Part - 11

Data Modelling Interview Questions and Answers..!

Sharing with Counter questions

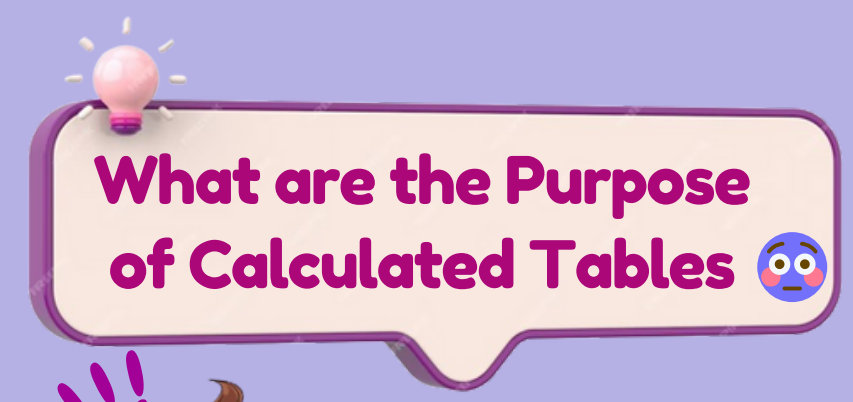
krishna kumar

@Krishan kumar

Have you worked with calculated tables in Power BI? Can you explain their purpose and when to use them?

➡ **Yes, I have worked with calculated tables in Power BI. Calculated tables are tables that you create using DAX formulas, rather than loading them from an external data source.**

They are particularly useful for creating new tables based on existing data in your model.



Purpose of Calculated Tables:

- **Custom Data Modelling:** **Create tables that don't exist in your source data but are necessary for analysis.**

- **Complex Calculations:** **Perform complex calculations and aggregations that need to be materialized into a table.**

- **Filtering Data:** **Generate subsets of data for specific analyses without altering the original tables.**

- **Intermediate Results:** **Store intermediate results that can be used in further calculations or relationships.**

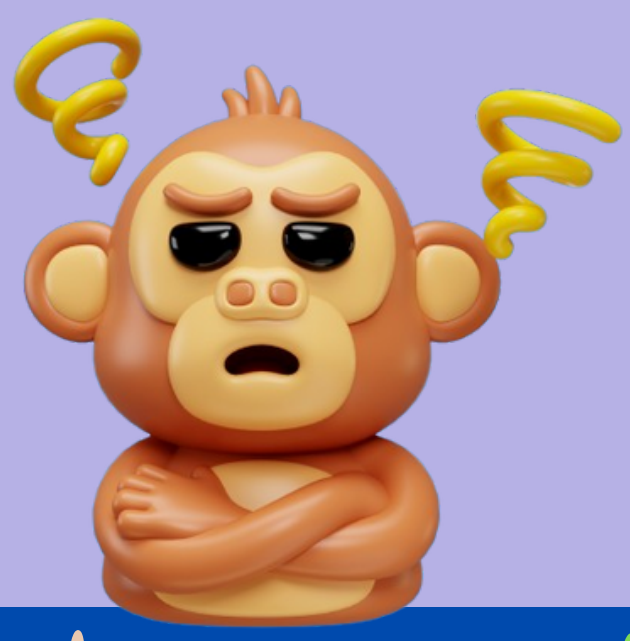
okayy.. When to use Calculated tables

When to Use:

- **When Derived Data is Needed:** If you need a new table derived from existing tables, such as a table of unique values or aggregated data.

- **Intermediate Calculations:** When you need to create intermediate calculations that will be used by multiple measures or reports.

- **Simplifying DAX Code:** When complex DAX calculations can be simplified by breaking them into smaller, manageable parts with calculated tables.



Really, do you have any example for it

Example Scenario:

➥ **Let's say you have a sales data table and you need a summary table showing total sales by product category. You can create a calculated table for this purpose.**

Example Calculation: Creating a Calculated Table for Total Sales by Category.

```
SalesByCategory =
    SUMMARIZE(
            Sales,
            Products[Category],
            "Total Sales", SUM(Sales[SalesAmount])
            )
```

Wanna, see the result for it

Result:

➡ **Resulting Table:**

Category	Total Sales
Electronics	100,000
Furniture	50,000
Clothing	25,000

1. How do calculated tables differ from calculated columns in terms of usage and performance?

Calculated tables are used to create new tables based on DAX expressions, often for custom data modelling or intermediate results.

Calculated columns add new columns to existing tables. Performance-wise, calculated tables can impact model size and memory usage, especially if they generate large amounts of data.

2. Can you give an example of a scenario where a calculated table would be preferable over a calculated column?

Use a calculated table when you need a new table for analysis, such as a table summarizing data from multiple sources, or a table that aggregates results in a new way.

For example, creating a table that summarizes sales data by month would be more efficient as a calculated table rather than adding many calculated columns to an existing table.

3. What are the potential drawbacks of using calculated tables?

Calculated tables can increase model complexity and size, potentially affecting performance.

They may also require additional maintenance if the underlying data or business logic changes. It's essential to balance their use with the need for simplicity and efficiency.

4. How do you manage the performance impact of calculated tables in Power BI?

- **Optimize calculated tables by minimizing their size and complexity.**
- **Use efficient DAX formulas and avoid creating overly large tables.**
- **Regularly monitor model performance and refine calculations as needed.**
- **Implement data reduction techniques such as filtering unnecessary rows or columns.**

5. How do you handle scenarios where a calculated table needs to be updated based on changes in other tables?

➡ **Ensure calculated tables are refreshed when the underlying data changes.**

Use relationships and ensure your DAX expressions account for the latest data.

You might also need to adjust or optimize the calculations to reflect any changes in the source tables.

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in krishan kumar