

A Few Things Before We Get Started...

A pivot table is a table that compiles and summarizes data from another data source. The intent of the pivot table is to quickly produce data for interpretive purposes by employing basic formulas as Sum, Average, Max, Min etc..

The word "pivot" is used to connote that the user can quickly arrange and rearrange the data without having to re-do, copy and paste formulae. Every change in a pivot table is computationally accurate.

The pivot table concept was rolled out in 1991 by Lotus123. They called it Lotus Improv.

By 1994 Microsoft rolled out "Pivot Table" and in Excel 97 MS rolled out the Pivot Table Wizard. They've been making improvements ever since.

Before Creating a Pivot Table

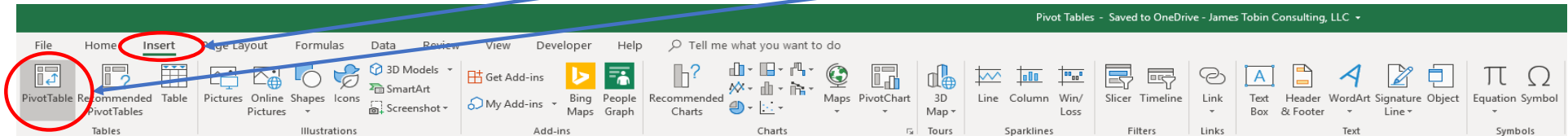
Before creating a pivot table, if feasible, you'll need to:

- 1 Ensure there are no blank columns or blank rows in the source data. If blank columns or rows appear in the data, they must be removed.
- 2 Convert the data to an Excel Table (Strongly recommend!!)
- 3 Ensure the formatting of the data types are consistent (e.g. dates are the same throughout a column; numeric data is same throughout a column). If the data is inconsistent, they must be fixed so as to be consistent throughout the column.
- 4 Ensure there are no blank cells in numeric fields. Blank cells will be treated as text and will yield "Count" results instead of "Sum" results. If there are blank cells in numeric fields, replace them with 0 (ZERO), not a space. Space is a text character and is inconsistent with a numeric column.
- 5 Understand that the pivot table is **NOT DYNAMIC**. The source data is stored in the workbook cache and remains unchanged even if you change the source data. Changes to the source data require the pivot table to be refreshed to effect changes in the pivot table.

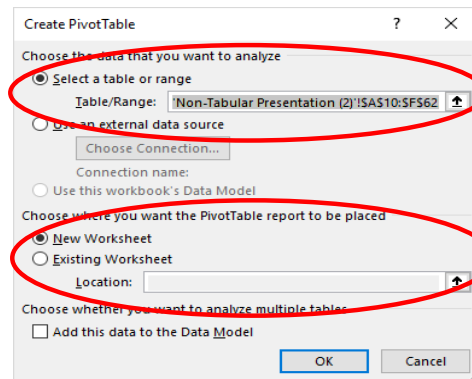
Creating a Pivot Table

Once the data is reviewed, cleaned and consistent, it's time to create a Pivot Table.

Place the cell indicator any place in the data. From the Insert ribbon, select the icon for "PivotTable".



After selecting the PivotTable icon, the "Create PivotTable" dialogue box appears asking you to identify the data source to analyze and where to place your pivot table, among other things.



In choosing the data to analyze you can choose data in the workbook or data in other workbooks or from external sources (e.g. Web based data, Third Party data, Enterprise data, etc.)

In choosing where to place the pivot table, you are limited to the currently active workbook, but you can choose to add a new worksheet for the pivot table or to place it in an existing worksheet.

Hit the OK button to continue...

