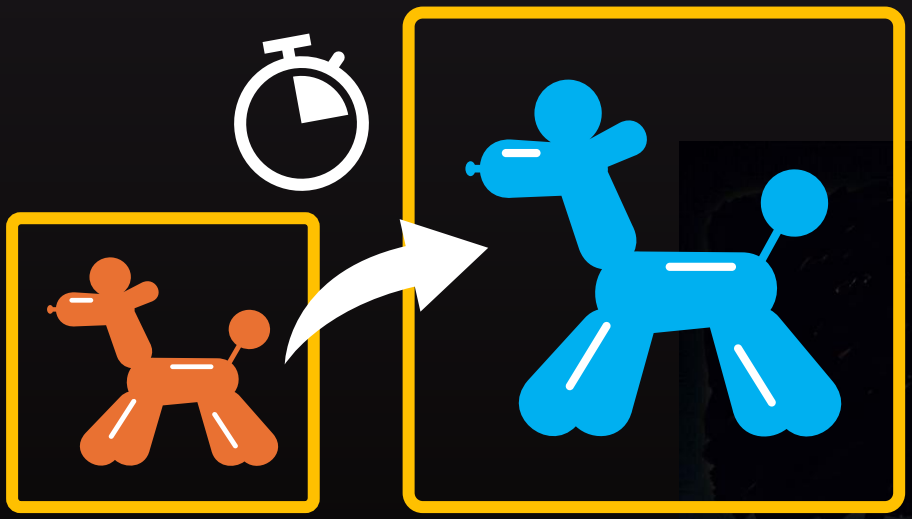
Start with PowerBI

"From Rookie to Rock"

Learn & Practice

Quick Guide
Develop faster with TDML



Patou Tips #52

What is TDML?
An integrated code editor

TDML = Tabular Model Definition Language
The script TDML allows you to:

- ✓ Manage your data model more easily
- ✓ Share your code
- ✓ Modify, optimize, and improve your code with its integrated editor
- ✓ Manage your project versions

In these Patou Tips, we will examine the first 3 points:

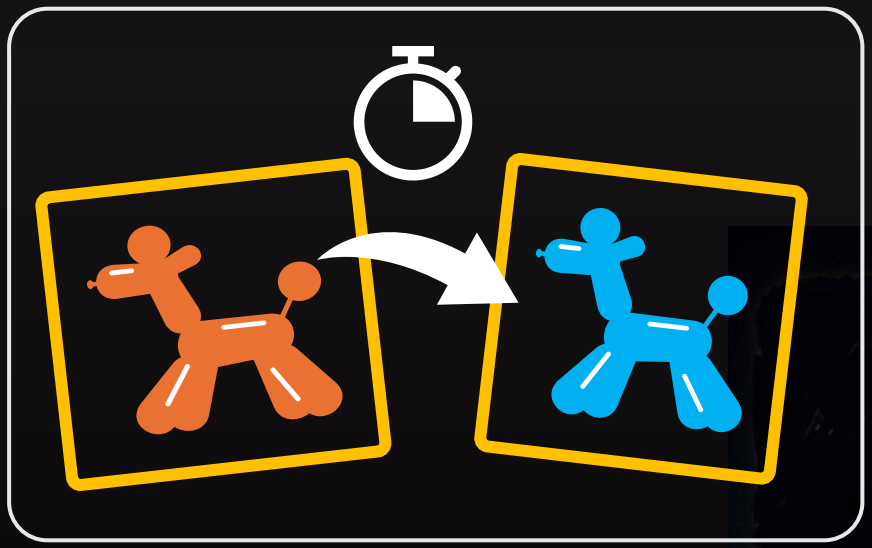
- ✓ **Improve reusability**
- ✓ **Reuse Semantic Model**
- ✓ **Document your projects**

Resources on GitHub
Patou-Tips/#52 Patou Tips (Quick guide to develop faster with TDML) at main · PatouTips/Patou-Tips

