

# TODAY's MENU

HERE WE SERVE POWER QUERY M.

## COMBINE MULTIPLE TABLES FROM FILES IN A FOLDER

From all files in this Folder:

	Content	Name	Data
1	Binary	CompanyA.xlsx	Table
2	Binary	CompanyB.xlsx	Table
3	Binary	CompanyC.xlsx	Table

Combine all excel tables

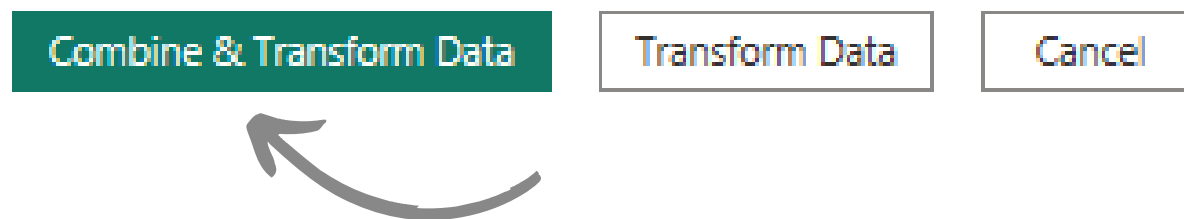
Name	Data	Item	Kind	Hidden
CompanyC3	Table	CompanyC3	Table	FALSE
CompanyC2	Table	CompanyC2	Table	FALSE
CompanyC1	Table	CompanyC1	Table	



DID YOU  
KNOW?

# Let me set the scene...

When you connect to a Folder and choose: *Combine & Transform Data*  
You can select a Sample file to design logic that will be applied to all.



When all files in the folder contain a single table with the exact same name, this functionality is seriously amazing!

But what if tables in those files have a different name?  
Or you want to get and transform multiple tables from those files?

Let's design a method to deal with that!



# Create a Folder location Parameter

Use a Parameter for the File location, that way if the folder is moved, you can easily update this to restore the Query.

