

Excel Tips & Tricks – December 2014

Data Analysis with Excel Tables

Excel Tables?

- What is an Excel Table
 - A range of related data in columns and rows with a row of column headers

Code	Color	Quantity	% of total
123	Red	10	6%
456	Green	50	32%
789	Blue	35	23%
987	Black	25	16%
654	White	15	10%
321	Silver	20	13%
Total		155	

Benefits

1. Easily change table formatting
2. Add alternating shading to rows or columns with a quick mouse click
3. Default filtering and sort options
4. Automatic name references for tables and columns to make formulas easier to read
5. Calculated columns extend formulas to last row of data
6. Easily summarize data with totals
7. Summarize with Pivot Tables
8. Table range automatically adjusts to include additional rows
9. No need to Freeze Panes for scrolling

Creating a Table

Home Insert Page Layout Formulas Data Review View

Table Picture Clip Art Shapes SmartArt Column Line Pie Bar Area

Illustrations Charts

Month	Salesman	Region	Product	No. Cust.	Net Sales	Profit / Loss
Jan-07	Joseph	North	FastCar	8	1,592	563
Jan-07	Joseph	North	RapidZoo	8	1,088	397
Jan-07	Joseph	West	SuperGlue	8	1,680	753
Jan-07	Joseph	West	FastCar	9	2,133	923
Jan-07	Lawrence	North	SuperGlue	8	1,624	621
Jan-07	Lawrence	North	FastCar	6	726	236
Jan-07	Lawrence	North	RapidZoo	9	2,277	966
Jan-07	Lawrence	West	SuperGlue	6	714	221
Jan-07	Lawrence	West	FastCar	9	2,682	1,023

Insert > Table

or

Home > Format as Table

File Home Insert Page Layout Formulas Data Review View Turbo TTS Developer Smart View PKZIP PUP v7

Clipboard Font Alignment Number Conditional Formatting Format as Table

Renaming a Table

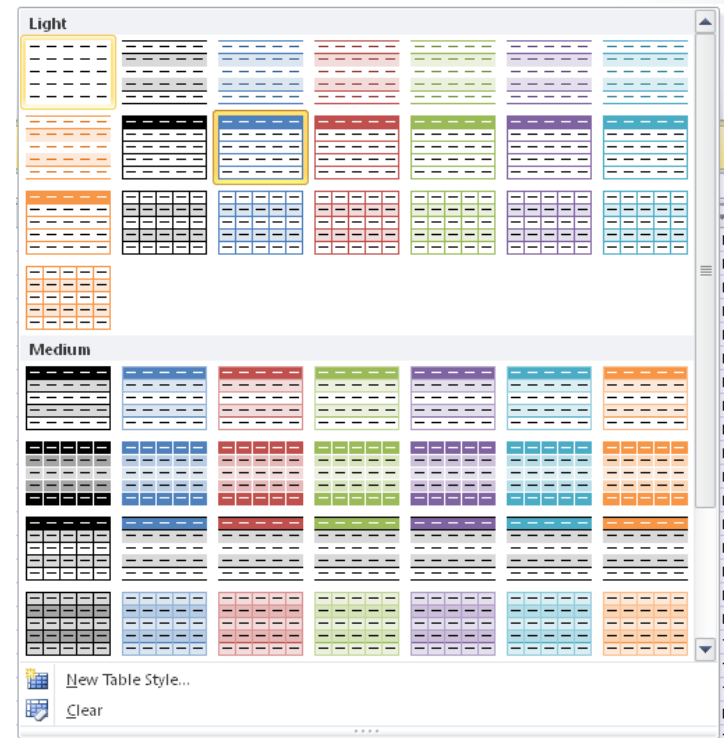
- Recommend renaming your table so that it is easily remembered and referenced in formulas
- Default name assigned will be Table1, Table2, etc.

The screenshot shows the Microsoft Excel interface with the 'Table Tools' ribbon selected. The 'Table Name' field in the 'Properties' group is highlighted with a red box and labeled 'Table1'. A red arrow points from this field to the 'Table1' label in the table's header row. The table has the following data:

Code	Color	Code	Size	Column	Column
1	Red	A	Small	AX	AX
2	Blue	B	Medium	BX	BX
3	Green	C	Large	CX	CX

Table formatting

- Pre-defined table formatting options. Just select any cell in your table and change the table formatting by going to “format as table” button in the home ribbon.