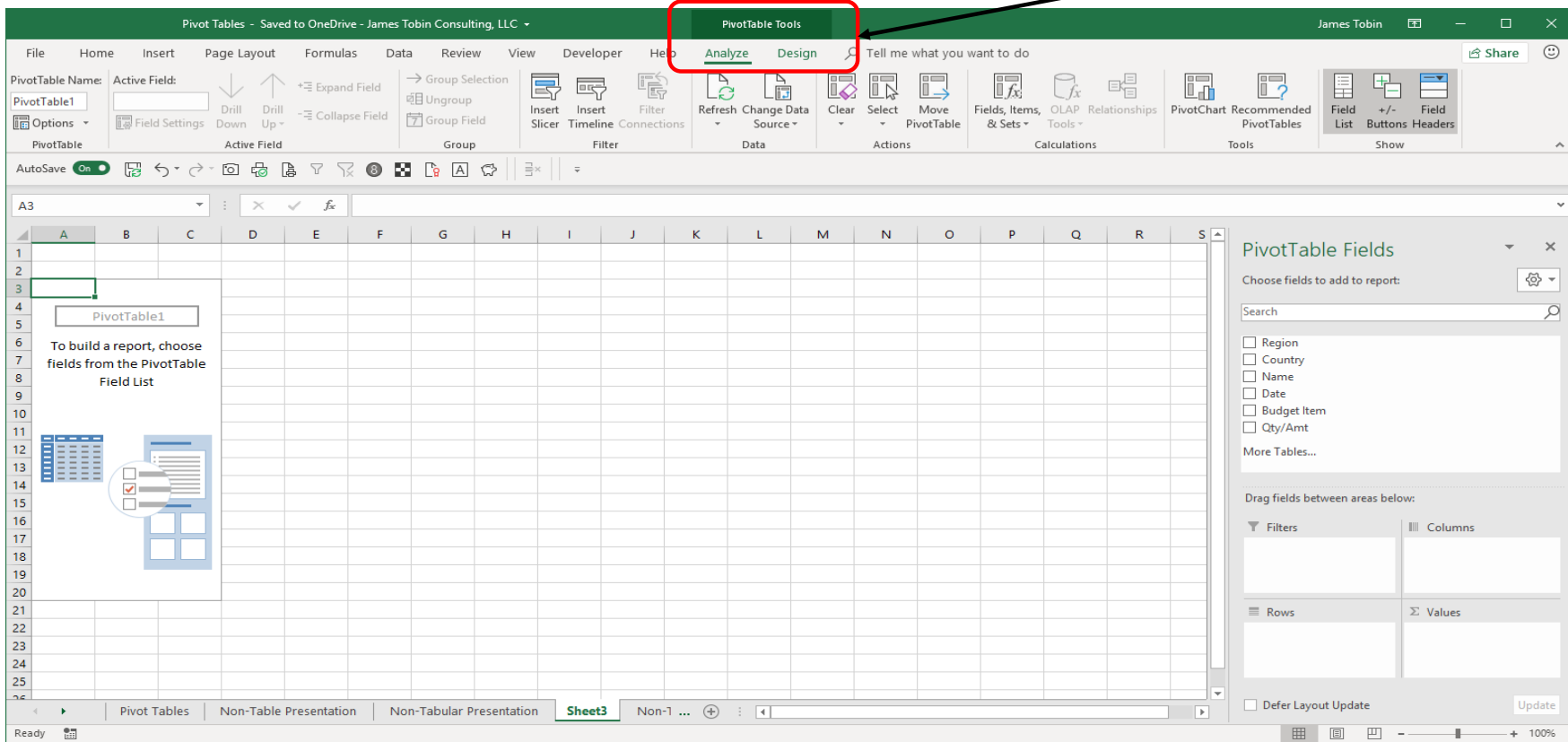
Pivot Tables Basics

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For demonstration purposes, I chose to place the pivot table in a new worksheet. In either case, the PivotTable Fields box appears along with an image where the pivot table will be placed.

You'll notice that because the cell indicator is in the image where the pivot table will be placed, the contextual tab "PivotTable Tools" appears with two sub-tabs "Analyze" and "Design". As long as your cell indicator is within the pivot table, the contextual tabs for PivotTable Tools will be visible.



