ALL, ALLEXCEPT, ALLSELECTED, REMOVEFILTERS, KEEPFILTERS for DAX Power BI!

R. Ganesh · Follow

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`ALLEXCEPT`, `ALLSELECTED`, `REMOVEFILTERS`, and `KEEPFILTERS` to control how filters are applied in your calculations. Here's a detailed explanation and example for each...

Date	Produc	Amoun	Region
01-07-2024	A	10,000	North
01-07-2024	B	15,000	North
01-07-2024	A	5,000	South
01-07-2024	B	20,000	South
02-07-2024	A	12,000	North
02-07-2024	B	10,000	North
02-07-2024	A	7,000	South
02-07-2024	B	25,000	South

1. ALL

Function: Removes all filters from a table or column, effectively returning the entire table or column regardless of any applied filters.

Syntax:

```
ALL(TableName)
ALL(TableName[ColumnName])
```

Example: Suppose you have a table called `Sales` with columns `Region` and `SalesAmount`.

To calculate the total sales amount without any filters applied, you can use:

```
Total Sales All = CALCULATE(SUM(Sales[SalesAmount]), ALL(Sales))
```

This formula ignores any filters on the `Sales` table and calculates the total sales amount for the entire table.

```
Total Sales All = SUMX(ALL(Sales), Sales[Amount])
```

Scenario:

- No filters applied.

Output:

- **Total Sales:** $10,000 + $15,000 + $5,000 + $20,000 + $12,000 + $10,000 + $7,000 + $25,000 = **$84,000**

2. ALLEXCEPT

Function: Removes all filters from a table or column except for the specified columns. Useful when you want to preserve certain filters while ignoring others.

Syntax:

```
ALLEXCEPT(TableName, TableName[ColumnName1], TableName[ColumnName2], ...)
```

Example: To calculate total sales while keeping the filter on `Region`, but ignoring filters on other columns, you can use:

```
Total Sales By Region = CALCULATE(SUM(Sales[SalesAmount]),
ALLEXCEPT(Sales, Sales[Region]))
```

This formula calculates the total sales amount while keeping the filter on the `Region` column but removing filters on other columns.

Scenario:

- **Filter:** `Product = "A"`

Output:

- **Total Sales (Product A only):** $34,000 (summing up sales for Product A across all regions and dates).

3. ALLSELECTED

Function: Returns all the values in a column or table that are currently selected or visible based on the user's selections in visuals, but not affected by filters outside the current context.

Syntax:

```
ALLSELECTED(TableName[ColumnName])
```

Example: If you want to calculate the total sales amount based on the selected regions in a slicer, you can use:

```
Total Sales Selected Regions = CALCULATE(SUM(Sales[SalesAmount]),
ALLSELECTED(Sales[Region]))
```

This formula calculates the total sales for the regions selected in the slicer, considering any filters applied in the visual.

```
Total Sales Selected = SUMX(ALLSELECTED(Sales), Sales[Amount])
```

Scenario:

- **Slicer Filter:** `Date = 2024-07-01` (through a slicer)
- **Visual Filter:** `Region = "North"`

Output:

- **Total Sales (Date = 2024–07–01, Region = "North"):** $25,000 (considering slicer selections and ignoring internal visual filters).

4. REMOVEFILTERS

Function: Removes filters from a table or column. It is similar to `ALL` but is often used for readability and explicit filter removal.

Syntax:

```
REMOVEFILTERS(TableName)
REMOVEFILTERS(TableName[ColumnName])
```

Example: To calculate the total sales amount without any filters on the `Sales` table but preserving slicers on other visuals, you can use:

```
Total Sales Remove Filters = CALCULATE(SUM(Sales[SalesAmount]),
REMOVEFILTERS(Sales))
```

This formula calculates the total sales amount for the entire `Sales` table, disregarding any filters applied to the `Sales` table.

```
Total Sales Remove Region Filter = SUMX(REMOVEFILTERS(Sales[Region]),
Sales[Amount])
```

Scenario:

- **Filter:** `Region = "North"`

Output:

- **Total Sales (Ignoring Region Filter):** $104,000 (total sales across all regions).

5. `KEEPFILTERS`

Purpose: Keeps filters on a specific column or table even if they are overridden by other filter functions.

Syntax:

```
KEEPFILTERS(<table_or_column>)
```

Example: To calculate the total sales amount while explicitly keeping filters applied to the `Category` column:

```
Total Sales Keep Product Filter = CALCULATE(SUM(Sales[Amount]),
KEEPFILTERS(Sales[Product]))
```

This measure ensures that filters on the `Category` column are respected even if other filter functions are applied.

```
Total Sales Keep Category Filter = SUMX(KEEPFILTERS(Sales[Category]),
Sales[Amount])
```

Scenario:

- **Filter:** `Product = "B"`

Output:

- **Total Sales (Product B only):** $70,000 (respecting the filter on Product B).

Summary of Use Cases

- **`ALL`:** Removes all filters from a table or column.
- **`ALLEXCEPT`:** Removes all filters except for specified columns.
- **`ALLSELECTED`:** Returns values based on the user's current selections in visuals.

- **`REMOVEFILTERS`**: Removes filters from a table or column, similar to `ALL`, but can be used for clarity.
- **`KEEPFILTERS`**: Use to explicitly keep filters on certain columns even if other filters might override them.

Measure	Description	Output
Total Sales All	Total sales ignoring all filters	$84,000
Total Sales Except Product	Total sales while keeping filter on Product	$34,000
Total Sales Selected	Total sales considering slicers and visual filters	$25,000
Total Sales Remove Region Filter	Total sales removing filter on Region	$104,000
Total Sales Keep Product Filter	Total sales while keeping filter on Product	$70,000

By understanding and using these DAX functions effectively, you can control filter contexts and perform complex calculations in Power BI.

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Happy Learning !!!

Regards!
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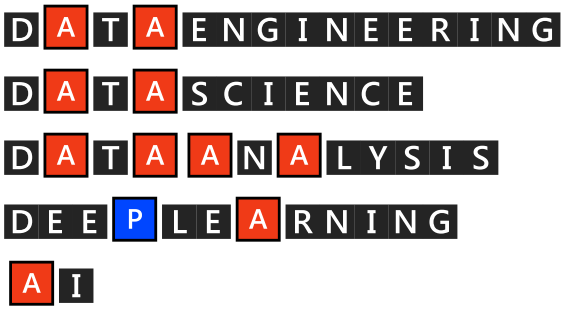

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