Context in DAX formulas

INTRODUCTION TO DAX IN POWER BI



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- Enables dynamic analysis where results of a formula change to reflect the selected data
- There are 3 types of context: row, filter and query

• "The current row"



"The current row"

Calculated Column

• Includes values from all columns within the current row

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Item	Price	Tax	Price_with_tax
Α	\$ 20	25%	\$25
В	\$ 45	0%	\$45
С	\$ 100	15%	\$115

"The current row"

Measures

- Can apply when using iterator functions which compute calculations row by row
- Iterator functions can be identified by an X after the function name i.e SUMX()
- Syntax: SUMX(, <expression>)

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Item	Price	Tax	Price_w_tax
Α	\$ 20	25%	\$25
В	\$ 45	0%	\$45
Total	-	-	\$ 70

• Example: SUMX(Sales, Sales[Price] + (Sales[Price] * Sales[Tax]))

Filter context is a set of filters that have been applied before the calculation is carried out.

Filter context can be applied in several ways:

- Attributes in a row/column
- Via a slicer
- Through the filter pane
- In a calculated measure

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Color	Quantity	
Blue	1,250	
Green	200	
Black	4,000	

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	Socks	Shoes	T-shirt
Blue	200	800	250
Green	90	10	100
Black	2,000	800	1,200

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	Socks
Blue	200

Calculate Function

- Syntax: CALCULATE(<expression>[, <filter1> [, <filter2> [, ...]]])
 - Expression: a measure or calculation to be evaluated. Must return a single value.
 - Filters:
 - Filters need to evaluate as a table
 - Filters should not clash with one another
 - Sales[City]="London" , Sales[Country] <> "United Kingdom"
 - CALCULATE() filters will always override filters from the visualization
- Example: CALCULATE(SUM(Sales), Sales[Region]="EMEA")

Let's practice!

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Creating DAX measures

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