## Manage Parameters

New

ABC FolderLocation X

1

Name

FolderLocation

Description

2

☒ Required

3

Type

Text

4

Suggested Values

Any value

5

Current Value

C:\Users\melissa\Downloads\Temp

OK

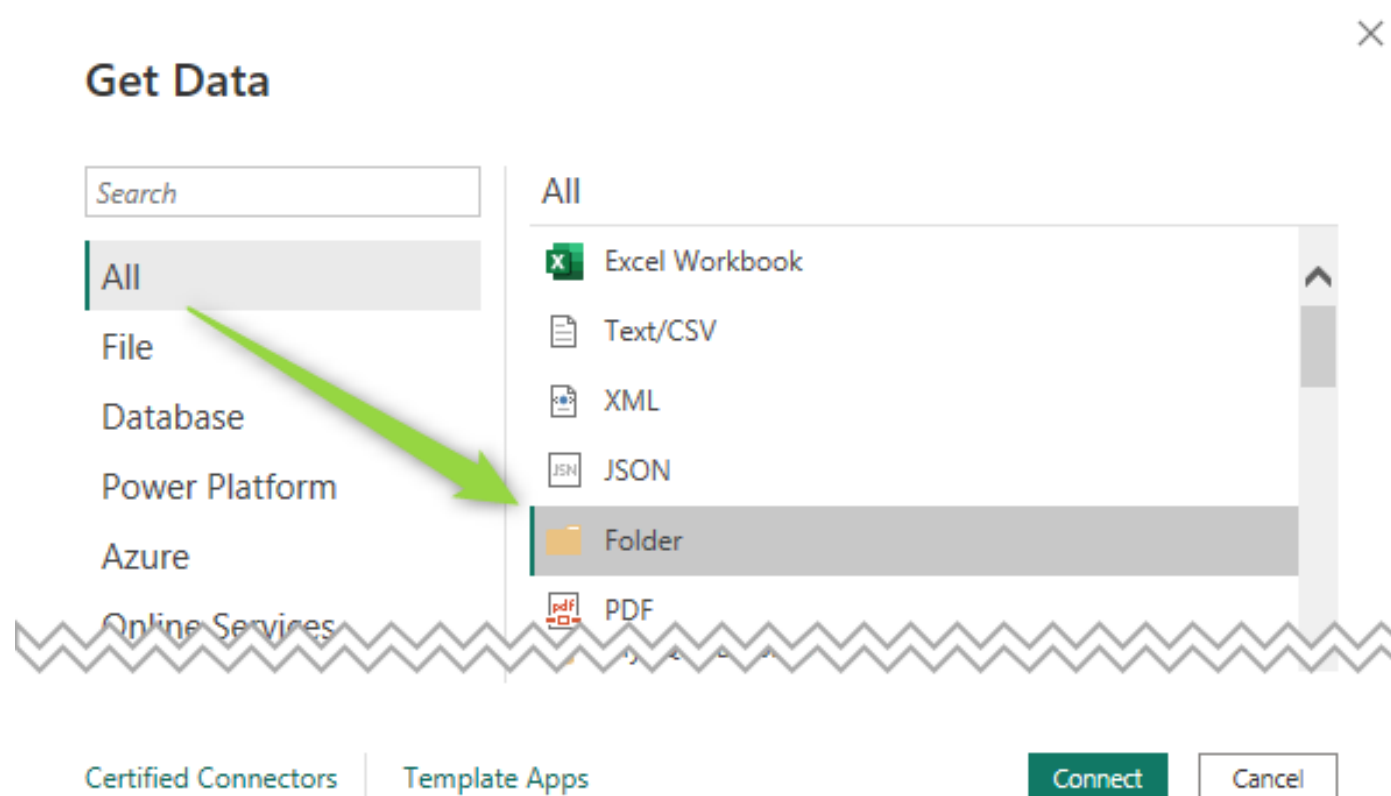
Cancel



# Get Data

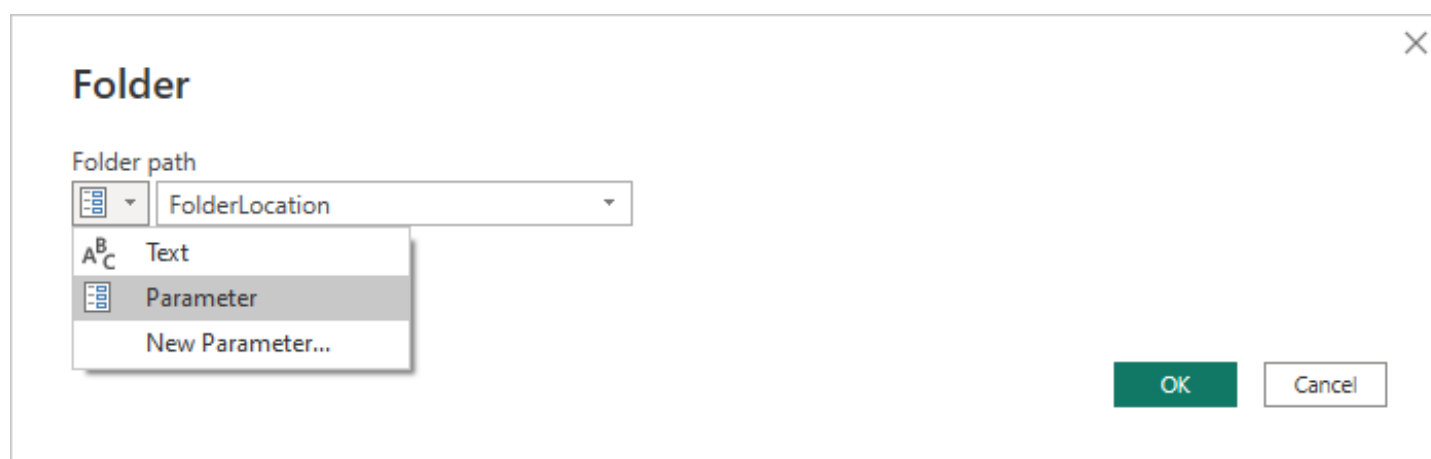
Select: New Source / More

This window will be shown, in the "All" section, you'll find "Folder"



