DAX FUNCTIONS

What is DAX Function?

DAX (Data Analysis Expressions) is a library of functions and operators that can be combined to build formulas and expressions in Power BI, Power Pivot, and Analysis Services. DAX formulas are used for creating calculated columns, measures, and custom tables.

Where DAX Can Be Used in Power BI?

Calculated Columns: Add new data to your tables based on existing data.

Measures: Perform calculations on your data that can be used in visualizations.

Custom Tables: Create new tables based on existing data with complex calculations.

MAX, MAXX, MAXA

MAX: Returns the largest numeric value in a column.

```
MAX(Table[Column])
```

MAXX: Returns the largest value that results from evaluating an expression for each row of a table.

```
MAXX(Table, Expression)
```

MAXA: Similar to MAX, but also considers logical values and text.

```
MAXA(Table[Column])
```

MIN, MINX, MINA

MIN: Returns the smallest numeric value in a column.

MIN(Table[Column])

MINX: Returns the smallest value that results from evaluating an expression for each row of a table.

MINX(Table, Expression)

MINA: Similar to MIN, but also considers logical values and text.

MINA(Table[Column])

AVERAGE, AVERAGEA, AVERAGEX

AVERAGE: Returns the arithmetic mean of a column.

AVERAGE(Table[Column])

AVERAGEA: Similar to AVERAGE, but also considers logical values and text.

AVERAGEA(Table[Column])

AVERAGEX: Returns the arithmetic mean of an expression evaluated for each row in a table.

AVERAGEX(Table, Expression)

COUNT, COUNTA, COUNTX, COUNTAX, DISTINCTCOUNT, COUNTBLANK, COUNTROWS

COUNT: Counts the number of rows in a column that contain numeric values.

```
COUNT(Table[Column])
```

COUNTA: Counts the number of rows in a column that are not empty.

```
COUNTA(Table[Column])
```

COUNTX: Counts the number of values that result from evaluating an expression for each row of a table.

```
COUNTX(Table, Expression)
```

COUNTAX: Similar to COUNTX, but also considers logical values and text.

```
COUNTAX(Table, Expression)
```

DISTINCTCOUNT: Counts the number of distinct values in a column.

```
DISTINCTCOUNT(Table[Column])
```

COUNTBLANK: Counts the number of blank cells in a column.

COUNTBLANK(Table[Column])

COUNTROWS: Counts the number of rows in a table.

COUNTROWS(Table)

IF Condition

IF: Returns one value if a condition is true and another value if it's false.

IF(Condition, ResultIfTrue, ResultIfFalse)

VLOOKUP or LOOKUPVALUE

LOOKUPVALUE: Returns the value of a column in a table where certain conditions are met.

LOOKUPVALUE(Result_Column, Search_Column1, Search_Value1, Search_Column2, Search_Value2, ...)

CONCATENATE

CONCATENATE: Joins two text strings into one.

CONCATENATE(Text1, Text2)

ALL, CONTAINS, CONTAINSSTRING, CONTAINSSTRINGEXACT

ALL: Removes filters from the specified columns or tables.

```
ALL(Table[Column])
```

CONTAINS: Checks if one or more rows in a table satisfy a condition.

```
CONTAINS(Table, Search_Column, Search_Value)
```

CONTAINSSTRING: Checks if one text string contains another text string.

```
CONTAINSSTRING(Text, Substring)
```

CONTAINSSTRINGEXACT: Checks if one text string contains another text string exactly.

```
CONTAINSSTRINGEXACT(Text, Substring)
```

DATETIME

DAX includes several functions to work with date and time data, such as:

DATE

TIME

TODAY

NOW

YEAR

MONTH

DAY

SUMMARIZE Table

SUMMARIZE: Creates a summary table for the requested totals over a set of groups.

```
SUMMARIZE(Table, GroupBy_Column1, [GroupBy_Column2, ...], [Name, Expression, ...])
```

ROLLUP

ROLLUP: Creates subtotals that roll up the set of groups.

```
SUMMARIZE(Table, ROLLUP(GroupBy_Column1, GroupBy_Column2, ...))
```

COALESCE

COALESCE: Returns the first non-blank value among its arguments.

```
COALESCE(Expression1, Expression2, ...)
```

ALL, ALLSELECTED, ALLEXCEPT

ALL: Removes all filters from the specified columns or tables.

```
ALL(Table[Column])
```

ALLSELECTED: Removes filters from the specified columns or tables but retains filters applied to the table via visual-level filters.

```
ALLSELECTED(Table[Column])
```

ALLEXCEPT: Removes all filters from the specified table except the filters that have been applied to the specified columns.

```
ALLEXCEPT(Table, Column1, Column2, ...)
```

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