



MASTERING DAX in POWER BI

Prepared by: Group 1



AGENDA

TOPICS COVERED

- Working with text
- Time intelligence

Tip: Use links to go to a different page inside your presentation.

How: Highlight text, click on the link symbol on the toolbar, and select the page in your presentation you want to connect.

[Back to Agenda Page](#)

OUR TEAM



SIM THYDATEPIN



SOM DEBORAH



PUN SOLITA



KONG DARACHIN

WORKING w/ TEXT

Data Analysis Expressions (DAX) includes a set of text functions based on the library of string functions in Excel, but which have been modified to work with tables and columns in tabular models.

[Back to Agenda Page](#)



WORKING w/ TEXT

There are a bunch of functions that you can use:

- LEFT
- RIGHT
- CONCATENATE
- UPPER
- LOWER

[Back to Agenda Page](#)



LEFT



Returns the specified number of characters from the start of a text string.

- Syntax : LEFT(<text>, <num_chars>)
- Example: Left_With_Position = LEFT(Orders[Product Sub-Category],5)

Product Category	Product Sub-Category	Left_Default	Left_With_Position
Office Supplies	Appliances	A	Appli
Office Supplies	Binders and Binder Accessories	B	Binde
Furniture	Bookcases	B	Bookc
Furniture	Chairs & Chairmats	C	Chair
Technology	Computer Peripherals	C	Compu
Technology	Copiers and Fax	C	Copie
Office Supplies	Envelopes	E	Envel
Office Supplies	Labels	L	Label
Furniture	Office Furnishings	O	Offic
Technology	Office Machines	O	Offic
Office Supplies	Paper	P	Paper
Office Supplies	Pens & Art Supplies	P	Pens
Office Supplies	Rubber Bands	R	Rubbe
Office Supplies	Scissors, Rulers and Trimmers	S	Sciss
Office Supplies	Storage & Organization	S	Stora



RIGHT

RIGHT returns the last character or characters in a text string, based on the number of characters you specify.

- Syntax : RIGHT(<text>, <num_chars>)
- Example: Right_Default = RIGHT(Orders[Product Sub-Category])

Product Category	Product Sub-Category	Right_Default	Right_With_Position
Office Supplies	Storage & Organization	n	ation
Technology	Telephones and Communication	n	ation
Office Supplies	Paper	r	Paper
Furniture	Bookcases	s	cases
Furniture	Chairs & Chairmats	s	rmats
Furniture	Office Furnishings	s	hings
Furniture	Tables	s	ables
Office Supplies	Appliances	s	ances
Office Supplies	Binders and Binder Accessories	s	ories
Office Supplies	Envelopes	s	lopes
Office Supplies	Labels	s	abels



CONCATENATE



Joins two text strings into one text string.

- CONCATENATE(<text1>, <text2>)
- Example: CONCATENATE_With_Space = CONCATENATE(CONCATENATE(Orders[Product Category], " "), Orders[Product Sub-Category])

Product Category	Product Sub-Category	CONCATENATE_Result	CONCATENATE_With_Space
Furniture	Bookcases	FurnitureBookcases	Furniture Bookcases
Furniture	Chairs & Chairmats	FurnitureChairs & Chairmats	Furniture Chairs & Chairmats
Furniture	Office Furnishings	FurnitureOffice Furnishings	Furniture Office Furnishings
Furniture	Tables	FurnitureTables	Furniture Tables
Office Supplies	Appliances	Office SuppliesAppliances	Office Supplies Appliances
Office Supplies	Binders and Binder Accessories	Office SuppliesBinders and Binder Accessories	Office Supplies Binders and Binder Accessories
Office Supplies	Envelopes	Office SuppliesEnvelopes	Office Supplies Envelopes
Office Supplies	Labels	Office SuppliesLabels	Office Supplies Labels
Office Supplies	Paper	Office SuppliesPaper	Office Supplies Paper
Office Supplies	Pens & Art Supplies	Office SuppliesPens & Art Supplies	Office Supplies Pens & Art Supplies
Office Supplies	Rubber Bands	Office SuppliesRubber Bands	Office Supplies Rubber Bands
Office Supplies	Scissors, Rulers and Trimmers	Office SuppliesScissors, Rulers and	Office Supplies Scissors, Rulers and Trimmers



UPPER

Converts a text string to all uppercase letters.

- UPPER(<text>)
- Example: Region_New = UPPER(Users[Region])

Region	Manager	Region_New
Central	Chris	CENTRAL
East	Erin	EAST
South	Sam	SOUTH
West	William	WEST



LOWER

Converts all letters in a text string to lowercase.

