

Anatomy of a Pivot Table

The Pivot Table below contains 4 elements of a basic Pivot structure: Rows, Columns, Values and Filter.

Filter

This allows you to include or exclude specific data from the Pivot Table

Column Labels

These are the categories that will be displayed across the top of the table. Each unique item in the column field will create a new column

Product Name (All)						
Sum of Quantity		Column Labels				
Row Labels	East	North	South	West	Grand Total	
Andrew Fuller	1203	191	376	888	2658	
Anne Dodsworth	360	82	339	323	1104	
Janet Leverling	1130	554	695	646	3025	
Laura Callahan	1192	231	260	539	2222	
Margaret Peacock	2071	359	589	1419	4438	
Michael Suyama	892	183	396	351	1822	
Nancy Davolio	2041	464	704	651	3760	
Robert King	1002	242	14	672	2330	
Steven Buchanan	813	5	7	718	1593	
Grand Total	10704	2311	373	6207	22952	

Row Labels

These are the categories you want to analyze. Each unique item in the row field will be listed down the left side of the table

Values

These are the data points you want to summarize. You can perform various calculations like sum, average, count, etc., on these values

Preparing source data for Pivot Table creation - DOs and DON'Ts



Excel Pivot Tables



Merged cells

- 1. Unmerge cells (see right)
- 2. Select column with unmerged cells
- 3. Go to HOME > FIND & SELECT > GO TO SPECIAL. Tick Blanks
- 4. Type = and press up arrow to create link
- 5. Press Ctrl ENTER to populate other blank cells
- 6. Now create Pivot Table

Year	Quarter	Month	Company	Revenue
2009	1	January	FirmA	67
	1	February	FirmA	69
	1	March	FirmA	128
	2	April	FirmA	78
	2	May	FirmA	67
	2	June	FirmA	88
2010	1	January	FirmA	128
	1	February	FirmA	131
	1	March	FirmA	34
	2	April	FirmA	129
	2	May	FirmA	117
	2	June	FirmA	71

Year	Quarter		Month	Company	Revenue	Sales
2009	1		January	FirmA	67	14
2009	1		February	FirmA	69	11
2009	1		March	FirmA	128	14
2009	2		April	FirmA	78	10
2009	2		May	FirmA	67	13
2009	2		June	FirmA	88	10
2010	1		January	FirmA	128	10
2010	1		February	FirmA	131	14
2010	1		March	FirmA	34	13
2010	2		April	FirmA	129	13
2010	2		May	FirmA	117	13
2010	4		December	FirmA	40	10
2009	1		January	FirmB	130	15
2009	1		February	FirmB	50	12
2009	1		March	FirmB	140	13

Blank Rows and Columns

- 1. Select blank column and delete (see left)
- 2. Select all affected columns
- 3. Go to HOME > FIND & SELECT > GO TO SPECIAL. Tick Blanks
- 4. Right click selection and DELETE > ENTIRE ROW

Filling in blanks in a Pivot Table

- 1. To populate blanks in a Pivot, right click and go to PIVOT TABLE OPTIONS
- 2. Select the LAYOUT & FORMAT tab
- 3. Under the FORMAT section enter '0' in the 'For empty cells show' box

Sum of Extended Price	Salesperson	
Borough	Andrew Fuller	Anne Dodsworth
Barking	£3,457	£7,070
Barnet		
Brent	£477	£945
Croydon	£240	£2,973
Ealing	£2,867	£3,272
Greenwich	£22,781	£18,105
Hammersmith	£10,339	£1,928
Haringey	£5,704	£588
Hounslow	£2,191	
Islington	£9,144	£1,209
Lambeth	£2,395	
Wandsworth	£13,130	£9,127
Grand Total	£72,723	£45,216

Refreshing Pivot Tables (TOP TIPS)