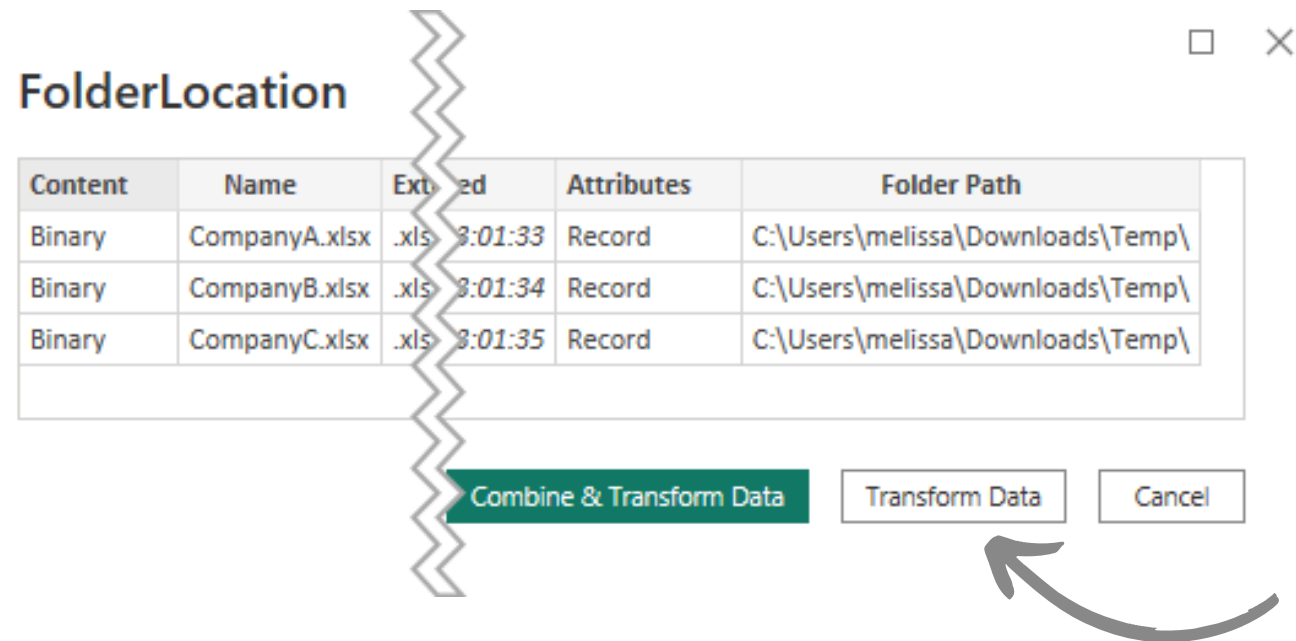
Switch to Parameter

And enter the *FileLocation* parameter name

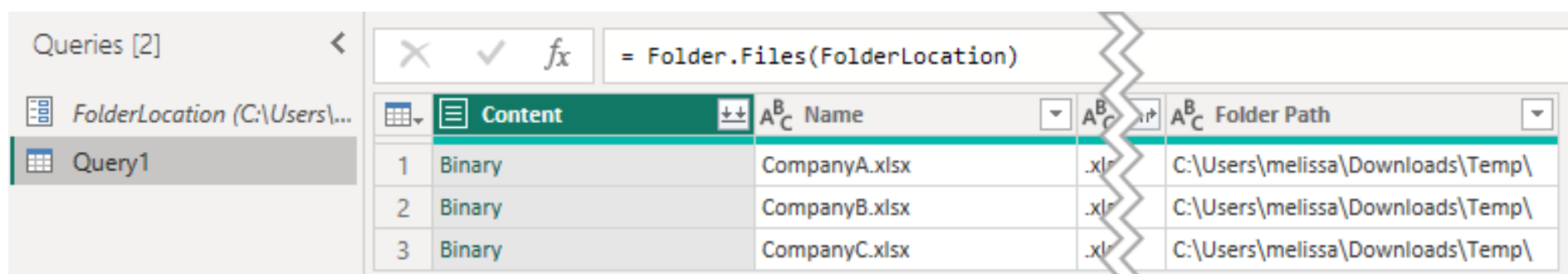


# Select "Transform Data"

Instead of *Combine & Transform Data*, select: *Transform Data*

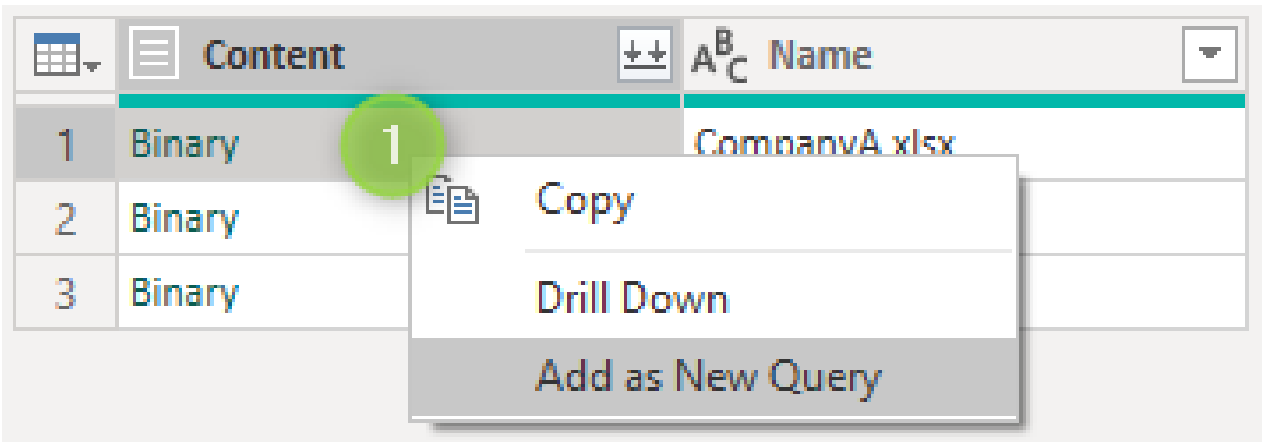


This will add *Query1* and shows the folder content



# Create a helper Query

Right click in the white space (1), select *Add as New Query*






Double click the file (2)



This calls *Excel.Workbook* and shows the sample file content

✕ ✓ *f<sub>x</sub>*

= Excel.Workbook(#"C:\Users\melissa\Downloads\Temp\\_CompanyA.xlsx1")

 A <sup>B</sup> <sub>C</sub> Name	 Data	 A <sup>B</sup> <sub>C</sub> Item	A <sup>B</sup> <sub>C</sub> Kind
1 Sheet1	Table	Sheet1	Sheet
2 CompanyA	Table	CompanyA	Table



# Create a filter that identifies all Excel tables

Use the User Interface to create a set of filters that can be applied to all files in the folder and obtains the required tables from each of them.

= Table.SelectRows("#Imported Excel Workbook", each ([Kind] = "Table"))

	A <sup>B</sup> <sub>C</sub> Name	Data	A <sup>B</sup> <sub>C</sub> Item	A <sup>B</sup> <sub>C</sub> Kind	Hidden
1	CompanyA	Table	CompanyA	Table	FALSE

### Filter Rows

Apply one or more filter conditions to the rows in this table.

☒ Basic
 ☐ Advanced

Keep rows where 'Item'

begins with  A<sup>B</sup><sub>C</sub>  Company

☒ And
 ☐ Or

A<sup>B</sup><sub>C</sub>  Enter or select a value

Combine filters into a single step using **and/or** keywords, when more than one step was created (validate the result). Like below.

