



Filter Context in DAX

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Logistics / FAQ

Recording

Will be recorded and available on PragmaticWorks YouTube channel

Following Along

Files are provided, following along is encouraged for the recording

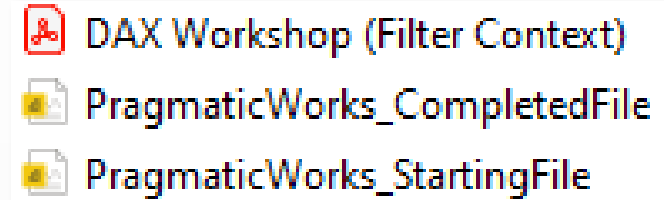
Attendee Files

Files included in Download

DAX Workshop Slides

PragmaticWorks_StartingFile.pbix

PragmaticWorks_CompletedFile.pbix



Requirements

Updated and newer version of Power BI Desktop to open files.

Agenda

What is Filter Context

- Defining Filter Context

- Understanding the definition of a measure

Calculate

- Modifying Filter Context with Calculate

- Time Intelligence Functions

Identifying Filters being applied

- Filters on visual

- DAX Studio

Inactive relationships

- USERELATIONSHIP function



What is Filter Context in DAX

Introduction to Filter Context

What is Filter Context? (Simple definition)

Filters that are applied through active relationships in the data model.



Let's define our measure

```
Total Sales =  
SUM( 'Internet Sales'[Sales Amount] )
```

Most common definition:

SUM of Sales Amount from the Internet Sales table **within the current filter context**

What does this measure represent?

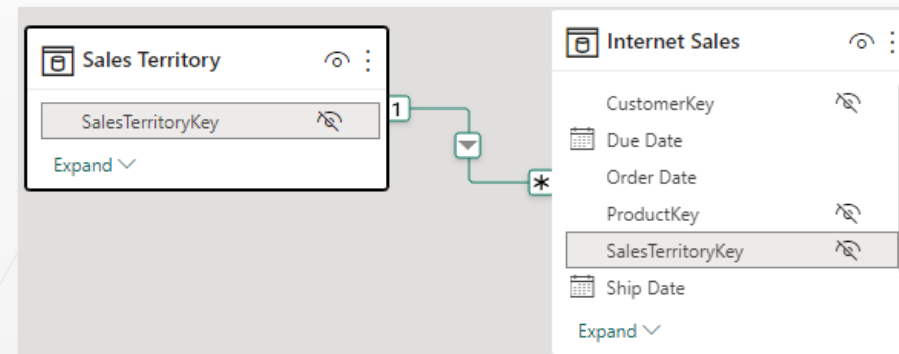
```
Total Sales =  
SUM( 'Internet Sales'[Sales Amount] )
```

Total Sales
▼
\$29,358,677.22

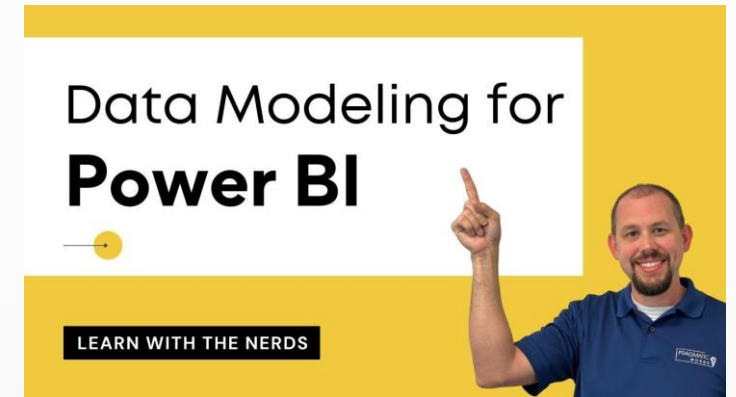
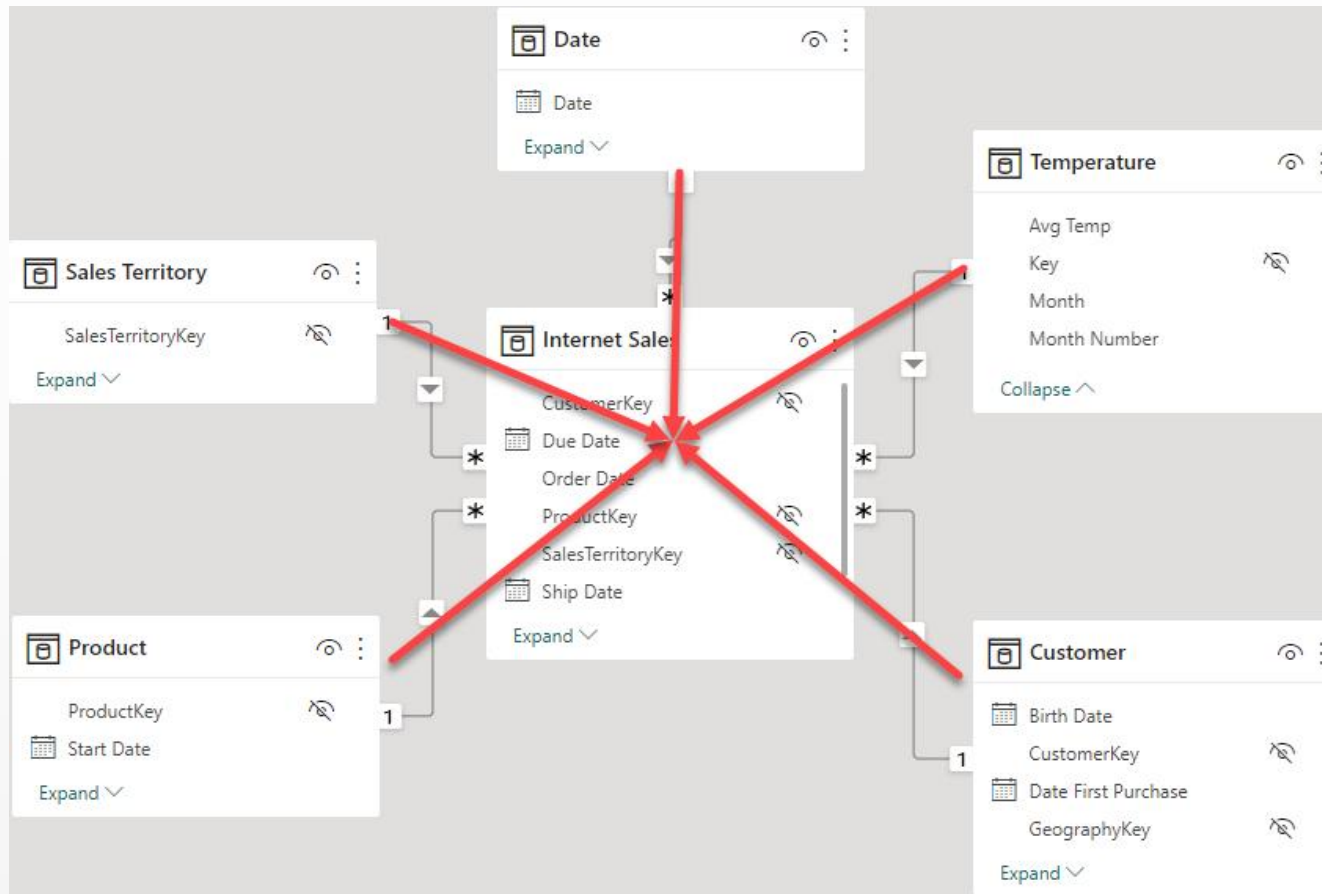
What if we add a filter on Country?