The pivot table fields are listed based on the columns of the data source. You can highlight and drag them to the 4 area fields.

Filters: This field may be used to filter the Rows and/or the columns.

Columns: This is the data that will be placed along the top of the pivot table (usually the when).

Rows: This is the data that will be placed on the left-hand side of the pivot table (usually the who and/or the what).

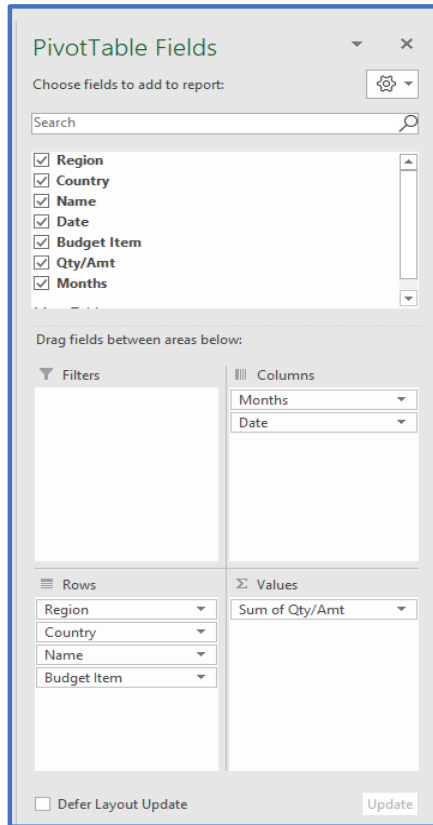
Values: This is the data that will be placed under the columns and to the right of the rows (usually the how much).

