

POWER QUERY UNPIVOT CHEAT SHEET

Mynda Treacy
Microsoft MVP



SCENARIO 1: STRAIGHTFORWARD UNPIVOT

In this example we want to unpivot columns B:D and remove the Grand Total column (E).

	A	B	C	D	E
1	Salesperson	2013	2014	2015	Grand Total
2	Bromley	32,310.84	44,050.64	10,995.71	87,357.19
3	Callahan	49,400.07	43,263.95	18,059.50	110,723.52
4	Coghill	124,655.56	51,163.01	49,945.11	225,763.68
5	Farnham	103,719.07	79,253.24	18,223.96	201,196.27
6	Finchley	95,850.36	55,787.97	30,861.76	182,500.09
7	Fuller	71,168.14	73,524.18	17,811.46	162,503.78
8	Gillingham	40,826.37	17,181.58	14,519.68	72,527.63
9	Gloucester	31,433.16	19,691.89	17,667.20	68,792.25
10	Rayleigh	59,827.19	41,903.64	15,232.16	116,962.99

4 RENAME COLUMNS

Double click the Attribute column header and enter a new name; Year:

Queries

	A ^B Salesperson	A ^B Attribute	1.2 Value
1	Bromley	2013	32310.84
2	Bromley	2014	44050.64
3	Bromley	2015	10995.71

5 CHANGE YEAR COLUMN TYPE

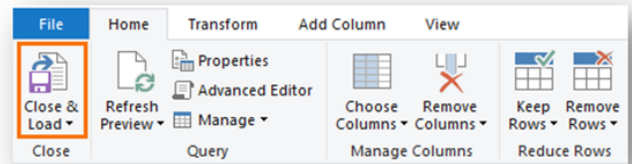
Click the ABC icon in the Year column header > select 'Whole Number':

Queries

	A ^B Salesperson	A ^B Year	1.2 Value
1	Bromley	Decimal Number	
2	Bromley	\$ Currency	
3	Bromley	1 ² 3 Whole Number	
4	Callahan	% Percentage	

6 CLOSE AND LOAD

Now you're ready to load the data back into the Excel worksheet. Click the 'Close & Load' button on the Home tab:

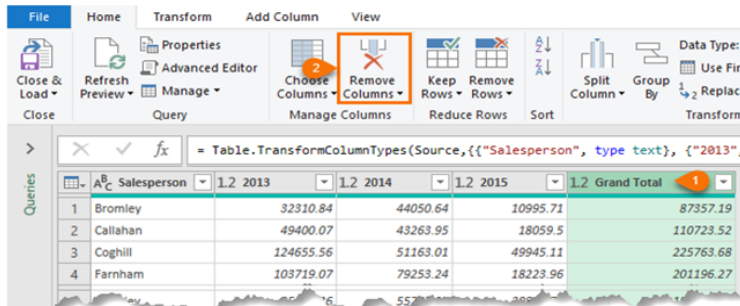


1 LOAD THE DATA

Data tab > From Table/Range. This will open the Query Editor window.

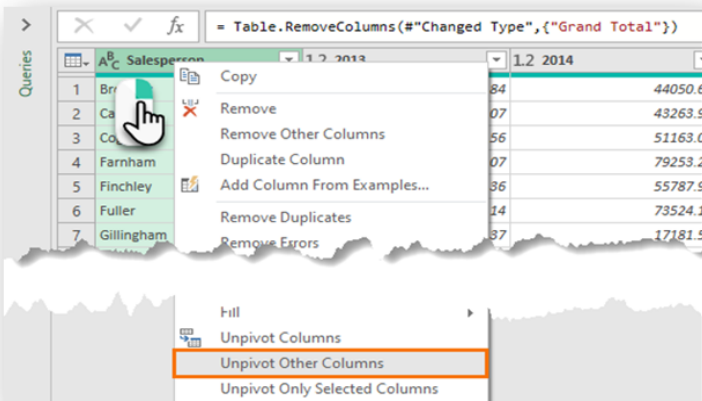
2 REMOVE GRAND TOTAL COLUMN

Left click to select it and press the Delete key, or go to the Home tab > Remove Columns, as shown below.



