DAX

BASICS

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DAX

Data **A**nalysis e**X**pression

- Native formula language of Power BI
- Used to create calculated columns, measures, and tables
- Similar to Excel formulas but designed for relational data models
- Powers all custom calculations and business logic in reports

Table Constructors

Table Constructors

Writing Simple Tables

- Create a list of values directly in the DAX formula

Single Column

{ "Red", "Blue", "White" }

Multiple Columns

{ ("A", 10, 1.5), ("B", 20, 2.5), ("C", 30, 3.5) }

Common Use

Product[Color] IN { "Red", "Blue", "White" }

Conditional Statements

IF

Dictating Conditions

Syntax

IF(condition, value_if_true, value_if_false)

Example

```
IF(
    Sales[Quantity] > 1,
    "MULTI",
    "SINGLE"
)
```

The third parameter is ***optional***, defaults to BLANK.

SWITCH

SWITCH

SWITCHing Among Options

- In case of multiple conditions, IFs can get messy real soon. SWITCH simplifies it.

```
IF(
    Product[Size] = "S", "Small",
    IF(Product[Size] = "M", "Medium",
        IF(Product[Size] = "L", "Large", "Other")
    )
)
```

```
SWITCH(
    Product[Size],
    "S", "Small",
    "M", "Medium",
    "L", "Large",
    "XL", "Extra Large",
    "Other"
)
```

Calculated Columns

Calculated Columns

Load and We will add those fields later

- New columns added to your table
- Computed during data refresh
- Stored in memory
- Value calculated row-by-row
- Value does NOT change based on user selections

Measures

Measures

Calculated on the fly

- Calculations that aggregate data
- Computed at query time (when viewing reports)
- NOT stored in memory
- Results CHANGE based on filters and selections

Q&A