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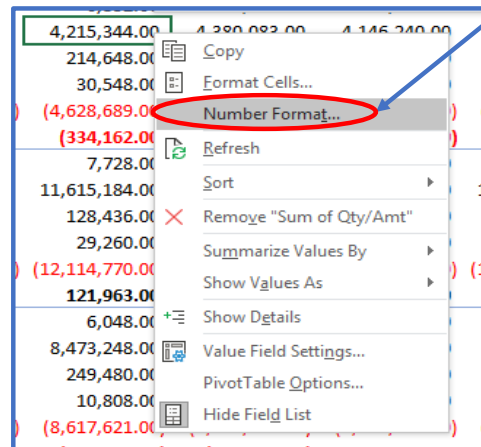
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As you drag the data fields into the four areas of the PivotTable Fields box, the pivot table begins to fill with the data as assigned.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sum of Qty/Amt												
Row Labels												
Africa												
Belmond Khwai River Lodge	6,975.00	5,460.00	5,983.00	6,180.00	5,952.00	6,540.00	6,169.00	6,851.00	6,300.00	6,541.00	6,300.00	6,417.00
20 Room Rev	9,109,350.00	7,130,760.00	7,813,798.00	8,071,080.00	7,773,312.00	8,541,240.00	8,056,714.00	8,947,406.00	8,227,800.00	8,542,546.00	8,227,800.00	8,380,602.00
30 Rest Rev	137,888.00	116,592.00	114,018.00	110,310.00	132,587.00	131,880.00	135,873.00	121,117.00	122,070.00	134,013.00	131,580.00	122,481.00
40 Spa Rev	12,152.00	9,856.00	10,385.00	10,140.00	10,974.00	9,690.00	10,044.00	11,780.00	9,570.00	12,989.00	11,130.00	11,625.00
50 Expenses	(9,720,505.00)	(6,294,039.00)	(8,835,858.00)	(7,185,665.00)	(6,852,316.00)	(8,892,026.00)	(6,890,237.00)	(8,413,514.00)	(7,110,662.00)	(7,955,879.00)	(8,394,487.00)	(9,043,822.00)
60 Net Income	(461,115.00)	963,169.00	(897,657.00)	1,005,865.00	1,064,557.00	(209,216.00)	1,312,394.00	666,389.00	1,248,778.00	733,669.00	(13,977.00)	(529,114.00)
Mauritius												
One & Only Le Saint Geran	5,921.00	5,656.00	6,200.00	5,730.00	5,859.00	6,270.00	6,386.00	6,386.00	5,790.00	6,386.00	6,450.00	6,169.00
20 Room Rev	8,899,263.00	8,500,968.00	9,318,600.00	8,612,190.00	8,806,077.00	9,423,810.00	9,598,158.00	9,598,158.00	8,702,370.00	9,598,158.00	9,694,350.00	9,272,007.00
30 Rest Rev	183,427.00	169,601.00	178,080.00	178,080.00	159,681.00	168,120.00	163,742.00	169,725.00	144,450.00	150,195.00	159,540.00	171,461.00
40 Spa Rev	14,198.00	12,236.00	15,469.00	14,220.00	17,019.00	16,530.00	14,849.00	16,399.00	15,870.00	15,252.00	17,370.00	17,267.00
50 Expenses	(9,106,334.00)	(9,113,261.00)	(9,762,634.00)	(8,610,633.00)	(8,744,891.00)	(10,584,300.00)	(8,249,192.00)	(10,585,067.00)	(8,940,078.00)	(8,380,274.00)	(10,471,122.00)	(10,197,233.00)
60 Net Income	(9,446.00)	(436,677.00)	(258,964.00)	193,857.00	237,886.00	(975,840.00)	1,527,557.00	(800,785.00)	(77,388.00)	1,383,331.00	(599,862.00)	(736,498.00)
Mozambique												
Beyond Bengueria Island	5,084.00	4,928.00	5,394.00	4,950.00	5,921.00	5,280.00	6,014.00	5,580.00	5,580.00	5,053.00	5,610.00	5,828.00
20 Room Rev	5,877,104.00	5,696,768.00	6,235,464.00	5,722,200.00	6,844,676.00	6,103,680.00	6,952,184.00	6,450,480.00	6,450,480.00	5,841,268.00	6,485,160.00	6,737,168.00
30 Rest Rev	201,996.00	202,972.00	214,117.00	190,170.00	213,683.00	217,770.00	211,575.00	199,764.00	220,260.00	210,769.00	195,330.00	202,895.00
40 Spa Rev	16,554.00	15,764.00	16,337.00	18,030.00	15,000.00	15,686.00	15,686.00	17,980.00	15,870.00	14,632.00	16,740.00	17,019.00
50 Expenses	(5,970,012.00)	(6,521,572.00)	(6,805,602.00)	(5,670,643.00)	(7,209,450.00)	(6,421,325.00)	(7,796,472.00)	(5,954,283.00)	(7,416,132.00)	(5,266,138.00)	(6,501,322.00)	(7,333,061.00)
60 Net Income	125,642.00	(606,068.00)	(339,684.00)	259,757.00	(135,591.00)	(84,875.00)	(617,027.00)	713,941.00	(729,522.00)	800,531.00	195,908.00	(375,979.00)
Seychelles												

Now that the pivot table is assembled, you can begin to format the pivot table elements. One of the first formatting tasks is to properly format the numbers. If you wish to format the numbers, place your cell indicator in the numeric data and with your right mouse button, select "Number Format...". **DO NOT** select "Format Cells..."