3 UNPIVOT YEAR COLUMNS

Select the Salesperson column > right-click > Unpivot Other Columns:



VOILA

Now you can create your PivotTable reports using data correctly formatted in a Tabular layout:

	A	B	C
1	Salesperson	Year	Value
2	Bromley	2013	32310.84
3	Bromley	2014	44050.64
4	Bromley	2015	10995.71
5	Callahan	2013	49400.07
6	Callahan	2014	43263.95
7	Callahan	2015	18059.5
8	Coghill	2013	124655.56
9	Coghill	2014	51163.01
10	Coghill	2015	49945.11
11	Farnham	2013	103719.07
12	Farnham	2014	79253.24
13	Farnham	2015	18223.96

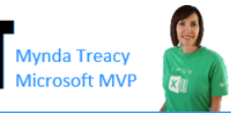


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SCENARIO 2: MULTI-COLUMN DATA TYPES

In this example we want to unpivot columns G & H (hours) and I & J (Cost) separately

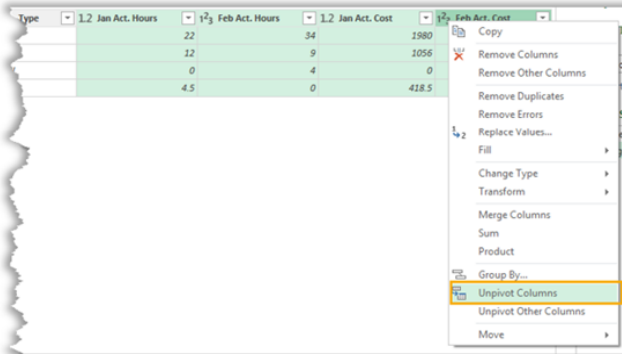
	A	B	C	D	E	F	G	H	I	J
1	Project Code	Project Name	Task Name	Resource Name	Resource Manager	Type	Jan Act. Hours	Feb Act. Hours	Jan Act. Cost	Feb Act. Cost
2	TC00001234	Project One	Task One	Resource 1	Manager 1	CW	22	34	1980	3060
3	TC00001234	Project One	Task One	Resource 2	Manager 2	CW	12	9	1056	792
4	TC00001234	Project One	Task Two	Resource 2	Manager 2	CW	0	4	0	352
5	TC00001234	Project One	Task Three	Resource 3	Manager 3	FTE	4.5	0	418.5	0

1 LOAD THE DATA

Data tab > From Table/Range. This will open the Query Editor window.

2 UNPIVOT VALUES COLUMNS

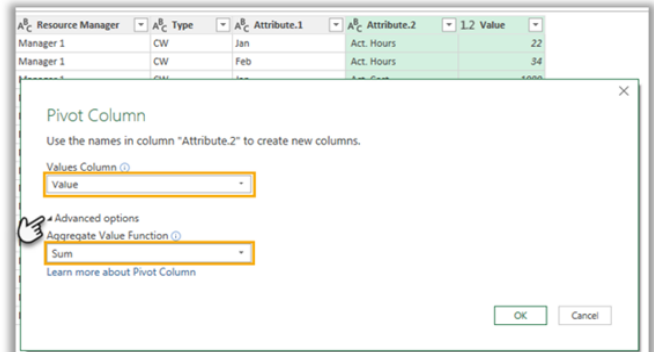
Select the 4 columns containing values > right-click the column header > Unpivot:



4 PIVOT ATTRIBUTE.2 and VALUE COLUMNS

This will put the Hours and Costs values into separate columns.

Tip: Select the Attribute.2 column first, then select the Value column > Transform tab > Pivot:



5 RENAME COLUMNS

Double click the column headers and rename as required:

Resource Manager	Type	Month	Act. Hours	Act. Cost
Manager 1	CW	Feb	34	3060
Manager 1	CW	Jan	22	1980
Manager 2	CW	Feb	9	792
Manager 2	CW	Jan	12	1056
Manager 3	FTE	Feb	0	0
Manager 3	FTE	Jan	4.5	418.5
Manager 2	CW	Feb	4	352
Manager 2	CW	Jan	0	0

6 CLOSE AND LOAD

Now you're ready to load the data back into the Excel worksheet. Click the 'Close & Load' button on the Home tab.

