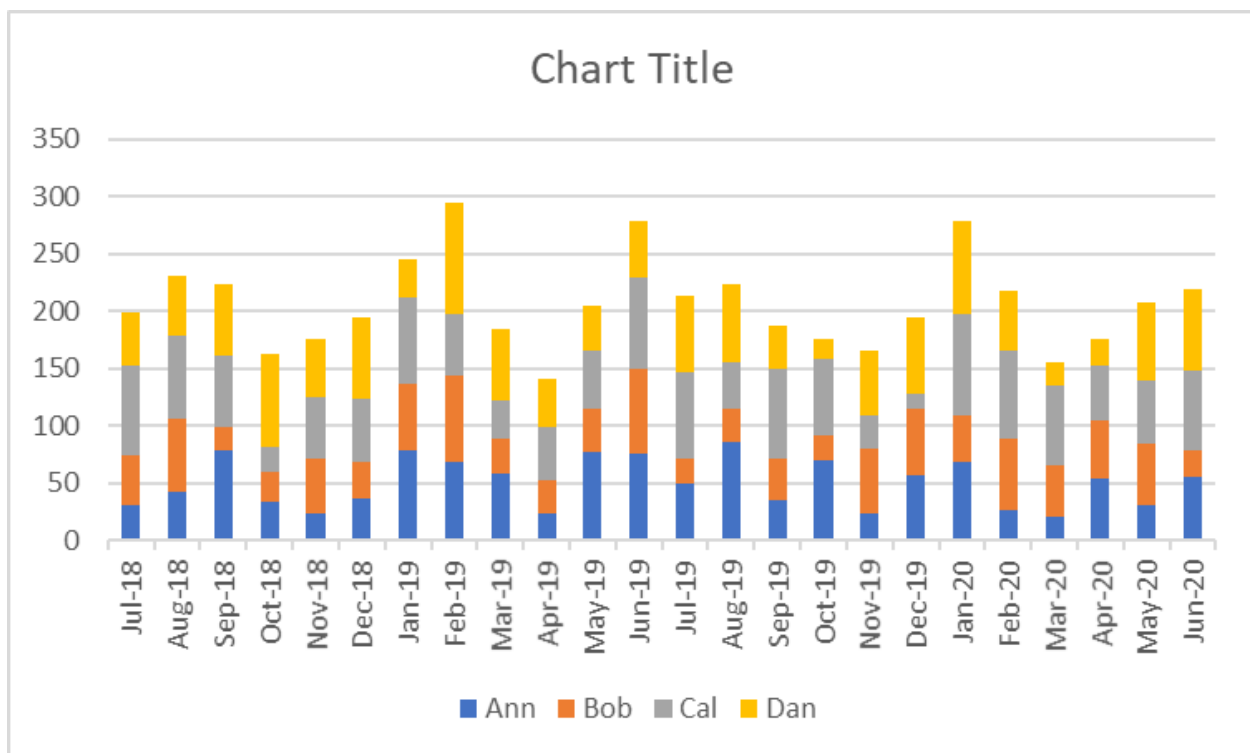


Create Charts

- 1) Create a column chart for the Summary by Fiscal Year



- 2) Create a stacked column chart for the original data table

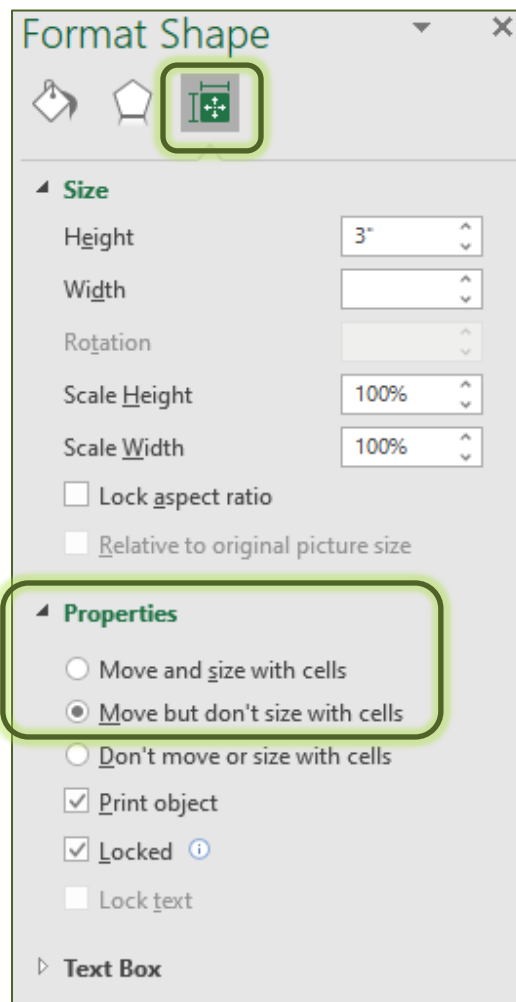


Format Charts to not Resize with Cells

- 1) Use the Shift key to select all three charts
- 2) From the Format tab, click the "more" button in the bottom right side of the Size group



- 3) This should open the **Format Shape** pane
- 4) If necessary, Turn to the **Size and Properties** tab
- 5) If necessary, open the **Properties** section by clicking the arrow in front
- 6) Choose the setting, **Move but don't size with cells**
- 7) Change the filters in the original data table to see your values and charts change.



Dashboard 3

