BLOSSOM ACADEMY

DATA MODELING

OUTLINE

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- Create a new field with calculated columns

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- Use a calculated table to create a relationship between two tables

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Create relationships between your data sources

The Model view in Power BI Desktop allows you to visually set the relationship between tables or elements.

A relationship is where two or more tables are linked together because they contain related data. This enables users to run queries for related data across multiple tables.

Create Relationships Between Your Data Sources
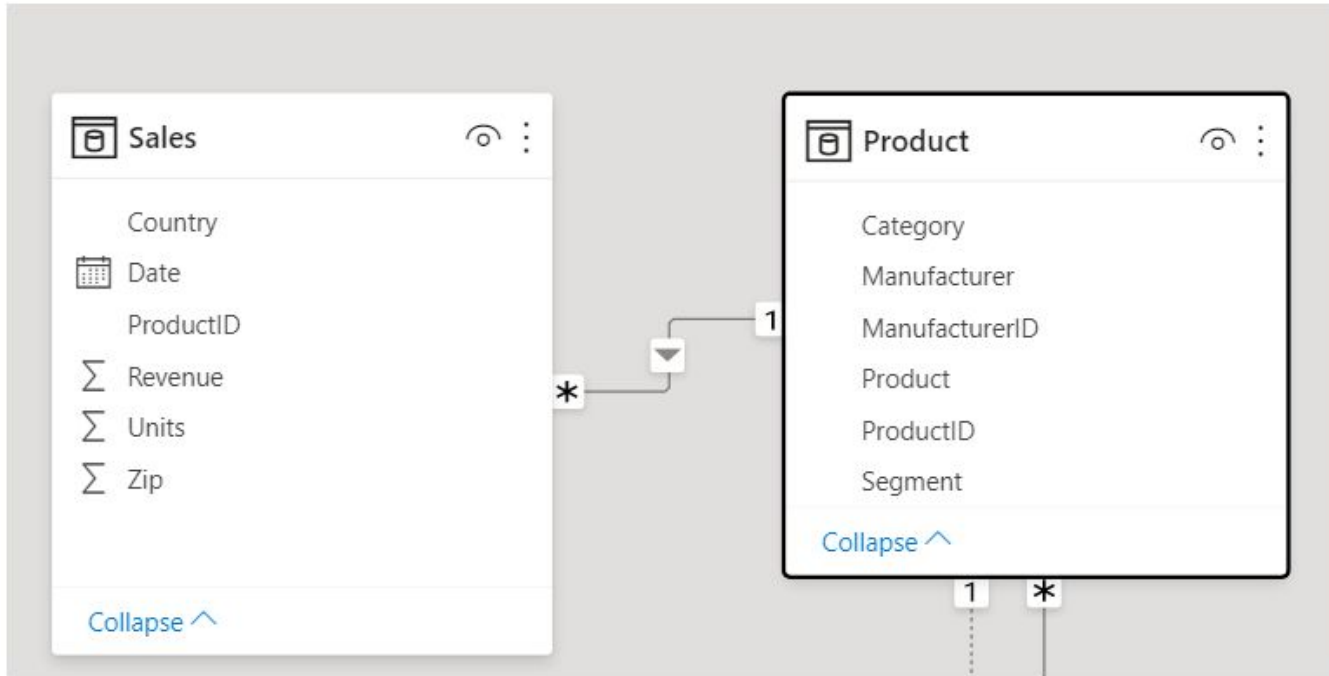
Create a New Field With Calculated Columns

Sometimes, the data that you are analyzing does not contain a field that you need. The answer might be calculated columns.

You can create a new calculated column by transforming two or more elements of existing data. For example, you can create a new column by combining two columns into one.

Procedure To Create a New Field With Calculated Columns

- To create your new column in the ProductSubcategory table, right-click or select the ellipsis ... next to ProductSubcategory in the Fields pane, and select New column from the menu.
- By default, a new calculated column is named Column. If you don't rename it, additional new columns will be named Column 2, Column 3, and so on. You want your column to be more identifiable, so while the Column name is already highlighted in the formula bar, rename it by typing ProductFullCategory, and then type an equals (=) sign.

Procedure To Create a New Field With Calculated Columns

- You want the values in your new column to start with the name in the ProductCategory field. Because this column is in a different but related table, you can use the RELATED function to help you get it.

- You want the ProductCategory column from the ProductCategory table. Select ProductCategory[ProductCategory], press Enter, and then type a closing parenthesis.

Procedure To Create a New Field With Calculated Columns

- You want dashes and spaces to separate the ProductCategories and ProductSubcategories in the new values, so after the closing parenthesis of the first expression, type a space, ampersand (&), double-quote ("), space, dash (-), another space, another double-quote, and another ampersand. Your formula should now look like this:

  ProductFullCategory = RELATED(ProductCategory[ProductCategory]) & " - " &

Procedure To Create a New Field With Calculated Columns

- Enter an opening bracket ([), and then select the [ProductSubcategory] column to finish the formula.
- Complete the formula by pressing Enter or selecting the checkmark in the formula bar. The formula validates, and the ProductFullCategory column name appears in the ProductSubcategory table in the Fields pane.

