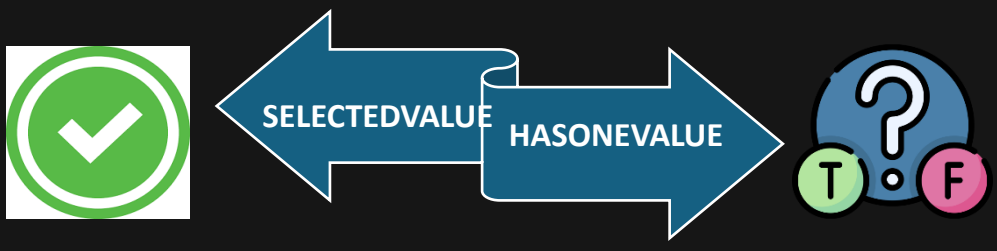
Power BI Learnings

(For Interview Preparation)

(SELECTEDVALUE vs HASONEVALUE)



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SELECTEDVALUE

The **SELECTEDVALUE** function is used to retrieve the value of a column when there is only one unique value selected in that column within the current context. It is commonly used in Power BI to create dynamic calculations based on user selections or context,

Syntax:

SELECTEDVALUE(Column), here '$\boldsymbol{Column}$' is The column from which a single value is to be returned.

Example:

SelectedCityPopulation =

Var SelectedCity = SELECTEDVALUE(Cities[CityName], "Multiple cities selected")

RETURN

IF(SelectedCity = "Multiple cities selected",SelectedCity,CALCULATE(SUM(Population[Population]),FILTER(PopulationPopulation[CityName] = SelectedCity)))

How it works:

I.In this example, suppose we have a table named "Population" with columns "CityName" and "Population." The goal is to create a measure that shows either the population of a selected city or a message if multiple cities are selected.

II.SELECTEDVALUE checks if a single city is selected. If yes, it returns the city's name; if not, it returns the message "Multiple cities selected."

III.The IF function then decides whether to display the message or calculate the total population for the selected city. If a single city is selected, it calculates the sum of the population for that city using CALCULATE and FILTER.

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HASONEVALUE

The **HASONEVALUE** function in Data Analysis Expressions (DAX) is used to determine whether there is only one unique value in a column within the current context. It returns a Boolean value: TRUE if there's only one distinct value, and FALSE otherwise. **HASONEVALUE** is commonly used in conditional logic to perform actions based on the uniqueness of the values in a column.

Syntax:

HASONEVALUE (Column), here '$\boldsymbol{Column}$' is The column, that has one or more unique values.

Example:

ProfitMarginRatio =

IF(HASONEVALUE(Product[ProductName]),DIVIDE(SUM(Sales[Profit]),

CALCULATE(SUM(Sales[Revenue]), ALL(Product[ProductName]))),BLANK())

How it works:

I.In this example, suppose we have a table named "Sales" with columns "ProductID," "Revenue," and "Profit," and another table named "Product" with columns "ProductID" and "ProductName." The goal is to create a measure that calculates the profit margin ratio for a selected product. If more than one product is selected, it returns BLANK.

II. HASONEVALUE checks if a single product is selected. If yes, it proceeds; if not, it returns BLANK.

III. The IF function then decides whether to calculate the profit margin ratio or return BLANK. If a single product is selected, it calculates the ratio of profit to revenue using the DIVIDE function and CALCULATE.

The use of ALL(Product[ProductName]) ensures that the calculation ignores any filters on the product name for context neutrality.

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CONFUSION ZONE

The **SELECTEDVALUE** and **HASONEVALUE** functions in DAX are both used in Power BI and other Analysis Services tools, but they serve different purposes. However, they can be confusing because they are often used in similar scenarios.

The major differences are,

Aspect	SELECTEDVALUE	HASONEVALUE
Purpose	Retrieves a specific value from a column when only one unique value is selected.	Checks if there is exactly one unique value in a column within the current context.
Return Type	Returns the actual value or an error if there is no or more than one value.	Returns TRUE if there is one value, and FALSE if none or more than one.
Usage	Used for fetching values directly, commonly in measures or calculated columns.	Used for conditional logic based on the uniqueness of values, often in combination with IF statements.
Confusion	Can be confusing in scenarios with multiple selections, where either function might seem applicable.	Confusion arises when trying to decide between them, especially in situations with single selections.

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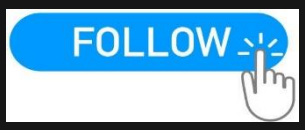
Repost if you find it helpful.



for more.

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