

## 1) Explain Common DAX Functions with examples and share the power bi desktop file for review.

Dax Definition:

*DAX STANDS for "Data Analysis Expressions"*

*It is a formula language.*

*It is used in a formula or expression to calculated and return one or more values.*

*DAX is a programming language, that allows the users to define custom calculations.*

*Some of the DAX functions are same as Excel functions.*

**Common DAX Functions:**

### 1. Date and time functions:

These functions help you create calculations based on dates and time. Many of the functions in DAX are similar to the Excel date and time functions. However, DAX functions use a **datetime** data type, and can take values from a column as an argument.

Function	Description
<a href="#">CALENDAR</a>	Returns a table with a single column named "Date" that contains a contiguous set of dates.
<a href="#">CALENDARAUTO</a>	Returns a table with a single column named "Date" that contains a contiguous set of dates.
<a href="#">DATE</a>	Returns the specified date in datetime format.
<a href="#">DATEDIFF</a>	Returns the number of interval boundaries between two dates.
<a href="#">DATEVALUE</a>	Converts a date in the form of text to a date in datetime format.
<a href="#">DAY</a>	Returns the day of the month, a number from 1 to 31.
<a href="#">EDATE</a>	Returns the date that is the indicated number of months before or after the start date.
<a href="#">EOMONTH</a>	Returns the date in datetime format of the last day of the month, before or after a specified number of months.
<a href="#">HOUR</a>	Returns the hour as a number from 0 (12:00 A.M.) to 23 (11:00 P.M.).
<a href="#">MINUTE</a>	Returns the minute as a number from 0 to 59, given a date and time value.
<a href="#">MONTH</a>	Returns the month as a number from 1 (January) to 12 (December).
<a href="#">NETWORKDAYS</a>	Returns the number of whole workdays between two dates.
<a href="#">NOW</a>	Returns the current date and time in datetime format.
<a href="#">QUARTER</a>	Returns the quarter as a number from 1 to 4.
<a href="#">SECOND</a>	Returns the seconds of a time value, as a number from 0 to 59.
<a href="#">TIME</a>	Converts hours, minutes, and seconds given as numbers to a time in datetime format.
<a href="#">TIMEVALUE</a>	Converts a time in text format to a time in datetime format.
<a href="#">TODAY</a>	Returns the current date.
<a href="#">UTCNOW</a>	Returns the current UTC date and time
<a href="#">UTCTODAY</a>	Returns the current UTC date.
<a href="#">WEEKDAY</a>	Returns a number from 1 to 7 identifying the day of the week of a date.

Function	Description
<a href="#">WEEKNUM</a>	Returns the week number for the given date and year according to the return_type value.
<a href="#">YEAR</a>	Returns the year of a date as a four digit integer in the range 1900-9999.

## 2) Text functions:

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. This section describes text functions available in the DAX language.

Function	Description
<a href="#">COMBINEVALUES</a>	Joins two or more text strings into one text string.
<a href="#">CONCATENATE</a>	Joins two text strings into one text string.
<a href="#">CONCATENATEX</a>	Concatenates the result of an expression evaluated for each row in a table.
<a href="#">EXACT</a>	Compares two text strings and returns TRUE if they are exactly the same, FALSE otherwise.
<a href="#">FIND</a>	Returns the starting position of one text string within another text string.
<a href="#">FIXED</a>	Rounds a number to the specified number of decimals and returns the result as text.
<a href="#">FORMAT</a>	Converts a value to text according to the specified format.
<a href="#">LEFT</a>	Returns the specified number of characters from the start of a text string.
<a href="#">LEN</a>	Returns the number of characters in a text string.
<a href="#">LOWER</a>	Converts all letters in a text string to lowercase.
<a href="#">MID</a>	Returns a string of characters from the middle of a text string, given a starting position and length.

## 3) Math and Statistical:

### **ROUND/ROUNDDOWN/ROUNDUP :**

Rounds a number to the specified number of digits / Rounds a number down, toward zero / Rounds a number up, away from 0 (zero)

**SUM :**

Adds all the numbers in a column

**AVERAGE:**

Returns the average (arithmetic mean) of all the numbers in a column.

**MIN/MAX:**

Returns the smallest / largest values in a column

Counts the number of cells in a column that contain numbers.

**COUNT:**

Counts the number of cells in a column that are not empty.

**COUNTA:**

Counts the number of blank cells in a column.

Counts the number of rows in the specified table, or in a table defined by an expression.

**DISTINCTCOUNT:**

Counts the number of distinct values in a column.

**4)Filter functions:**

The filter and value functions in DAX are some of the most complex and powerful, and differ greatly from Excel functions. The lookup functions work by using tables and relationships, like a database. The filtering functions let you manipulate data context to create dynamic calculations.