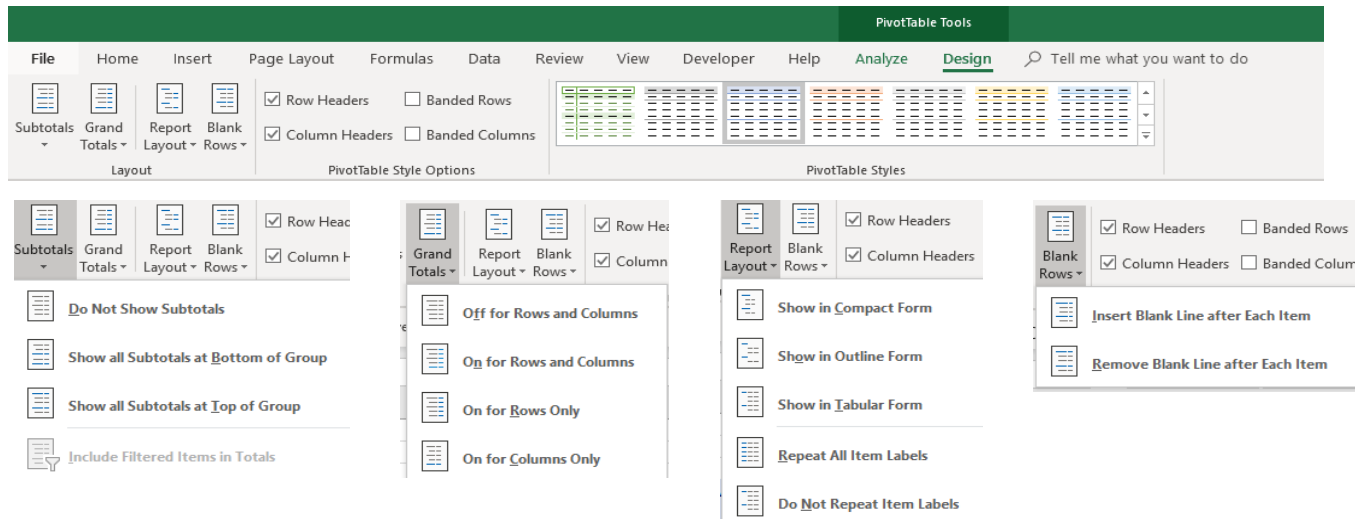
Select the number style you prefer and all the numeric data will change accordingly.

Pivot Tables Basics

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PivotTable Tools - Design



In the Layout section of the Design subsection in the PivotTable Tools ribbon, there are four items to consider:

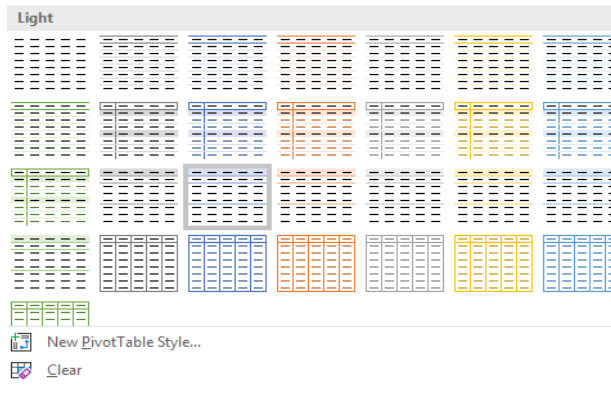
Subtotals - The drop down enables you to place subtotals above or below the row data, or not include subtotals at all.

Grand Totals - The drop down enables you to place grand totals at the far right of the pivot table (Rows) and/or at the bottom of the pivot table (Columns).

Report Layout - The drop down enables you to change the appearance of the pivot table. The default is Compact Form.

Blank Rows - The dropdown enables you to insert or remove blank lines between each item in the row section of the pivot table.

There are 85 PivotTable Styles to choose from. If one of the 85 does not move you, you can create a style of your own and save it as a PivotTable Style option. The 85 styles can be accessed by selecting the drop down arrows to the right of the PivotTable Styles section.

