Functions in Calculated Fields

Data analysis involves a lot of calculations. Tableau has several inbuilt functions in Calculated fields, which helps create expressions and formulas for complex calculations. Through these functions, you will be creating the required features in the tableau.

Following are the description of different categories of functions.

- Number Functions
- String Functions
- Date Functions
- Logical Functions
- Aggregate Functions

Number Functions

To perform numeric calculations, use these functions. It only works with the numbers.

Following are some examples of important number functions.

Function	Description	Example
CEILING (number)	Rounds a number to the nearest integer equal or greater value.	CEILING(2.145) = 3
POWER (number, power)	Raises the number to the specified power.	POWER(5,3) = 125
ROUND (number, [decimals])	Rounds the numbers to a specified number of digits.	ROUND(3.14152,2) = 3.14

Date Functions

Tableau has a variety of date functions to carry out calculations which involve dates. All the date functions use the date_part, a string indicating the part of the date such as - month, day, or year. Following are a few examples:

Function	Description	Example
DATEADD (date_part, increment, date)	Returns an increment added to the date. The type of increment is specified in date_part.	DATEADD ('month', 3, #2004-04-15#) = 2004-0715 12:00:00 AM
DATENAME (date_part, date, [start_of_week])	Returns date_part of date as a string. The start_of_week parameter is optional.	DATENAME('month', #200404-15#) = "April"
DAY (date)	Returns the day of the given date as an integer.	DAY(#2004-04-12#) = 12
NOW( )	Returns the current date and time.	NOW( ) = 2004-04-15 1:08:21 PM

String Functions

String Functions are used for string manipulation. Following are some important examples.

Function	Description	Example
LEN (string)	Returns the length of the string.	LEN("Tableau") = 7

LTRIM (string)	Returns the string with any leading spaces removed.	LTRIM(" Tableau ") = "Tableau"
REPLACE (string, substring, replacement)	Searches the string for substring and replaces it with a replacement. If the substring is not found, the string is not changed.	REPLACE("GreenBlueGreen", "Blue", "Red") = "GreenRedGreen"
UPPER (string)	Returns string, with all characters uppercase.	UPPER("Tableau") = "TABLEAU"

Logical Functions

These functions evaluate some single value or the result of an expression and produce a boolean output.

Function	Description	Example
IFNULL (expression1, expression2)	The IFNULL function returns the first expression if the result is not null and the second expression if it is null.	IFNULL([Sales], 0) = [Sales]
ISDATE (string).	The ISDATE function returns TRUE if the string argument can be converted to a date and FALSE if it cannot.	ISDATE("11/05/98") = TRUE ISDATE("14/05/98") = FALSE
MIN(expression)	The MIN function returns the minimum of an expression across all records or	MIN(Measure_name)

	the minimum of two expressions for each record.	

Aggregate Functions

Function	Description	Example
AVG(expression)	Returns the average of all the values in the expression. AVG can be used with numeric fields only. Null values are ignored.	AVG((Measure_name)
COUNT (expression)	Returns the number of items in a group. Null values are not counted.	Count(Measure_name)
MEDIAN (expression)	Returns the median of an expression across all records. Median can only be used with numeric fields. Null values are ignored.	Median(Measure_name)
STDEV (expression)	Returns the statistical standard deviation of all values in the given expression based on a population sample.	STDEV(Measure_name)

You can explore more at Function in Tableau