The Date table

INTRODUCTION TO DAX IN POWER BI



Jess Ahmet
Content Developer, DataCamp

datacamp

Working with dates

Example Date: 2020/09/20 12:52

Date and Time Functions

- `YEAR(<date>)` > 2020
- `QUARTER(<datetime>)` > 3
- `MONTH(<datetime>)` > 9

Format Function

- Weekday: `FORMAT(<date>, <"dddd">)` > Friday
- Time: `FORMAT(<date>, <"h:nn:ss">)` > "12:52:00"

Time Intelligence Functions

- `LASTDATE()`
- `DATESBETWEEN()`
- `DATEADD()`

[1] https://docs.microsoft.com/en-us/dax/format-function-dax

Working with dates

- Evaluate data in time-series to spot trends and patterns i.e seasonal performance
- Out of the box features:
  - 20+ Date and Time Functions
  - 30+ Time Intelligence Functions
  - Automatically enabled date hierarchies
    - Drill-able to year, quarter, month and day

The importance of a date table

Issues of relying on **only** dates from transactional tables:

- Gaps in dates i.e no sales made on 20th September
- Returns wrong results when using time-intelligence functions
  - No error, wrong result
  - Difficult to troubleshoot

Creating a Date Table

- A dedicated date table is highly recommended for accurate reporting using time-intelligence functions.

Benefits:

- Filter by multiple date attributes such as Year and Month
- Custom calendar view/definitions such as fiscal dates
- Use of time-intelligence features to select a time horizon (e.g Today, Yesterday, Last 30 days)

Types of Analysis:

- Revenue by Day of Week, Fiscal Performance, Public Holidays

Creating a Date table

CALENDAR()

- Syntax: `CALENDAR(<start_date>, <end_date>)`
- Returns a table with a single column 'date' that contains a continuous set of dates inclusive of the specified dates
- Example: `CALENDAR('2020-01-01', '2020-12-31')`

Creating a Date table

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Date
2020-01-01
2020-01-02
...
2020-12-31

Creating a Date table

CALENDARAUTO()

- Syntax: `CALENDARAUTO(<fiscal_year_end_month>)`
- Returns a table with a single column 'date' that automatically takes the earliest and latest date in the model and internally calls `CALENDAR()` .
- Example: `CALENDARAUTO(12)`

Creating a Date table

CALENDARAUTO()

- Syntax: `CALENDARAUTO(<fiscal_year_end_month>)`
- Returns a table with a single column 'date' that automatically takes the earliest and latest date in the model and internally calls `CALENDAR()` .
- Example: `CALENDARAUTO(12)`

Date
2020-01-01
2020-07-31
...
2020-12-31

Let's practice!

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Dates and Quick Measures

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Let's practice!

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Congratulations!

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Course Recap

Chapter 1

- DAX functions
- Creating calculated columns
- Creating measures

Chapter 2

- Row vs. filter context
- Use of variables with `VAR`
- Working with iterator functions
- Using `CALCULATE()` to filter measures

Chapter 3

- Creating calculated tables
- Date and Time, Format and Time Intelligence Functions
- Quick Measures

Practice makes perfect!

Become a DAX master!

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