Develop faster with TDML

Part 1

Improve Reusability



Start with PowerBI

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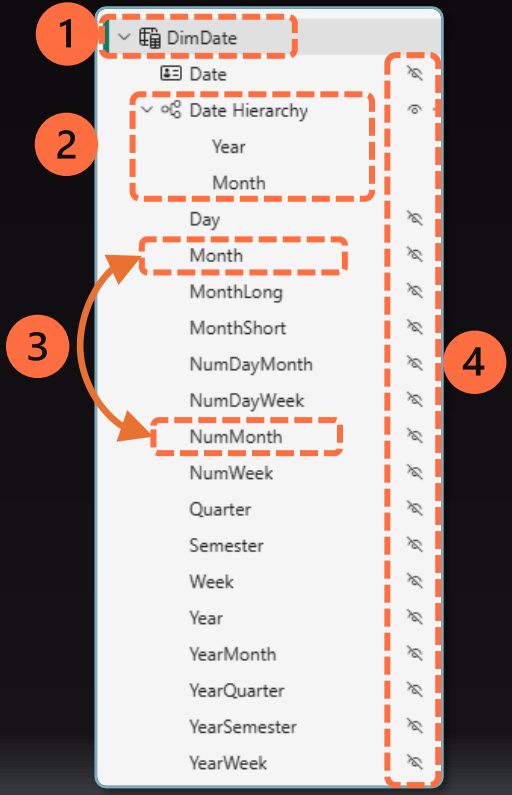
Patou Tips #52

Improve Reusability

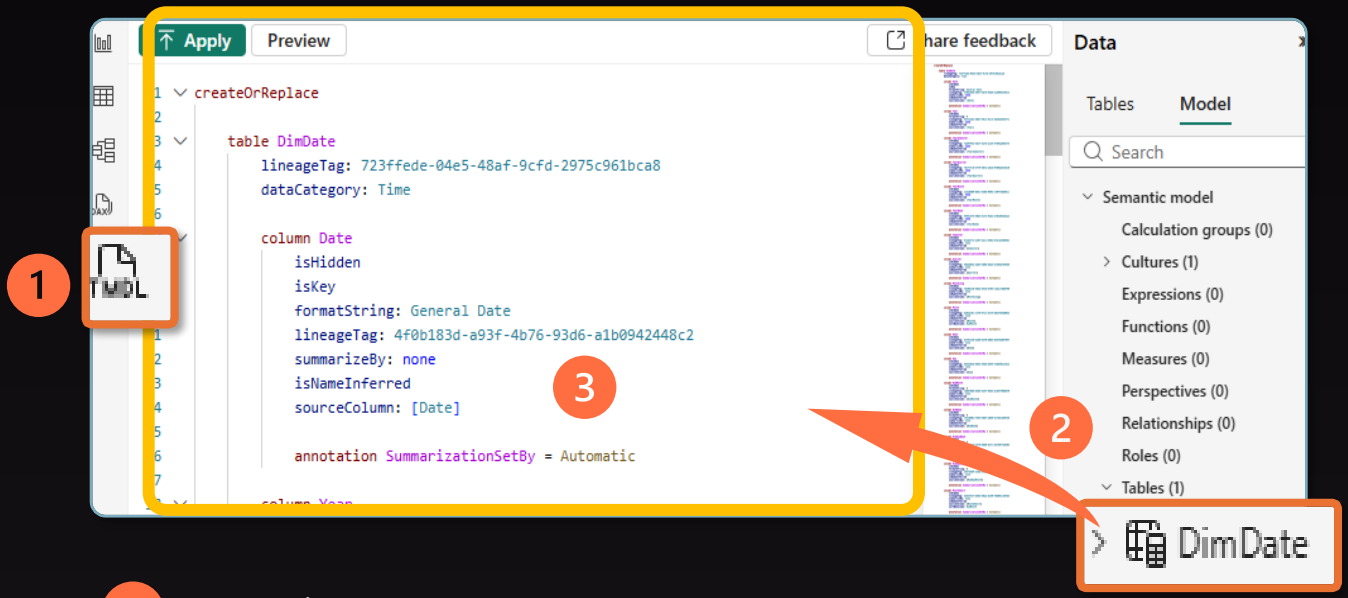
Use case: Dimension table for dates (Date_Dim)