- You can easily define your own table formatting color schemes and apply them.

Alternate Row/Column Shading

- When you create a table, zebra lines come as a bonus. And when you add new rows to the table, excel takes care of zebra lining or banding automatically. You can turn on / off the banded rows feature from the Table > Design ribbon tab.



Mon	Salesm.	Regio	Produ	o. Custor	Net Sale	Profit / Lo
Jan-07	Joseph	North	FastCar	8	1592	563
Jan-07	Joseph	North	RapidZoc	8	1088	397
Jan-07	Joseph	West	SuperGlue	8	1680	753
Jan-07	Joseph	West	FastCar	9	2133	923
Jan-07	Joseph	West	RapidZoc	10	1610	579
Jan-07	Joseph	Middle	SuperGlue	10	1540	570
Jan-07	Joseph	Middle	FastCar	7	1316	428
Jan-07	Joseph	Middle	RapidZoc	7	1799	709

Data Filters & Sort Options

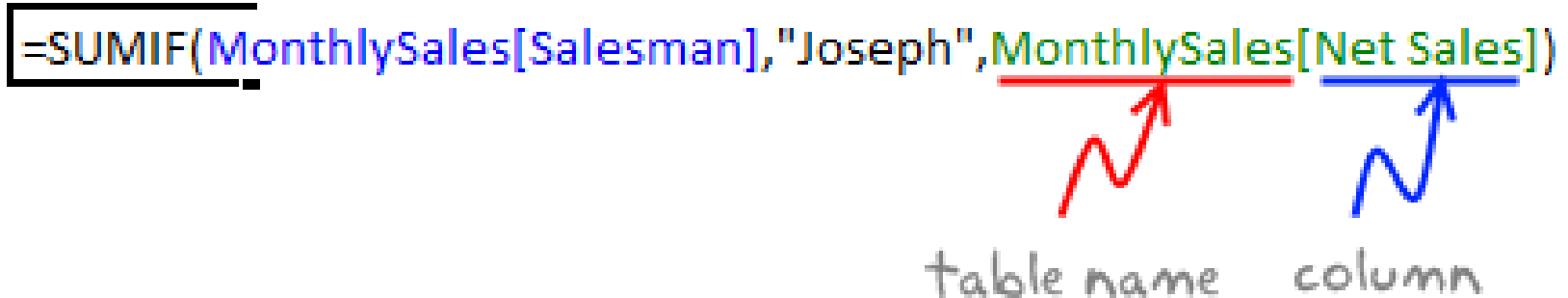
- Each data table comes with filters and sorting options so that you can filter and sort the data in that table independently. That also means, if a worksheet has 2 tables, they each get their own data filters (usually Excel wont allow you to add more than one set of filters per sheet)

Code	Color	Code	Size
1	Red	A	Small
2	Blue	B	Medium
3	Green	C	Large
Code	Material		
X	Wood		
Y	Metal		
Z	Plastic		

Structured References

- The most important advantage of tables is that you can write meaningful looking formulas instead of using cell references. When you create and name the table, you can write formulas that look like this:

```
=SUMIF(MonthlySales[Salesman],"Joseph",MonthlySales[Net Sales])
```



The diagram shows the formula `=SUMIF(MonthlySales[Salesman],"Joseph",MonthlySales[Net Sales])` with annotations. A red squiggly arrow points from the text "table name" below to the `MonthlySales[Salesman]` part of the formula. A blue squiggly arrow points from the text "column" below to the `MonthlySales[Net Sales]` part of the formula. The formula is enclosed in a black box.

- To refer to specific parts of a table use these nomenclatures:
 - the entire table: `=sales[#All]`
 - the data portion of the table: `=sales[#Data]`
 - the headers: `=sales[#Headers]`

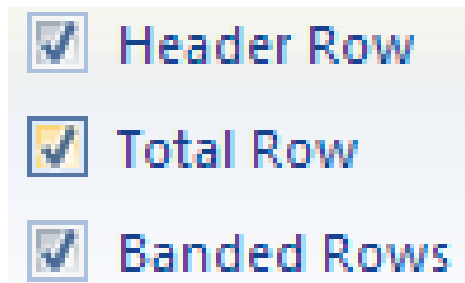
Calculated Columns

- Any tabular data will have its share of calculated columns. Excel tables make having calculated columns very easy. The beauty of calculated columns in table is that, when you write or change a formula in one cell, excel automatically fills the formula in the rest of cells in that column.

