What does FILTER(Sales, Sales[Amount] > 1000) return?

it returns all rows of Sales table which is its Amount higher than 1000

Write a measure High Sales that sums Amount where Amount > 1000 using FILTER

.

```
High Sales = CALCULATE(sum(Sales[Amount]), FILTER(Sales, Sales[Amount]> 1000))
```

How does ALLEXCEPT(Sales, Sales[Region]) differ from ALL(Sales)?

ALL(Sales)

- Removes **all filters** from the **Sales** table.
- It **ignores Region, Product, Date, everything**.

Effect:

It returns totals as if **no slicers or filters** were applied.

Example:

TotalSales_All =

CALCULATE(SUM(Sales[Amount]), ALL(Sales))

This measure always shows the **grand total**, no matter what is selected.

ALLEXCEPT(Sales, Sales[Region])

- Removes **all filters except Region**.
- Means: **Keep the Region filter**, remove all others (Product, Date, Category, etc.).

Effect:

It returns totals **within each Region**, even if other filters are applied.

Example:

Sales_By_Region_Only =

CALCULATE(SUM(Sales[Amount]), ALLEXCEPT(Sales, Sales[Region]))

This shows **each Region's total**, ignoring slicers for Product, Date, etc.

Use SWITCH to categorize Amount:

"Medium" if 500–1000

"High" if > 1000 ```

```
Category = SWITCH(
```

```
    TRUE(),
    Sales[Amount]>1000, "High",
    Sales[Amount]>500, "Medium"
    )
```

What is the purpose of `ALLSELECTED`?

ALLSELECTED keeps **the filters made by the user (like slicers)** but **removes filters made in side the visual** itself.

In simple words:

- It **respects slicers** (user selections),
- But **removes row/column level filters** of a visual to calculate totals at a **higher level**.

Write a measure Regional Sales % showing each sale's contribution to its region's t otal (use ALLEXCEPT).

```
Regional Sales % =
DIVIDE(
    SUM(Sales[Amount]),
    CALCULATE(
        SUM(Sales[Amount]),
        ALLEXCEPT(Sales, Sales[Region])
    )
)
```

Create a dynamic measure using SWITCH to toggle between SUM, AVERAGE, and COUNT of Amount.

```
Dynamic Measure 2 =
SWITCH(
    SELECTEDVALUE('Calc Selector'[Calc Type ]),
    "SUM", SUM(Sales[Amount]),
    "Average", AVERAGE(Sales[Amount]),
    "Count", COUNT(Sales[Amount]),
    Blank()
)
```

Use FILTER inside CALCULATE to exclude "Furniture" sales (Products[Category] = "Furniture").

```
category Filter = CALCULATE(SUM(Sales[Amount]), FILTER(Products, Products[Category]= "Furnitur
e"))
```

Why might ALLSELECTED behave unexpectedly in a pivot table?

ALLSELECTED can behave unexpectedly in a pivot table because it depends on **what the user has selected *and* how the visual/grouping context is currently applied**. In other words, **ALL SELECTED does not always remove all filters** — it keeps *some filters*, depending on how the pivot is expanded or collapsed.

Optimize this measure:

High Sales = CALCULATE(SUM(Sales\[Amount]), FILTER(Sales, Sales\[Amount] > 1000)) (Hint: Replace FILTER with a Boolean filter inside CALCULATE.)

```
High Sales 2 = CALCULATE(

SUM(Sales[Amount]),

  Sales[Amount] > 1000)
```

Write a measure Top 2 Products using TOPN and FILTER to show the highest-grossing products.

```
Top 2 Products =

VAR TopProducts =

    TOPN(

        2,                                  -- how many products to return

        SUMMARIZE(Sales, Sales[ProductID],    -- table grouped by Product

            "TotalSales", SUM(Sales[Amount])

        ),

        [TotalSales], DESC                  -- sort highest first

    )

RETURN

CALCULATE(

    SUM(Sales[Amount]),

    KEEPFILTERS(TopProducts)                -- apply only those 2 products

)
```

Use ALLSELECTED with no parameters to respect slicers but ignore visual-level filters.

ALLSELECTED() removes **visual-level filters** (filters applied directly to the visual),

but **keeps slicer selections and page/report filters**.

```
Sales % of Total =

VAR TotalVisibleSales =

    CALCULATE(

        SUM(Sales[Amount]),

        ALLSELECTED()

    )

RETURN

DIVIDE(

    SUM(Sales[Amount]),

    TotalVisibleSales

)
```

Debug: A SWITCH measure returns incorrect values when fields are added to a mat rix visual.

Quick checklist — what to check first

1. **Is your measure using SELECTEDVALUE()?**
    - SELECTEDVALUE() returns a value **only** when exactly one value is in context. I f the matrix adds a field so multiple values appear, SELECTEDVALUE() become s BLANK() → SWITCH falls to the default branch.
2. **Is the slicer set to single-select?**
    - If your SWITCH depends on a selector slicer, make sure the slicer is single-select (Format → Selection controls → Single select ON).
3. **Does your SWITCH rely on row-level columns (row context) vs aggregated measures (filter context)?**
    - Adding fields changes whether the measure is evaluated per product, per region, p er combination. Your expressions must be aggregations (SUM/COUNT) not raw column references.
4. **Is the measure removing filters (ALL, ALLSELECTED, ALLEXCEPT) unexpected ly?**
    - CALCULATE(..., ALL(...)) can make the measure ignore slicer/visual context.
5. **Is the matrix using additional group levels (drilldown) that require ISINSCOPE / H ASONEVALUE checks?**

Simulate a "reset filters" button using ALL in a measure.

done