✕

✓

$f_x$

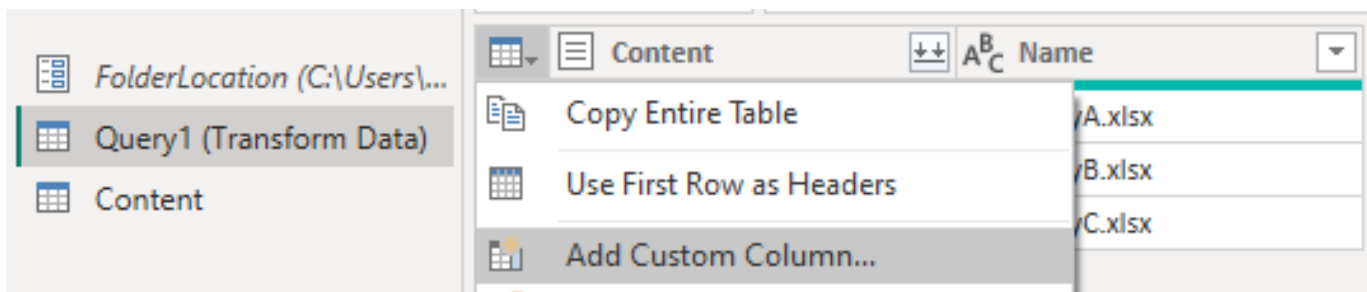
= Table.SelectRows("#Imported Excel Workbook", each ([Kind] = "Table" and Text.StartsWith([Item], "Company"))) )

	<div>ABC</div> Name	<div>ABC</div> Data	<div>ABC</div> Item	<div>ABC</div> Kind	<div>ABC</div> Hidden
1	CompanyA	Table	CompanyA	Table	FALSE



# Transfer the logic generated with the UI

Time to translate all these actions to *Query1*. Tip. Click on that mini table icon in the top left of the table to *Add a Custom Column*.



Copy the single step filter logic from the helper query. Replace the initial table *#"Imported Excel Workbook"* with *Excel.Workbook* and insert the *[Content]* column by double clicking that name on the right.

Custom Column

Add a column that is computed from the other columns.

New column name

Data

Custom column formula ⓘ

= Table.SelectRows( Excel.Workbook([Content]), each ([Kind] = "Table" and Text.StartsWith([Item], "Company"))) )

Available columns

Content

Name

<< Insert

Learn about Power Query formulas

✓ No syntax errors have been detected.

OK

Cancel

A square QR code located in the bottom left corner of the page.



## Preview the result

Click in the whitespace, this will show an additional preview section down below. This file returns multiple tables, all meeting our criteria.

✕

✓

fx

each Table.SelectRows( Excel.Workbook([Content]), each ([Kind] = "Table" and Text.StartsWith([Item], "Company")))

	Content	Name	Data
1	Binary	CompanyA.xlsx	Table
2	Binary	CompanyB.xlsx	Table
3	Binary	CompanyC.xlsx	Table

Name	Data	Item	Kind	Hidden
CompanyC3	Table	CompanyC3	Table	FALSE
CompanyC2	Table	CompanyC2	Table	FALSE
CompanyC1	Table	CompanyC1	Table	FALSE