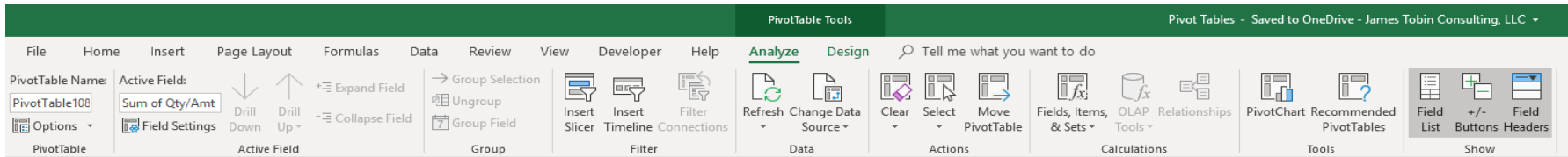


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PivotTable Tools - Analyze



PivotTable Section

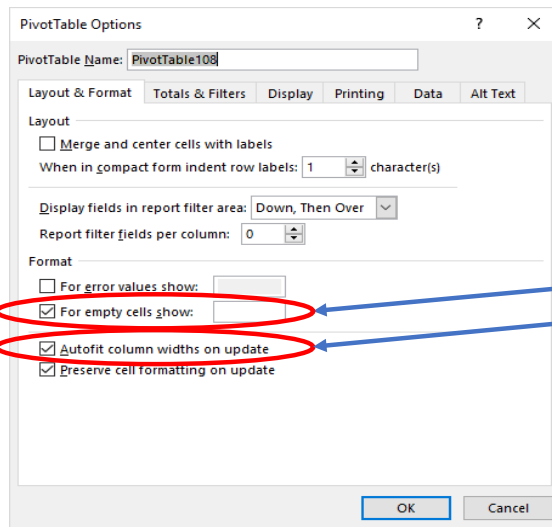
PivotTable Name Field - You can change the name of the pivot table in this field.

Options - When you click on the dropdown button, you can choose:

Options - Allows you to change some of the default options in the pivot table.

Show Report Filter Pages... - Great tool to generate a report for each member of the filtered data (This is **AWESOME!!**)

Generate GetPivotData - Toggle to use/not use GetPivotData Structure for formula syntax.

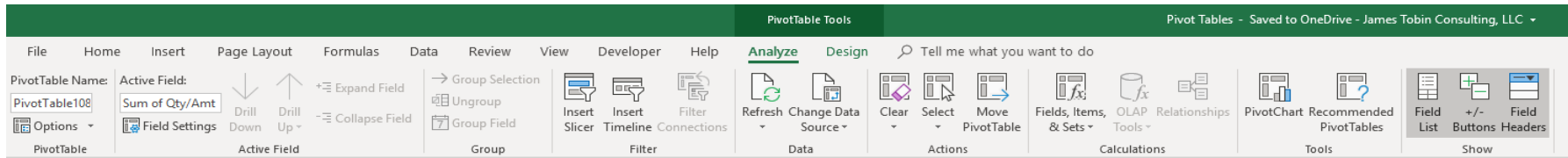


PivotTable Options dialogue box - There are many tabs in this dialogue box, but from the Layout & Format tab I frequently change the "For Empty cell show:" to 0 and for the "Autofit column widths on update" I remove the check mark.

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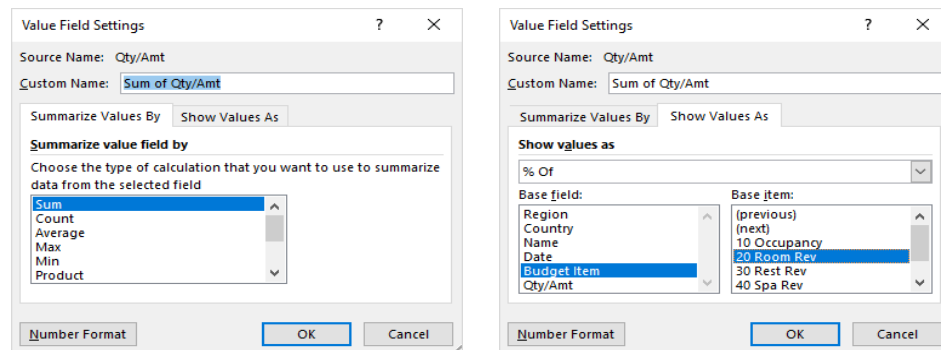
Active Field Section

Active Field - Lets you know where your cell indicator is and allows you to change the name of the field.