Optimize Data by Hiding Fields and Sorting Visualization Data

Imported data often contains fields that you don't need for your reporting and visualization tasks. Data might contain unnecessary information or it might be available in another column.

Power BI Desktop has tools to optimize your data and make it more usable for building reports and visuals.

Use a Calculated Table to Create a Relationship Between Two Tables

Calculated tables is a function within DAX. Most of the time, you can import data into your model from an external data source.

However, calculated tables provide intermediate calculations and data that you want stored as part of the model rather than as part of a query. You can use calculated tables, for example, to cross join two tables.
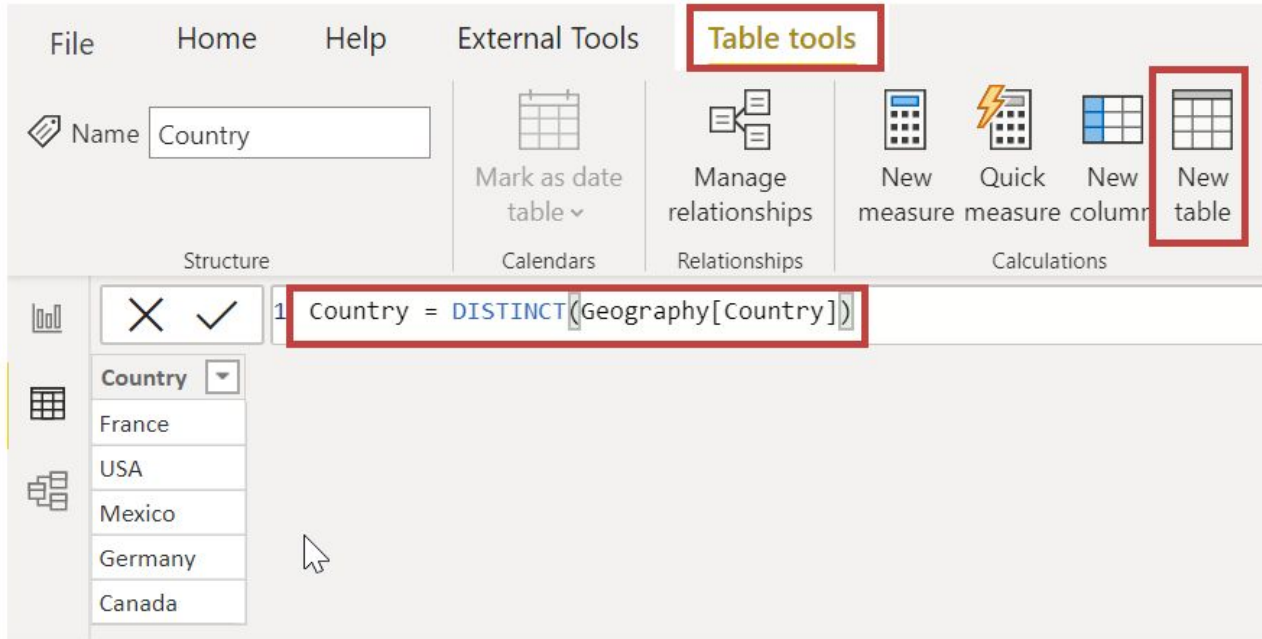
Creating a Calculated Table

To create a calculated table:

- Go to Data view in Power BI Desktop, on the left side of the report canvas.
- Select New Table from the Table tools tab to open the formula bar.
- Type the name of your new table, the equal sign, and the calculation that you want to use to form the table.
- Your new table will appear on the Fields pane in your model.
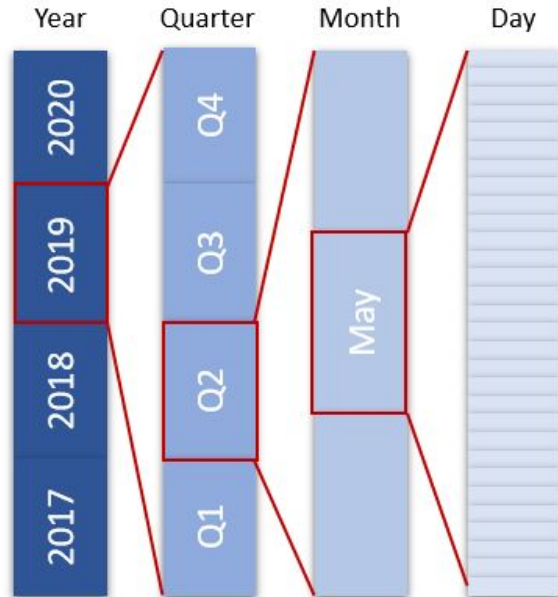
Creating a Calculated Table

Format Time-based Data so That You Can Drill Down For More Details

Analyzing time-based data with Power BI is a simple process. The modeling tools in Power BI Desktop automatically generate fields that let you drill down through time periods.

When you create a table visualization in your report by using a date field, Power BI Desktop automatically includes breakdowns by time period.

Format Time-based Data so That You Can Drill Down For More Details