Net Sales	Profit / Loss	%
1592	563	=
1088	397	
1680	753	
2133	923	
1610	579	
1540	570	
1316	428	
1799	709	
1624	621	
726	236	
2277	966	
714	221	
2682	1023	

Column Totals

- Table functionality makes it easy to add subtotals to your tables. You can add a total row to your table with just a click. Using the Subtotal function will adjust the total when you apply filters vs. the Sum function which will show total of all rows even if some rows are hidden.
- You can easily change the summary type from “sum” to say “average”.



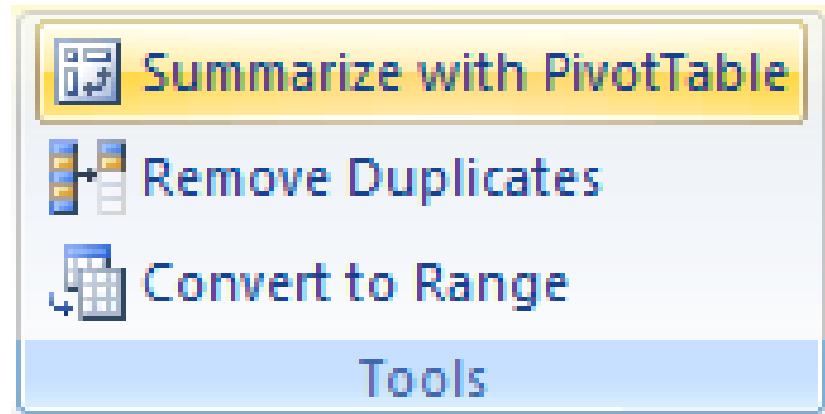
jan-07	42%
jan-07	31%
jan-07	38%
Total	37%

Dropdown menu for the Total cell:

- None
- Average
- Count
- Count Numbers
- Max
- Min
- Sum
- StdDev
- Var
- More Functions.

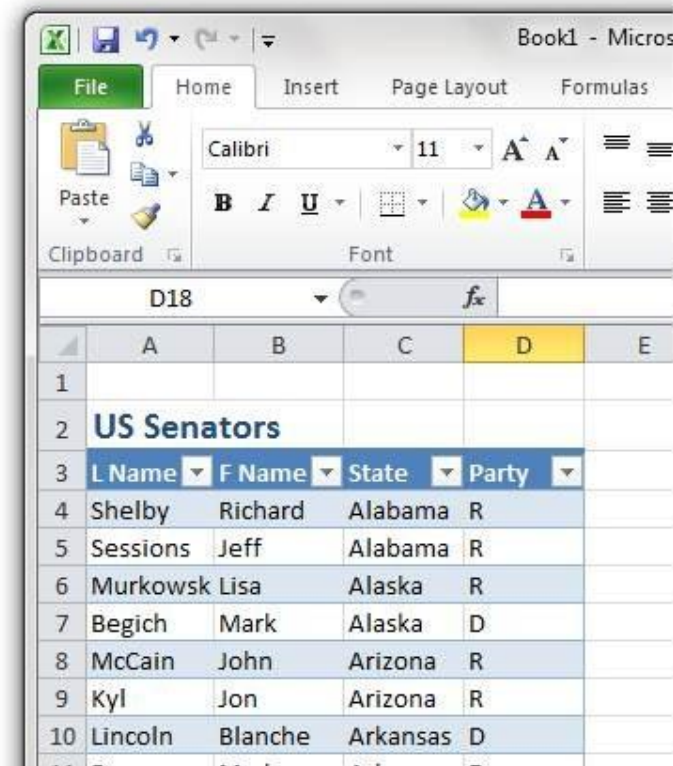
Pivot Tables

- Click a button to create Pivot Tables with your data. As you add rows of data to your table, the pivot table will automatically include the new rows or columns. The source of your pivot table will be the table name, so as you add rows to the table, the Pivot will automatically include the new data when you refresh – no need to update the source range on your pivot table.



Scrolling through data

- When you scroll through your table and get to the bottom of the screen, the column header will change to your column name automatically.