- 1. Make your source data into a Table (Ctrl T) so any changes or additions to the source will be updated when refreshing the Pivot (Alt F5)
- 2. To set up automatic refresh, right click on Pivot > PIVOT TABLE OPTIONS > DATA > tick REFRESH DATA WHEN OPENING THE FILE. Now save, close and re-open to refresh

CALCULATED COLUMNS

Pivot Tables allow you to create extra information in the form of calculated columns. Method 1 shows a summary Pivot with 3 calculated columns based on original 'Quantity' data (see below)

Row Labels	Sum of Quantity	% GT	Benchmark	Running total
Andrew Fuller	2796	10.66%	-20.36%	2796
Anne Dodsworth	1411	5.38%	-59.81%	4207
Janet Leverling	3511	13.38%		7718
Laura Callahan	2615	9.97%	-25.52%	10333
Margaret Peacock	4831	18.41%	37.60%	15164
Michael Suyama	2013	7.67%	-42.67%	17177
Nancy Davolio	4373	16.67%	24.55%	21550
Robert King	2785	10.61%	-20.68%	24335
Steven Buchanan	1904	7.26%	-45.77%	26239
Grand Total	26239	100.00%		

METHOD 1

1. Create a Pivot based on a breakdown of Quantity by Salesperson
2. Drag the Quantity field into the 'Values' box (again)
3. Right click on the 2nd Quantity field and go to SHOW VALUES AS > % OF GRAND TOTAL
4. Create 2 more Quantity field columns and apply % DIFFERENCE FROM and RUNNING TOTAL to each of the columns (see above)

Row Labels	Sum of Quantity	Sum of Unit Price	Sum of Extended Price
Barking	2573	2998.67	7715577.91
Barnet	205	330.1	67670.5
Brent	317	989.3	313608.1
Croydon	1267	1331.69	1687251.23
Ealing	1392	1341.98	1868036.16
Greenwich	7319	8861.51	64857391.69
Hammersmith	3964	4977.09	19729184.76
Haringey	812	1093.35	887800.2
Hounslow	851	1641.98	1397324.98
Islington	1789	1691	3025199
Lambeth	1061	1075.64	1141254.04
Wandsworth	1402	1221.57	1712641.14
Grand Total	22952	27553.88	632416653.8

METHOD 2

1. In Pivot go to PIVOT TABLE ANALYSE > FIELDS, ITEMS & SETS > CALCULATED FIELD
2. Enter 'Extended Price' in the Name field
3. Enter Quantity*Unit Price in the Formula field and click OK

CONDITIONAL FORMATTING

Set Conditional Formatting rules on Pivot Tables to change colour dynamically

↓

Sum of Extended Price		Column Labels				
Row Labels		East	North	South	West	Grand Total
Andrew Fuller		£35,941	£9,621	£15,525	£15,396	£76,483
Anne Dodsworth		£25,763	£2,153	£12,100	£5,200	£45,216
Janet Leverling		£39,621	£13,580	£23,717	£13,460	£90,377
Laura Callahan		£39,058	£4,786	£4,499	£13,113	£61,456
Margaret Peacock		£63,522	£7,844	£25,992	£40,166	£137,525
Michael Suyama		£23,306	£4,411	£12,996	£8,210	£48,922
Nancy Davolio		£58,953	£10,877	£14,120	£36,052	£120,001
Robert King		£35,388	£13,554	£15,858	£15,692	£80,492
Steven Buchanan		£23,288	£160	£625	£26,890	£50,963
Grand Total		£344,841	£66,985	£125,432	£174,177	£711,434

1. Select all 'value' cells (e.g. Extended Price) with the down arrow (see above)
2. Go to CONDITIONAL FORMATTING > NEW RULE > ALL CELLS SHOWING "Sum of Extended Price" values for "" > FORMAT ONLY CELLS THAT CONTAIN
3. Set 1st rule: 'Greater than 35,000 then Format colour to Green
4. Repeat step 2 then set 2nd rule: 'Between 20,000 and 35,000' then Format colour to Yellow
5. Repeat step 2 then set 3rd rule: 'Between 0 and 19,999' then Format colour to Red
6. Now change data source, refresh Pivot and see the colours change dynamically (see below)

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Row Labels		East	North	South	West	Grand Total
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Creating Bins and Grouping Dates

Bins are used to group numeric data into intervals, making it easier to analyze and visualize the distribution of data. This is particularly useful for creating histograms or summarizing data in a more meaningful way.