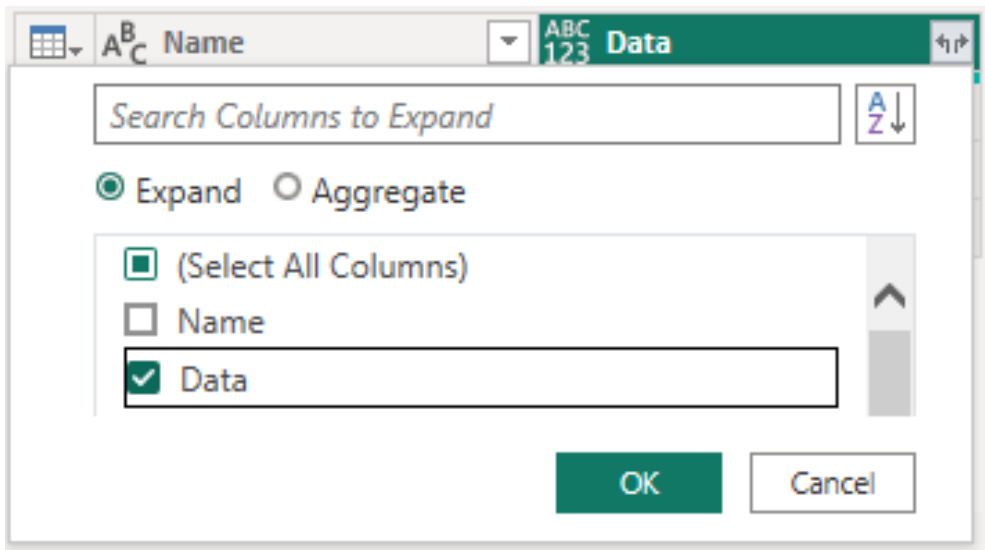
Select the columns of interest using the UI or use projection, to return only the Name and Data Column

<div> <div>✕</div> <div>✓</div> <div><math>f_x</math></div> </div> <div>)[[Name], [Data]]</div>	
<div> <div> <div></div> <div></div> </div> <div></div> </div>	<div> <div>ABC</div> <div>123</div> </div> <div> <div> <div> <div></div> <div></div> </div> <div></div> </div> </div>
1	CompanyA.xlsx
2	CompanyB.xlsx
3	CompanyC.xlsx