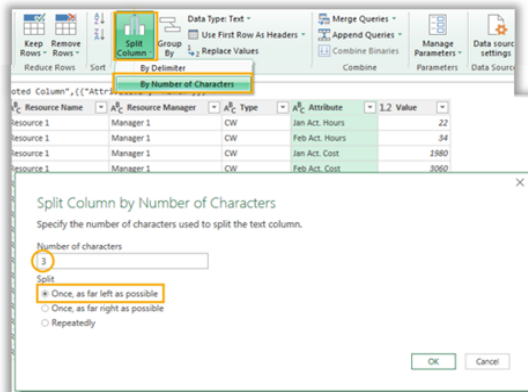
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3 SPLIT ATTRIBUTE COLUMN by NUMBER of CHARACTERS

Select the Attribute > Home tab > Split Column > by Number of Characters.

In the dialog box enter 3 (this will split after the month name) > Split; Once, as far left as possible:



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SCENARIO 3: NESTED COLUMN HEADERS

	A	B	C	D	E	F	Jan		Feb	
							Act Hours	Act \$	Act Hours	Act \$
1	Project Code	Project Name	Task Name	Resource Name	Resource Manager	Type				
2	TC00001234	Project One	Task One	Resource 1	Manager 1	CW	22	1980	34	3060
3	TC00001234	Project One	Task One	Resource 2	Manager 2	CW	12	1056	9	792
4	TC00001234	Project One	Task Two	Resource 2	Manager 2	CW	0	0	4	352
5	TC00001234	Project One	Task Three	Resource 3	Manager 3	FTE	4.5	418.5	0	0

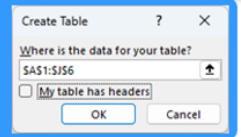
In this example we want to unpivot columns G to J but the headers are split over rows 1 and 2.

1 FORMAT in EXCEL TABLE

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8	Column9	Column10	Column11
							Jan		Feb	
Project Code	Project Name	Task Name	Resource Name	Resource Manager	Type	Act Hours	Act \$	Act Hours	Act \$	
TC00001234	Project One	Task One	Resource 1	Manager 1	CW	22	1980	34	3060	
TC00001234	Project One	Task One	Resource 2	Manager 2	CW	12	1056	9	792	
TC00001234	Project One	Task Two	Resource 2	Manager 2	CW	0	0	4	352	
TC00001234	Project One	Task Three	Resource 3	Manager 3	FTE	4.5	418.5	0	0	



IMPORTANT:
Do not select 'My table has headers'

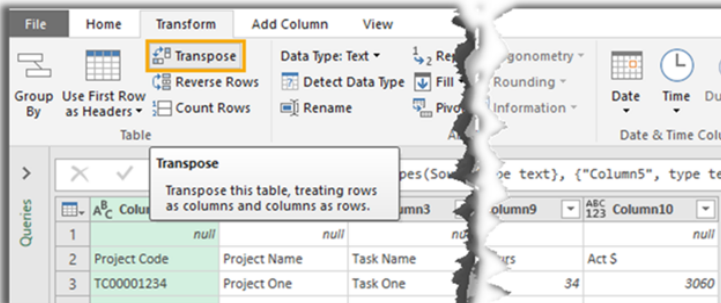


2 LOAD THE DATA

Data tab > From Table/Range. This will open the Query Editor window.

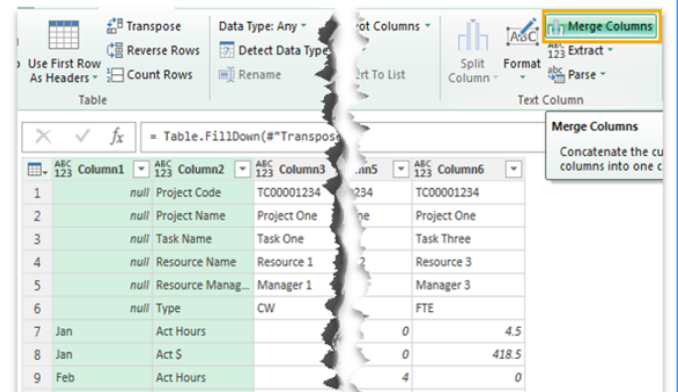
3 TRANSPOSE NESTED HEADER COLUMNS

Transform tab > Transpose:



5 MERGE COLUMNS

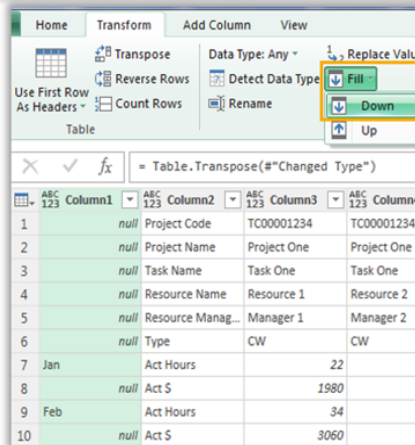
Merge Columns 1 and 2. I won't use a delimiter because the month values in Column1 are all 3 characters long, so I can easily split the column by length later



4 FILL DOWN MONTH LABELS

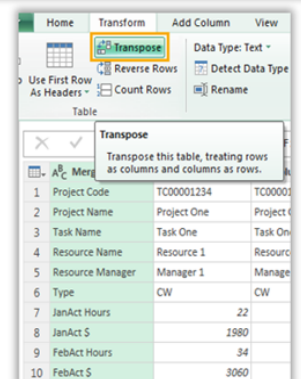
Select Column1 > Transform tab > Fill Down.

This will repeat the month names on each row where relevant:



6 TRANSPOSE

Transpose the table back to its original layout:



Continued on next page

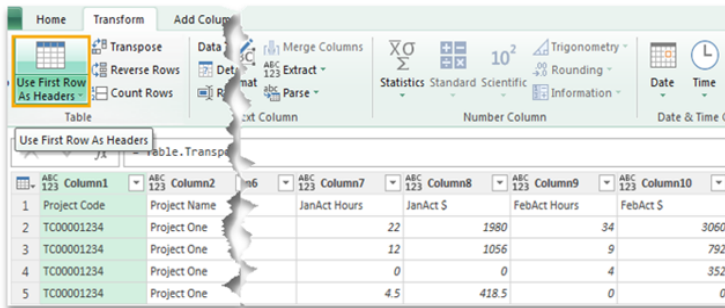
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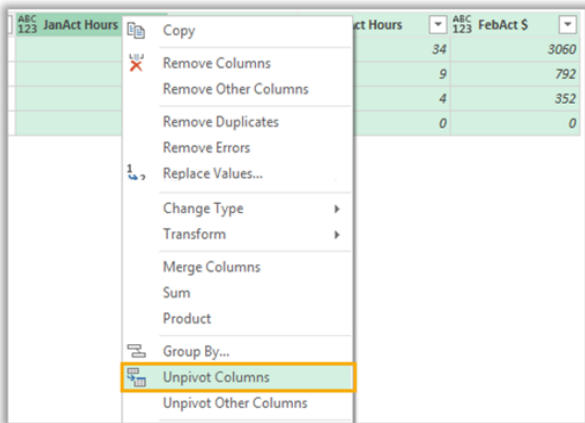
7 PROMOTE HEADERS to FIRST ROW

Now that the column labels are in one row we can promote them to the header.
Transform tab > Use First Row as Headers:



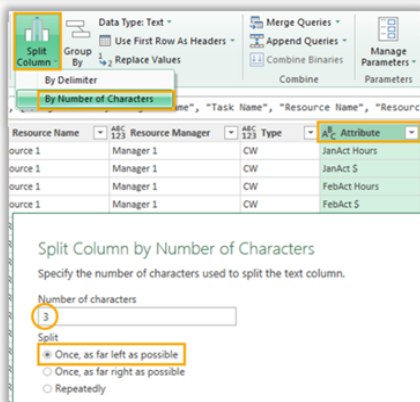
8 UNPIVOT VALUES COLUMNS

Select the 4 columns containing values > right-click the column header > Unpivot:



9 SPLIT ATTRIBUTE COLUMN by NUMBER of CHARACTERS

Select the Attribute > Home tab
> Split Column
> by Number of Characters.
In the dialog box enter 3,
(this will split after the month name)
> Split; Once, as far left as possible:

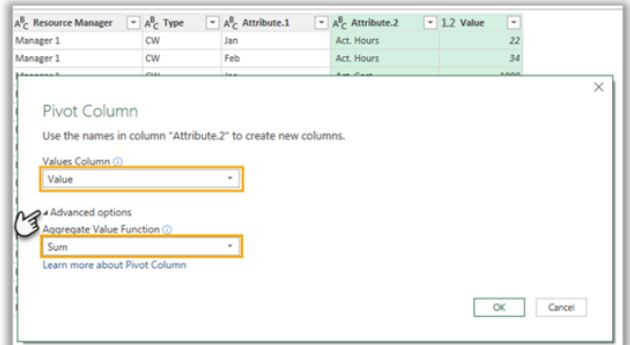


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10 PIVOT ATTRIBUTE.2 and VALUE COLUMNS

This will put the Hours and Costs values into separate columns.

Tip: Select the Attribute.2 column first, then select the Value column > Transform tab > Pivot:



11 RENAME COLUMNS

Double click the column headers and rename as required:

Resource Manager	Type	Month	Act. Hours	Act. Cost
Manager 1	CW	Feb	34	3060
Manager 1	CW	Jan	22	1980
Manager 2	CW	Feb	9	792
Manager 3	FTE	Feb	0	0
Manager 3	FTE	Jan	4.5	418.5
Manager 2	CW	Feb	4	352
Manager 2	CW	Jan	0	0

12 CLOSE AND LOAD

Now you're ready to load the data back into the Excel worksheet. Click the 'Close & Load' button on the Home tab.

VOILA

Now you can create your PivotTable reports using data correctly formatted in a Tabular layout:

Project Code	Project Name	Task Name	Resource Name	Resource Manager	Type	Month	Act Hours	Act \$
TC00001234	Project One	Task One	Resource 1	Manager 1	CW	Feb	34	3060
TC00001234	Project One	Task One	Resource 1	Manager 1	CW	Jan	22	1980
TC00001234	Project One	Task One	Resource 2	Manager 2	CW	Feb	9	792
TC00001234	Project One	Task One	Resource 2	Manager 2	CW	Jan	12	1056
TC00001234	Project One	Task Three	Resource 3	Manager 3	FTE	Feb	0	0
TC00001234	Project One	Task Three	Resource 3	Manager 3	FTE	Jan	4.5	418.5
TC00001234	Project One	Task Two	Resource 2	Manager 2	CW	Feb	4	352
TC00001234	Project One	Task Two	Resource 2	Manager 2	CW	Jan	0	0



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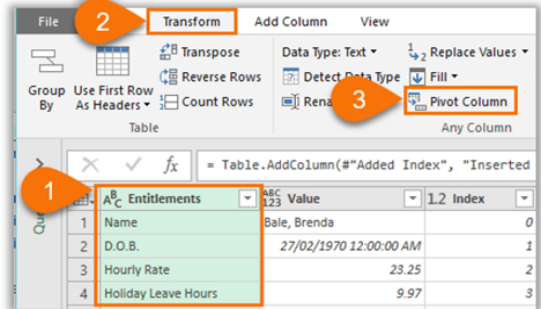
SCENARIO 4: REPEATING ROWS

The data in columns B and C follows a pattern of repeating rows. We can use Pivot to help convert it to a tabular layout.

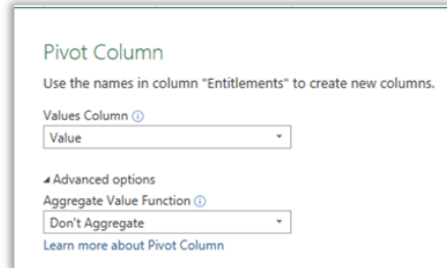
	B	C
1	Entitlements	Value
2	Name	Bale, Brenda
3	D.O.B.	27/02/1970
4	Hourly Rate	\$23.25
5	Holiday Leave Hours	9.97
6	Holiday Leave Accrual	\$231.80
7		
8	Total:	\$231.80
9		
10	Name	Billing, Brian
11	D.O.B.	2/06/1952
12	Hourly Rate	\$27.50
13	Holiday Leave Hours	57.44
14	Holiday Leave Accrual	\$1,579.52
15		
16	Total:	\$1,579.52
17		
18	Name	Brown, Bob
19	D.O.B.	9/02/1976
20	Hourly Rate	\$30.00
21	Holiday Leave Hours	101.96
22	Holiday Leave Accrual	\$3,058.90
23		
24	Total:	\$3,058.90