Sum of Extended Price	Quantity ▼						
Borough ▼	1-20	21-40	41-60	61-80	81-100	101-120	Grand Total
Barking	£20,746	£23,413	£13,293	£3,164			£60,617
Barnet	£2,999	£533					£3,532
Brent	£7,489	£630					£8,119
Croydon	£7,718	£19,965	£2,692	£2,296			£32,670
Ealing	£8,042	£20,423	£6,671				£35,135
Greenwich	£57,778	£104,317	£49,133	£23,713	£19,206	£9,373	£263,519
Hammersmith	£38,567	£44,683	£27,154	£4,564			£114,968
Haringey	£9,555	£7,150					£16,705
Hounslow	£17,264	£5,760	£1,050				£24,073
Islington	£12,639	£11,960	£24,421	£6,314			£55,334
Lambeth	£7,988	£10,186	£16,609				£34,782
Wandsworth	£6,978	£17,935	£19,917	£13,151			£57,980
Grand Total	£197,762	£266,953	£160,939	£53,201	£19,206	£9,373	£707,434

Creating Bins

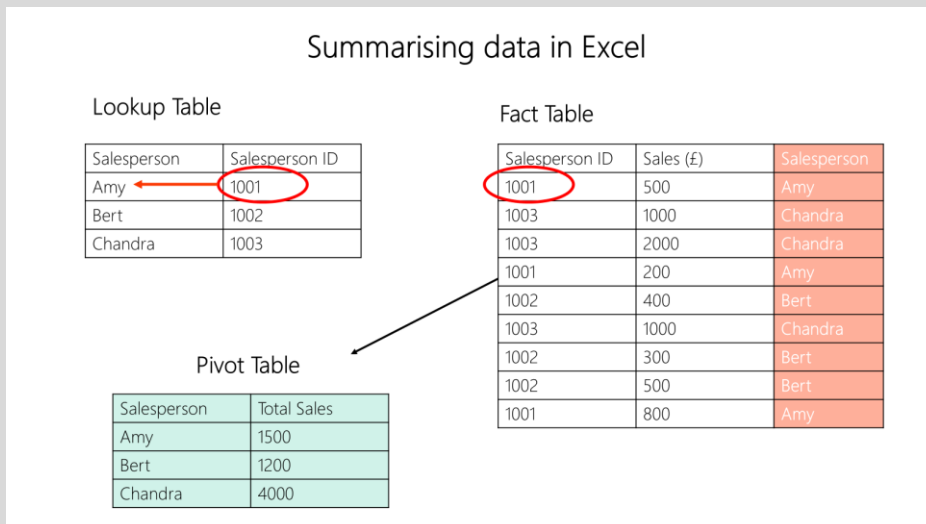
1. Drag the numeric field you want to group into the Rows or Columns area.
2. Right-click on any value in the numeric field within the Pivot Table.
3. Select Group from the context menu.
4. In the Grouping dialog box, specify the Starting at, Ending at, and By values to define the bin intervals.
5. Click OK.

Sum of Sales	Years (Ord ▼)			
Months (Order Date) ▼	2016	2017	2018	2019
Jan		£1,023,894	£991,161	£972,151
Feb		£1,474,243	£813,625	£995,419
Mar		£1,592,368	£898,328	£1,025,608
Apr		£1,305,496	£910,454	£1,013,296
May		£1,413,138	£1,234,217	£1,322,319
Jun		£1,442,259	£960,851	£1,031,014
Jul	£489,024	£1,501,846	£951,675	£1,051,745
Aug	£554,758	£1,476,723	£1,291,535	£1,237,603
Sep	£399,314	£1,252,945	£1,107,312	£1,224,671
Oct	£459,274	£1,702,408	£1,046,093	£1,190,585
Nov	£431,633	£1,492,894	£957,415	£1,191,948
Dec	£367,129	£1,254,487	£843,121	£1,402,738
Grand Total	£2,701,132	£16,932,701	£12,005,789	£13,659,096

