MASTERCLASS IN POWERBI

DOWNTOWNCODERS

COMPLEX DAX BUSINESS USE CASES - POWERBI

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SCENARIO BASED QUESTIONS on **IMPLEMENT & MANAGE CASH and BANK**:

▢ Scenario: SHOW LAST NON-BLANK VALUE FOR EACH CUSTOMER

Your report shows monthly sales by customer. Some customers do not purchase every month. You need to show their last non-blank purchase amount.

Last Purchase =

```
CALCULATE(
        LASTNONBLANKVALUE(
        'Sales'[Date],
        [Total Sales]
),
 ALLEXCEPT('Sales', 'Sales'[CustomerID]))
```

=> Use this measure in a matrix visual grouped by customer.

▢ Scenario: YOY GROWTH ON A ROLLING BASIS

Calculate Year-over-Year growth for sales, but on a rolling 12-month basis.

Rolling Sales =

```
CALCULATE([Total Sales], DATESINPERIOD('Date'[Date], MAX('Date'[Date]), -12, MONTH))
```

YoY Rolling =

```
 DIVIDE(
     [Rolling Sales] - CALCULATE([Rolling Sales], SAMEPERIODLASTYEAR('Date'[Date])),
     CALCULATE([Rolling Sales], SAMEPERIODLASTYEAR('Date'[Date]))
)
```

▢ Scenario: RANK CUSTOMERS BY SALES ONLY IN ACTIVE MONTHS

Only rank customers in months where they made a sale.

Customer Rank =

```
RANKX(
    FILTER(ALL('Customer'), [Total Sales] > 0),
    [Total Sales], , DESC
)
```

▢ Scenario: DISPLAY CURRENT AND PREVIOUS QUARTER SALES IN SAME CARD

Show both current and previous quarter sales in a single visual.

Current Q Sales =

```
CALCULATE([Total Sales], DATESQTD('Date'[Date]))
```

Prev Q Sales =

```
CALCULATE([Total Sales], PREVIOUSQUARTER('Date'[Date]))
```

=> Use a multi-card visual or KPI visual.

▢ Scenario: HANDLE MANY-TO-MANY RELATIONSHIPS

You have Customers and Products both linked to a Sales table, and both have multiple matches (many-to-many).

- *Use a **bridge table**.*
- *Use TREATAS to pass filters manually in DAX.*

Filtered Sales =

```
CALCULATE([Total Sales], TREATAS(VALUES('CustomerProductBridge'[CustomerID]), 'Sales'[CustomerID]))
```

▢ Scenario: CUSTOMER RETENTION ANALYSIS

Identify retained customers (who purchased in both current and previous periods).

Retained Customers =

```
CALCULATE(
      DISTINCTCOUNT('Sales'[CustomerID]),
      INTERSECT(
            VALUES('Sales'[CustomerID]),
            CALCULATETABLE(VALUES('Sales'[CustomerID]), SAMEPERIODLASTYEAR('Date'[Date]))
   )
)
```

▢ Scenario: MULTIPLE FILTER SELECTIONS IN SLICER WITHOUT AFFECTING OTHER VISUALS

Allow a slicer to control only one visual without affecting the entire report.

*Use **Edit Interactions** from the Format tab → Select the slicer → Set visual interactions to "None" for other visuals.*

▢ Scenario: SALES TARGET VS ACTUAL BY HIERARCHY (REGION → COUNTRY → CITY)

Visualize sales vs target with drill-down ability.

- *Use a hierarchy in the axis field.*
- *Create a measure for variance:*

Sales Variance = [Actual Sales] - [Target Sales]

▢ Scenario: CALCULATE SALES BETWEEN TWO SELECTED DATES USING DATE PICKER

User selects start and end dates from slicers, and you show total sales between them.

- *Use two disconnected slicers.*
- *Create measures:*

Start Date = *MIN('Date Slicer 1'[Date])*
End Date = *MAX('Date Slicer 2'[Date])*

Sales Between =

```
    CALCULATE(
            [Total Sales],
            'Date'[Date] >= [Start Date] && 'Date'[Date] <= [End Date]
)
```

▢ Scenario: EXCLUDE A SPECIFIC VALUE FROM DAX CALCULATION

Calculate total sales excluding a specific region or product.

Sales Excl Region =
CALCULATE([Total Sales], 'Region'[Name] <> "East")

▢ Scenario: MOST RECENT COMMENT OR STATUS PER CUSTOMER

Show the latest status (text field) for each customer.

Latest Status =
CALCULATE(
LASTNONBLANK('Comments'[Date], 'Comments'[Status]),
FILTER('Comments', 'Comments'[CustomerID] = MAX('Customer'[CustomerID]))
)

▢ Scenario: SWITCH BETWEEN CURRENCY FORMATS DYNAMICALLY

Allow user to select currency from a slicer and convert values accordingly.

- *Use disconnected Currency table.*
- *Create a conversion rate measure.*

Converted Sales =
*[Total Sales] * SELECTEDVALUE('Currency Rate'[Conversion Rate])*

▢ Scenario: CONDITIONAL FORMATTING BASED ON MULTIPLE CONDITIONS

Highlight values where sales are below target and profit is negative.

- *Create a measure to return a hex color code:*

Color Code =
IF([Sales] < [Target] && [Profit] < 0, "#FF0000", "#00FF00")
=> Use this in the conditional formatting pane.

▢ Scenario: CALCULATE % CONTRIBUTION TO PARENT LEVEL

Show each product's contribution to its category total.

Product % of Category =
DIVIDE([Sales], CALCULATE([Sales], ALLEXCEPT('Product', 'Product'[Category])))

▢ Scenario: DYNAMIC RANKING BASED ON MEASURE SELECTION

Allow user to choose between Sales, Profit, or Margin and rank customers accordingly.

- *Create a disconnected table with metric names.*
- *Use SWITCH to dynamically evaluate:*

Selected Metric =

```
SWITCH(
    SELECTEDVALUE('Metric'[Name]),
    "Sales", [Total Sales],
    "Profit", [Total Profit],
    "Margin", [Profit Margin]
)
```

Dynamic Rank =

```
RANKX(ALL('Customer'), [Selected Metric])
```

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