Sales Territory Country	Total Sales
United States	\$9,389,789.51
Australia	\$9,061,000.58
United Kingdom	\$3,391,712.21
Germany	\$2,894,312.34
France	\$2,644,017.71
Canada	\$1,977,844.86
Total	\$29,358,677.22

Why does this work?



The Star Schema





Filter Context

A close-up photograph of two hands interacting with a laptop. One hand is pointing at the screen, while the other is on the trackpad. The person is wearing a black wristband and a ring. A blue diagonal overlay covers the left side of the image, containing the title and subtitle.

Filter Context

Identifying Filter Context

How to identify filters

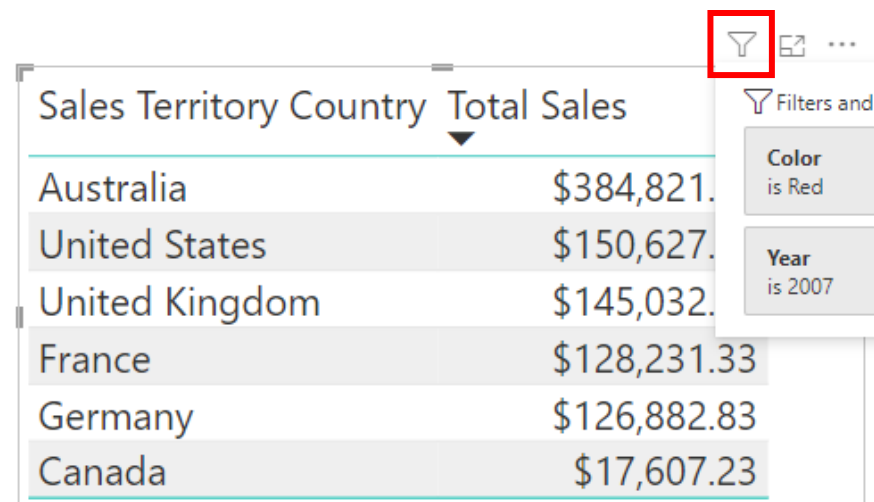
Filters on Visual

Shows filters from outside current visual

DAX Studio

Copy query

Paste into DAX Studio



Sales Territory	Country	Total Sales
Australia		\$384,821.
United States		\$150,627.
United Kingdom		\$145,032.
France		\$128,231.33
Germany		\$126,882.83
Canada		\$17,607.23

Filters and

- Color is Red
- Year is 2007

```
1 // DAX Query
2 DEFINE
3     VAR _ProdColor =
4         FILTER(
5             KEEPFILTERS(VALUES('Product'[Color])),
6             NOT('Product'[Color] IN {"Multi"}))
7
8     VAR _DateYear =
9         TREATAS({2022}, 'Date'[Year])
10
11     VAR _Result =
12         SUMMARIZECOLUMNS(
13             ROLLUPADISSUBTOTAL('Sales Territory'[Sales Territory Country], "IsGrandTotalRowTo",
14             _ProdColor,
15             _DateYear,
16             "Total_Sales", 'Internet Sales'[Total Sales] )
17
18 EVALUATE
19     _Result
20
21 ORDER BY
22     [Total_Sales] DESC,
23     'Sales Territory'[Sales Territory Country]
```



Identifying Filter Context