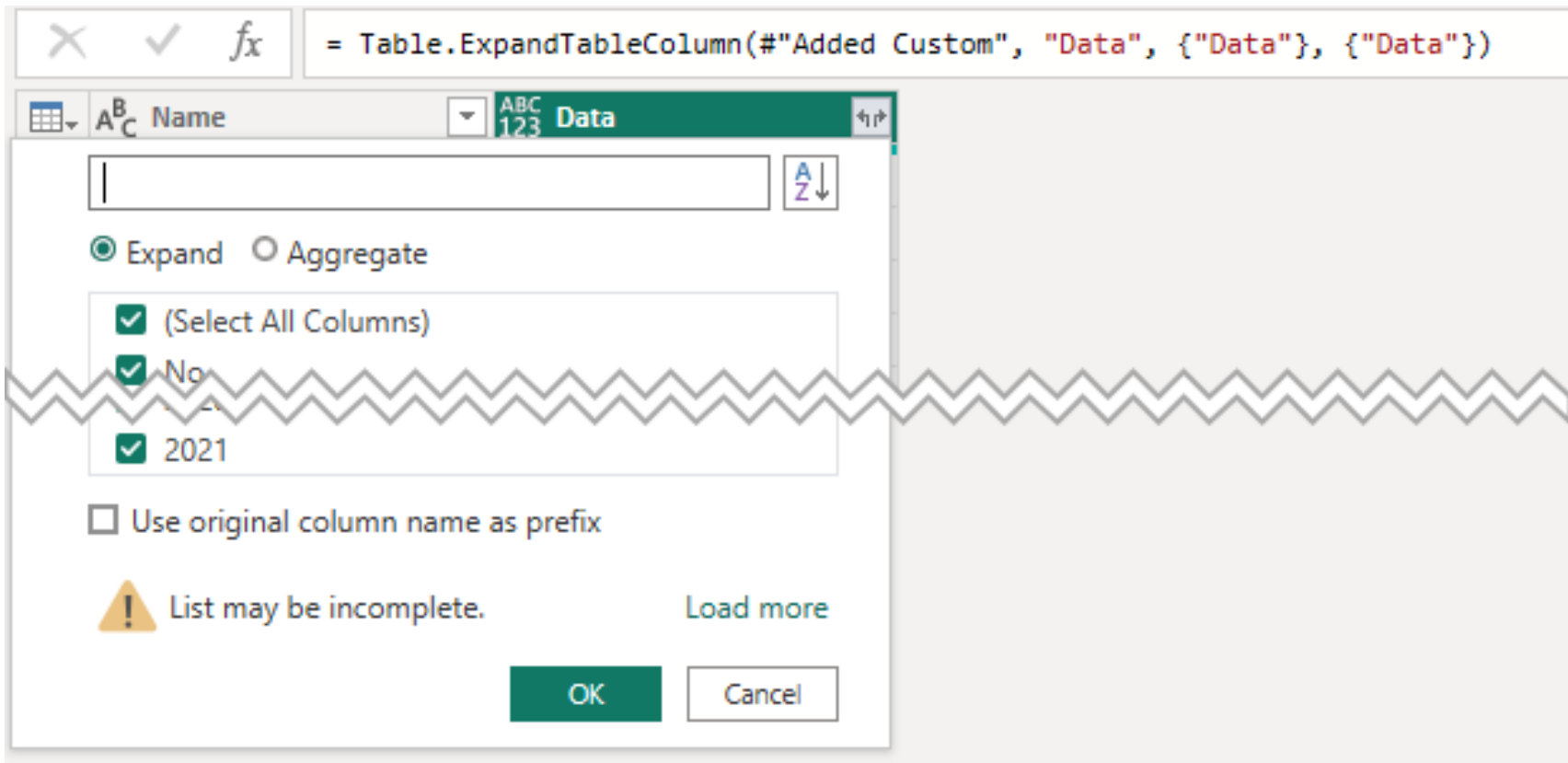


# Extract Data columns

Use the sideward arrows to expand the Data column and get the Data field

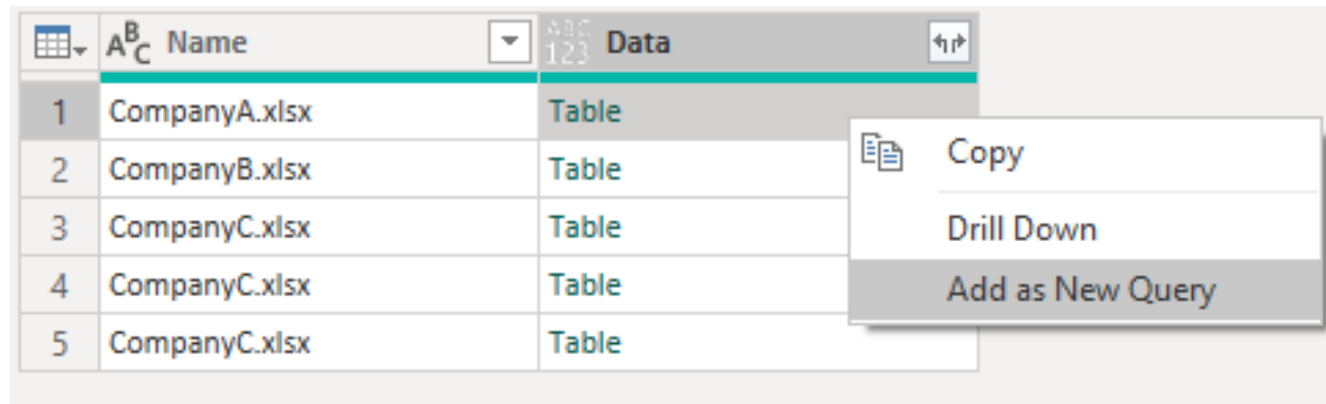


Repeat this for the extracted Data as well



# Improve the code for the final Expand step

In the Applied steps, select the step before the final Expand operation.  
Right click in the whitespace beside a table and *Add as New Query*