4 PIVOT VALUE COLUMN

Select the Entitlements column > Transform tab > Pivot Column:



In the Pivot Column dialog box under 'Advanced Options' select 'Don't Aggregate':

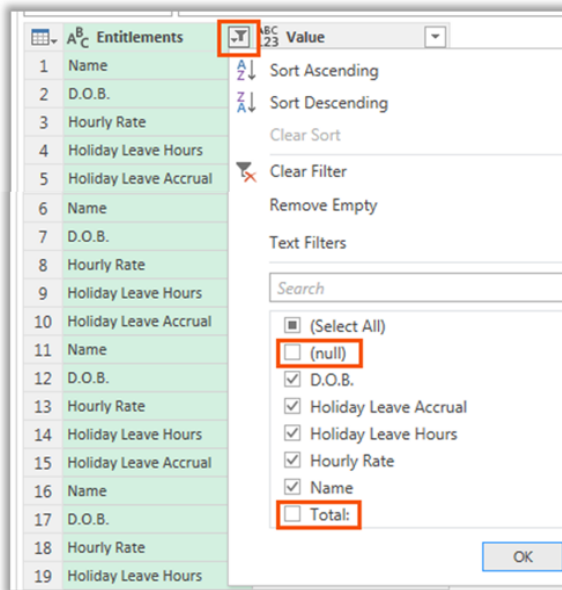


1 LOAD THE DATA

Data tab > From Table/Range. This will open the Query Editor window.

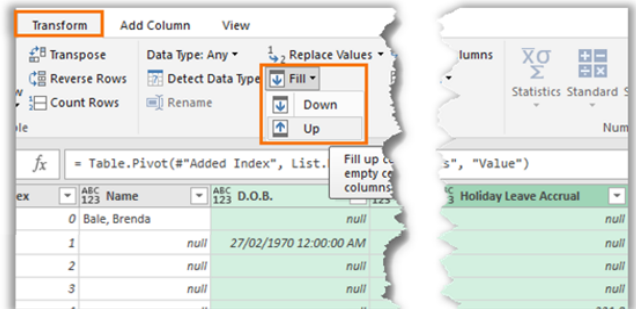
2 REMOVE ROWS

Remove rows we don't need. Select the Entitlements column > Filter > uncheck '(null)' and 'Total':



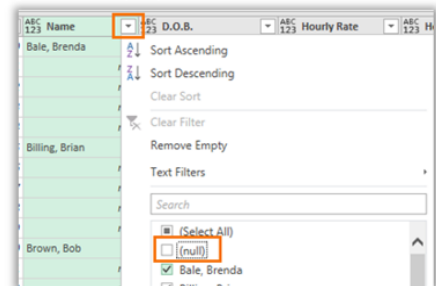
5 FILL UP

Select the D.O.B. to Holiday Leave Accrual columns > Transform tab > Fill Up:



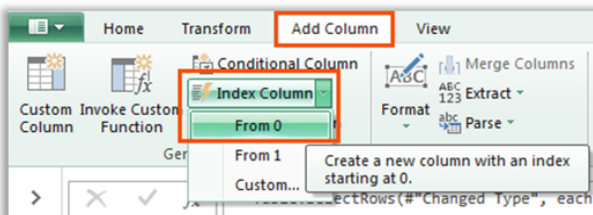
6 FILTER NAME COLUMN

Remove the null rows. This will remove all of the rows that we don't need, leaving us with just one row per person.



3 ADD INDEX COLUMN

Add Column > Index Column; From 0 or From 1, it doesn't really matter:



7 DELETE INDEX COLUMN

We don't need the Index column anymore. Select the headers and press the Delete key.

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