- LOWER(<text>)
- Example: LowerCase = LOWER(Orders[Product Sub-Category])

1 LowerCase = LOWER(Orders[Product Sub-Category])	
Product Category	Product Sub-Category
Furniture	Bookcases
Furniture	Chairs & Chairmats
Furniture	Office Furnishings
Furniture	Tables
Office Supplies	Appliances
Office Supplies	Binders and Binder Accessories
Office Supplies	Envelopes
Office Supplies	Labels
Office Supplies	Paper
Office Supplies	Pens & Art Supplies
Office Supplies	Rubber Bands
Office Supplies	Scissors, Rulers and Trimmers
Office Supplies	Storage & Organization
Technology	Computer Peripherals
Technology	Copiers and Fax
Technology	Office Machines
Technology	Telephones and Communication

LowerCase

bookcases
chairs & chairmats
office furnishings
tables
appliances
binders and binder accessories
envelopes
labels
paper
pens & art supplies
rubber bands
scissors, rulers and trimmers
storage & organization
computer peripherals
copiers and fax
office machines
telephones and communication



TIME INTELLIGENCE

DATE, YEAR, MONTH, DAY, MTD, YTD
calculations.



WHAT IS TIME INTELLIGENCE?

Time intelligence functions support calculations to compare and aggregate data over time periods, supporting days, months, quarters, and years. In order to use any time intelligence calculation, you need a well-formed date table.



DATESBETWEEN

Syntax

DAX

```
DATESBETWEEN(<Dates>, <StartDate>, <EndDate>)
```

Parameters

Term	Definition
Dates	A date column.
StartDate	A date expression.
EndDate	A date expression.

EXAMPLE

```
SalesAmount20150515 :=
```

```
CALCULATE (
    SUM ( Sales[SalesAmount] ),
    DATESBETWEEN (
        'Date'[Date],
        DATE ( 2015, 1, 1 ),
        DATE ( 2015, 5, 15 )
    )
)
```

Syntax

DAX

```
DATESYTD(<dates> [,<year_end_date>])
```

Copy

Parameters

Term	Definition
dates	A column that contains dates.
year_end_date	(optional) A literal string with a date that defines the year-end date. The default is December 31.

EXAMPLE

DAX

Copy

```
= CALCULATE(  
    SUM(InternetSales_USD[SalesAmount_USD]),  
    DATESYTD(DateTime[DateKey],  
            "6-30"  
    )  
)
```



DATESYTD



DATEADD

Syntax

DAX

```
DATEADD(<dates>, <number_of_intervals>, <interval>)
```

Copy

Parameters

Term	Definition
dates	A column that contains dates.
number_of_intervals	An integer that specifies the number of intervals to add to or subtract from the dates.
interval	The interval by which to shift the dates. The value for interval can be one of the following: <code>year</code> , <code>quarter</code> , <code>month</code> , <code>day</code>

EXAMPLE

```
// Calculate the date one week from today  
OneWeekFromToday = DATEADD(TODAY(), 7, DAY)
```

```
// Calculate the date three months ago  
ThreeMonthsAgo = DATEADD(TODAY(), -3, MONTH)
```

```
// Calculate the date one year in the future  
OneYearInTheFuture = DATEADD(TODAY(), 1, YEAR)
```

```
// Calculate the date of the first day of the current month  
FirstDayOfCurrentMonth = DATEADD(TODAY(), -DAY(TODAY()), DAY)
```

```
// Calculate the date of the last day of the previous quarter  
LastDayOfPreviousQuarter = DATEADD(TODAY(), -QUARTER(TODAY()), DAY)
```

DAY, MONTH, YEAR

DAX

```
DAY = DAY([DATE])
```

DAX

```
MONTH = MONTH([DATE])
```

DAX

```
YEAR = YEAR([DATE])
```



TOTALMTD

Syntax

DAX

```
TOTALMTD(<expression>,<dates>[,<filter>])
```

Parameters

Parameter	Definition
expression	An expression that returns a scalar value.
dates	A column that contains dates.
filter	(optional) An expression that specifies a filter to apply to the current context.

EXAMPLE

DAX

```
= TOTALMTD(SUM(InternetSales_USD[SalesAmount_USD]),DateTime[DateKey])
```

Copy



SYNTAX

DAX

```
TOTALYTD(<expression>,<dates>[,<filter>][,<year_end_date>])
```

Copy

Parameters

Parameter	Definition
expression	An expression that returns a scalar value.
dates	A column that contains dates.
filter	(optional) An expression that specifies a filter to apply to the current context.
year_end_date	(optional) A literal string with a date that defines the year-end date. The default is December 31.

TOTALYTD

EXAMPLE

DAX

```
= TOTALYTD(SUM(InternetSales_USD[SalesAmount_USD]),DateTime[DateKey])
```



THANK YOU!