Grouping Dates

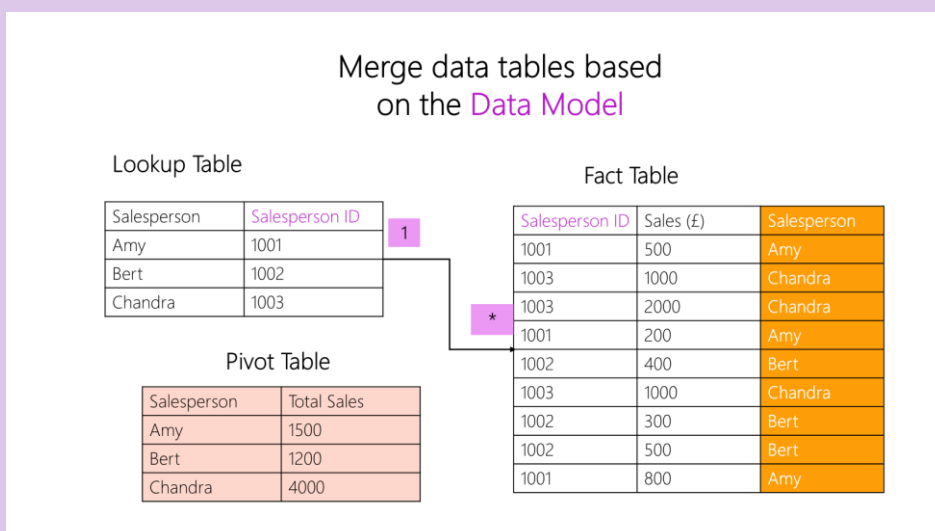
1. Drag Order Date to Columns and with any date selected go to UNGROUP
2. Select GROUP FIELD and choose YEARS and MONTHS
3. Drag 'Months' from Columns to Rows
4. Drag 'Sales' to VALUES

Consolidating separate datasets to create summary reports:



1. Use a LOOKUP function to match ID no. from Fact table to Lookup
2. Populate Salespersons' names in Fact Table
3. Create Pivot Table to summarise Salespersons' Total Sales

New way: Create DATA MODEL as an alternative



1. Go to POWER PIVOT > MANAGE
2. 'Get Data' to import Excel tables into Power Pivot
3. Create Relationships in DIAGRAM VIEW
4. Output data model to a Pivot Table

Excel Pivot Tables

CREATING PIVOTS USING MACROS

1. Go to the "Developer" tab. If you don't see the Developer tab, you can enable it by going to **File > Options > Customize Ribbon** and checking the Developer option.
2. Click on "Record Macro" in the Developer tab.
3. Name your macro and choose where to store it (This Workbook is usually a good choice). You can also assign a shortcut key if you like.
4. Click "OK" to start recording.
5. Select the Pivot Table you want to clear.
6. Go to the "PivotTable Analyze" tab (or "Options" in older versions of Excel).
7. Click on "Clear" and then select "Clear All".
8. Stop recording the macro by going back to the Developer tab and clicking "Stop Recording".

Now, you have a macro that clears your Pivot Table. You can run this macro anytime by going to the Developer tab, clicking on "Macros", selecting your macro, and clicking "Run".

CREATING MACRO BUTTONS

1. Go to **INSERT > SHAPE > RECTANGLE**
2. Click and drag on the worksheet to draw the button.
3. Right click on the shape and select **Assign Macro**
4. Select the macro you recorded and click **OK**

EXAMPLES OF MACRO BUTTONS

Clear Pivot

Year/Month by
Revenue

% of Sales by
Company

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