Field Settings - Very useful. A dialogue box appears and allows you to i) change the field name, ii) change how the data is summarized, iii) allows you to show the value as a function of other data in the pivot table and iv) allows you to change the number formatting.

Drill Up and Down - The Drill Down/Up tools are only available if you're using an advanced pivot table.

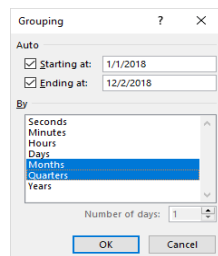
Expand/Collapse Field - These are on/off switches that allow you to skinny or fatten up your pivot table presentation.



These are examples of the Value Field Settings dialogue box. You can rename the field in "Custom Name:", you can change the way the data is summarized in the tab "Summarize Values By", you can present the data as a function of other data in the pivot table via the tab labeled "Show Values As", or you can change the number formatting by pressing the button titled "Number Format".

Group Section

There are three icons in this section that allow you to group data based on common elements. For example, in the demonstration file, the months are listed across the top of the pivot table. You can group them by quarters by selecting a single month in the column header and selecting the "Group Selection" icon. Once selected the Grouping dialogue box appears and allows you to select how you want the group selected "By".

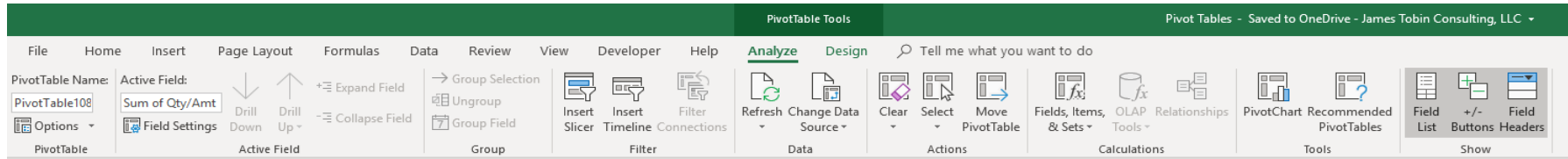


By selecting the "Ungroup" icon, the groupings will be removed from the pivot table.

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Filter Section

Insert Slicers - When you select this icon, Excel will ask you to select which slicers you'd like to see based on the data elements in the PivotTable Fields. The Slicers are a more visual system for filtering data in the pivot table.

Insert Timeline - This is a visual filter for selecting data based on the date.

Data

Refresh - Because pivot tables are not dynamically linked, any change to the source data requires that the pivot table be refreshed so that the changes in the source data can be found in the pivot table.

Change Source Data - This icon allows you can change the source of the data you use in your pivot table.

Actions

Clear - The dropdown options allow you to clear (read: remove) the entire pivot table or clear the filters.

Select - The dropdown options allow you to select certain items (e.g. Labels and/or Values) for action. One of the more useful selections is the ability to select the entire pivot table.

Move PivotTable - This option allows you to move the pivot table to a new location within the current workbook.

Calculations (Advanced Pivot Tables)

Fields, Items, & Sets - This dropdown allows you to create Calculated Fields and/or Calculated Items to be inserted into the pivot table.

Tools

PivotChart - This allows you to create a chart based on the pivot table. You can incorporate the slicers into the manipulation of the pivot chart.

Recommended PivotTables - This selection allows you to choose a pivot table based on an AI feature in Excel that looks at your source data and proposes various pivot table formats.

Show

Field List - This is a toggle that shows or hides the PivotTable Field List.

+/- Buttons - This is a toggle that shows or hides the expand/collapse buttons found within the pivot table.

Field Headers - This is a toggle that shows or hides the field headers in the pivot table.