

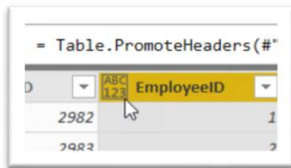
Power BI - Power Query - DAX

A Quick Guide to The Power BI Galaxy



Power Query

This is your **data preparation** stage:
It's best to set the data types here first!
Click the icon on the upper left hand side of any column to change its data type.



(Avoid ABC123's!)

Create a **Custom Function** with the Advanced Editor.
They always begin with a () followed by =>
You can put a parameter in between the parenthesis to "pass" in a value to the function.

Example:

```
( my_value ) =>  
let  
    Source = my_value + 1  
in  
    Source
```



Disable the "Allow data preview to download in the background" for a faster query editing experience.
Go to: File -> Options and Settings -> Options -> Data File

Common Power Query Shortcuts

Open Advanced Editor:	Alt, H, Q
New Source:	Alt, H, N
New Custom Column:	Alt, A, CC
Invoke Custom Function:	Alt, A, CF

Reference a query if you need to have multiple queries based of the same source.
Right-click on your source (base) query, choose "Reference".

Use a Parameter to store a file location for example.
Home -> Parameters -> New Parameter
Then replace the value on your query with the parameter name.

Example:

```
= Excel.Workbook( File.Contents( #"My File Location" ), null, true )
```

Pivot Columns (on date): Select single column

	Name	Date	Amount
1	Brent	November	5000
2	Sarah	November	6000
3	Brent	December	7000
4	Sarah	December	8000

	Name	Nov...	Dec...
1	Brent	5000	7000
2	Sarah	6000	8000

UnPivot Columns (on dates): Select related columns

	Name	Nov...	Dec...
1	Brent	5000	7000
2	Sarah	6000	8000

	Name	Attribute	Value
1	Brent	November	5000
2	Brent	December	7000
3	Sarah	November	6000
4	Sarah	December	8000

Add a new column with a specific calculation via: Add Column -> Custom Column
Note: This does NOT follow DAX syntax, but normal operations apply (+, -, /, *).

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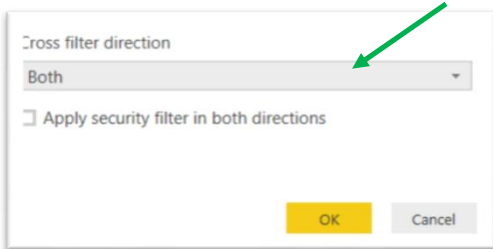
Power BI Desktop

You can use **Bookmarks** and **Buttons** together to quickly show / go to specific "views" of your dashboard.

Export data to Excel from any visual via the ellipsis button.



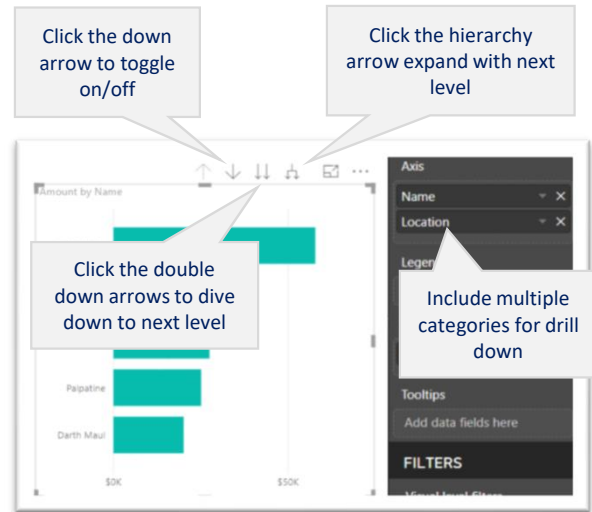
Try changing **Cross Filter Direction** to 'Both' if visuals aren't responding as expected.



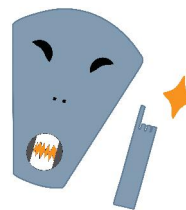
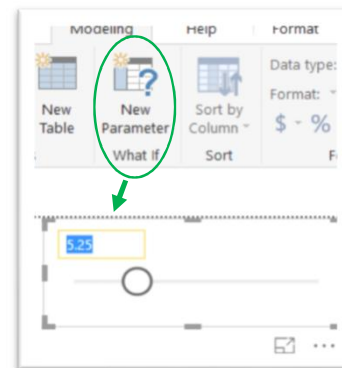
Common Desktop Shortcuts

New Measure:	Alt, H, N, M
New Column:	Alt, H, N, C
Edit Queries:	Alt, H, Q
Set Currency Type:	Alt, M, C
Set Percent Type:	Alt, M, P
New Table:	Alt, M, N, C
Desktop / Mobile View:	Alt, W, F
Open Bookmarks:	Alt, W, B
Toggle Gridlines:	Alt, W, G

Add a drill down feature by including multiple categories on an axis.



Create a 'What If' parameter to **allow a user** to enter / select a **range of values**.



TIP: Be sure to **Use Measures** and not calculated columns when building other calculations off of a What If parameter. Why? Because **calculated columns will NOT update** with the What If parameter.

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DAX

Easily **create a date table with GenerateSeries()**

This function requires 3 parameters:
Beginning value, Ending value, Increment

Example:

```
DateTable = GENERATESERIES(  
    Date( year, month, day ),  
    TODAY( ),  
    1 )
```

Beg. Value
End Value
Increment



Where possible, **Use Measures** instead of calculated columns as **calculated columns** will unnecessarily **inflate** your data model.

"X" functions i.e. SUMX()

These apply an initial calculation for each row before aggregating the entire column.

Example:

```
Total with Tax = SUMX(  
    Sales Table', [Amount] + [Tax])
```

These fields will be added together for each row.

You can **Use Variables** to help your model run better with the key word "var" and "return".

Example:

```
Tatooine and Sales Ratio =  
VAR tatooine = CALCULATE(  
    SUM( 'Sales'[Amount] ) ,  
    Customers[Location] = "Tatooine" )  
VAR totalSales = CALCULATE(  
    SUM( 'Sales'[Amount] ) ,  
    All( 'Sales' ) )  
RETURN tatooine + totalSales
```

Common DAX Shortcuts

New Line:	Shift + Enter
Comment Line:	Ctrl + /
Uncomment Line:	Ctrl + /
Find and Replace All:	Ctrl + Shift + L
Indent Entire Line Right:	Ctrl +]
Indent Entire Line Left:	Ctrl + [

NOTE: You can use the Tab key to indent as well, but the Ctrl +] method indents the entire row as opposed to where the cursor is.

TIP: These shortcuts also work in the Advanced Query Editor for Power Query!

CALCULATE() allows you to **apply a filter to your calculation.**

Example:

```
Tatooine Sales = CALCULATE(  
    SUM('Sales'[Amount]),  
    Customers[Location] = "Tatooine")
```

Use SelectedValue() to **return a selected value** from a slicer or filter on the report.

Example:

```
Selected Employee =  
SELECTEDVALUE(  
    Employees[Name], "None Selected" )
```

Column that the selected value is in.

Alternate result if no filter is selected.