Book1 - Micros

File Home Insert Page Layout Formulas

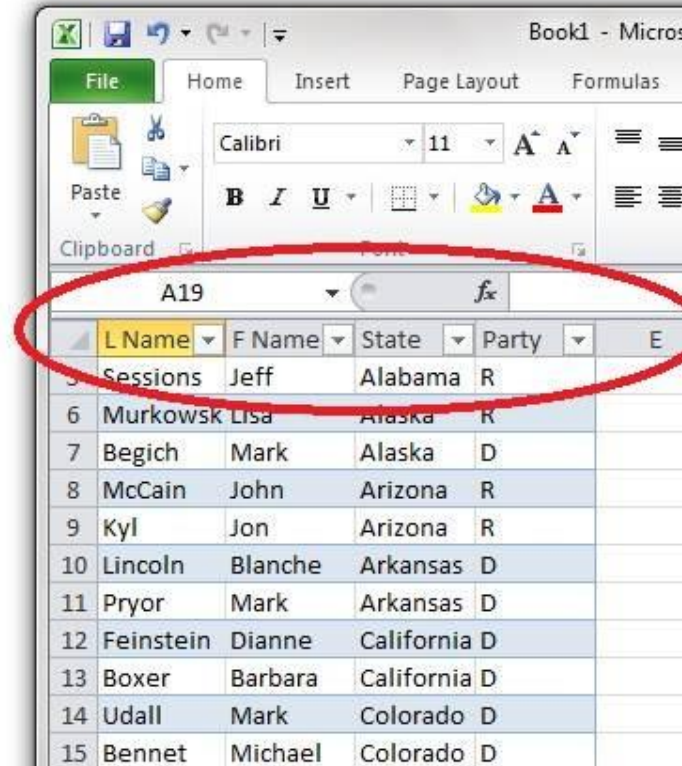
Calibri 11 A⁺ A⁻

Paste B I U Font

Clipboard

D18 fx

	A	B	C	D	E
1					
2	US Senators				
3	L Name	F Name	State	Party	
4	Shelby	Richard	Alabama	R	
5	Sessions	Jeff	Alabama	R	
6	Murkowski	Lisa	Alaska	R	
7	Begich	Mark	Alaska	D	
8	McCain	John	Arizona	R	
9	Kyl	Jon	Arizona	R	
10	Lincoln	Blanche	Arkansas	D	



Book1 - Micros

File Home Insert Page Layout Formulas

Calibri 11 A⁺ A⁻

Paste B I U Font

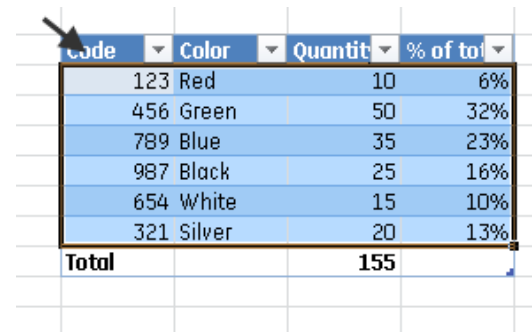
Clipboard

A19 fx

	L Name	F Name	State	Party	E
5	Sessions	Jeff	Alabama	R	
6	Murkowski	Lisa	Alaska	R	
7	Begich	Mark	Alaska	D	
8	McCain	John	Arizona	R	
9	Kyl	Jon	Arizona	R	
10	Lincoln	Blanche	Arkansas	D	
11	Pryor	Mark	Arkansas	D	
12	Feinstein	Dianne	California	D	
13	Boxer	Barbara	California	D	
14	Udall	Mark	Colorado	D	
15	Bennet	Michael	Colorado	D	

Other Table Features

- Tab at last cell in row to go to next row
- Tab at last cell in table adds another row (if Total Row exists, it will move down one row)
- Just starting typing in the blank cell below the table and table will extend
- Pasting data at the end of table - if formula columns exist, they will extend to end of new data
- Select Table data only, move cursor to upper left corner until diagonal arrow appears

A screenshot of an Excel table with four columns: Code, Color, Quantit, and % of tot. The table contains six data rows and a Total row. A black arrow points to the top-left corner of the table, where a small black diagonal arrow is visible, indicating that the table is selected.

Code	Color	Quantit	% of tot
123	Red	10	6%
456	Green	50	32%
789	Blue	35	23%
987	Black	25	16%
654	White	15	10%
321	Silver	20	13%
Total		155	

Other Useful Excel Information

- www.contextures.com