	Name	Data
1	CompanyA.xlsx	Table
2	CompanyB.xlsx	Table
3	CompanyC.xlsx	Table
4	CompanyC.xlsx	Table
5	CompanyC.xlsx	Table

In the formula bar wrap *Table.ColumnNames* around the drill down syntax, as illustrated here, to return a list with Column Names.  
Rename this query, I've called it: *GetColNames*

{0}[Data] )'. A green arrow points from the formula bar to the resulting table. The table has a header 'List' and 8 rows of data." data-bbox="187 620 882 880"/>

	List
1	No
2	Company
3	2016
4	2017
5	2018
6	2019
7	2020
8	2021



# Improve the code for the final Expand step

Select the final Expand step in *Query1* and replace the hard coded lists with column names with the name of the helper query: *GetColNames*

✓

*fx*

= Table.ExpandTableColumn("#Expanded Data", "Data", GetColNames)

	ABC 123	ABC 123	ABC 123	ABC 123	ABC 123
	Name	No	Company	2016	2021
1	CompanyA.xlsx		1 CompanyA		618399812
2	CompanyA.xlsx		2 CompanyA		569117703
3	CompanyA.xlsx		3 CompanyA		770844946
4	CompanyB.xlsx		1 CompanyB		217408448
5	CompanyB.xlsx		2 CompanyB		229247716
6	CompanyB.xlsx		3 CompanyB		984756355
7	CompanyC.xlsx		1 CompanyC3		907396425
8	CompanyC.xlsx		2 CompanyC3		506012871
9	CompanyC.xlsx		3 CompanyC3		137954988
10	CompanyC.xlsx		1 CompanyC2		907396425
11	CompanyC.xlsx		2 CompanyC2		506012871
12	CompanyC.xlsx		3 CompanyC2		137954988
13	CompanyC.xlsx		1 CompanyC1		907396425
14	CompanyC.xlsx		2 CompanyC1		506012871
15	CompanyC.xlsx		3 CompanyC1		137954988

Don't forget to "Disable load" for both helper queries. You can do so by right clicking their name in the Queries Pane.



# Final steps

Select all row header columns, go to Transform/ Unpivot Columns/ Unpivot Other Columns.

Bestand Home Transform Add Column View Tools Help

Group By Use First Row as Headers Count Rows

Transpose Reverse Rows

Data Type: Text Detect Data Type Rename

Replace Values Fill Pivot Column

Unpivot Columns Unpivot Other Columns Unpivot Only Selected Columns

Merge Columns Extract Parse

Queries [4]

- FolderLocation (C:\Users\...\Documents\CompanyA.xlsx)
- Query1 (Transform Data)
- Content
- GetColNames

Table

Formula Bar: = Table.ExpandTableColumn("#Expanded Data", "Company", "ID", "Name")

Table:

	ABC	ABC	ABC	ABC
	123	123	123	2016
1	CompanyA.xlsx	1	CompanyA	618399812
2	CompanyA.xlsx	2	CompanyA	569117703
3	CompanyA.xlsx	3	CompanyA	770844946
4	CompanyB.xlsx	1	CompanyB	217408448
5	CompanyB.xlsx	2	CompanyB	229247716
6	CompanyB.xlsx	3	CompanyB	984756355
7	CompanyC.xlsx	1	CompanyC3	907396425
8	CompanyC.xlsx	2	CompanyC3	506012871
9	CompanyC.xlsx	3	CompanyC3	137954988
10	CompanyC.xlsx	1	CompanyC2	907396425
11	CompanyC.xlsx	2	CompanyC2	506012871
12	CompanyC.xlsx	3	CompanyC2	137954988
13	CompanyC.xlsx	1	CompanyC1	907396425
14	CompanyC.xlsx	2	CompanyC1	506012871
15	CompanyC.xlsx	3	CompanyC1	137954988

Tip: Translate all but the currently selected columns into attribute-value pairs.

And set appropriate column types for all columns. Done!





I LOVE SOLVING  
PRACTICAL PROBLEMS  
WITH POWER QUERY/ M.