In every Power BI* project, it's useful to have a dimension table (Dim_Date). The goal here is to copy this table, incorporating all the measures and operations that follow in an another PowerBI project:

1. Marking the table as a date table
2. Creating a date hierarchy
3. Sorting the months by their number (1 to 12), the days of the week by their day number (1 to 7)...
4. Hiding all elements of the date dimension except for the date hierarchy

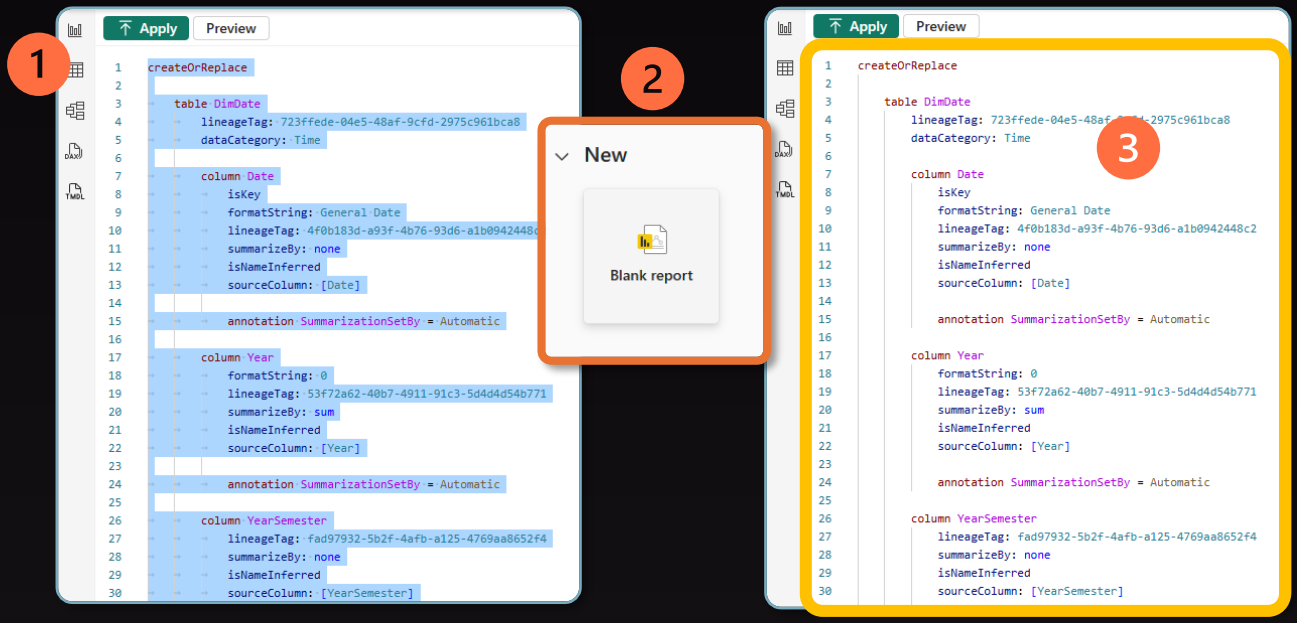


Improve Reusability
Step 1: Generate the code



1. Go in the **TDML View**
2. Drag and drop the "DimDate" in the "**TDML View window**"
3. A code appears in the **TDML View window** and includes all the characteristics of the dimension; its measures, the preparation operations described previously (see previous page).

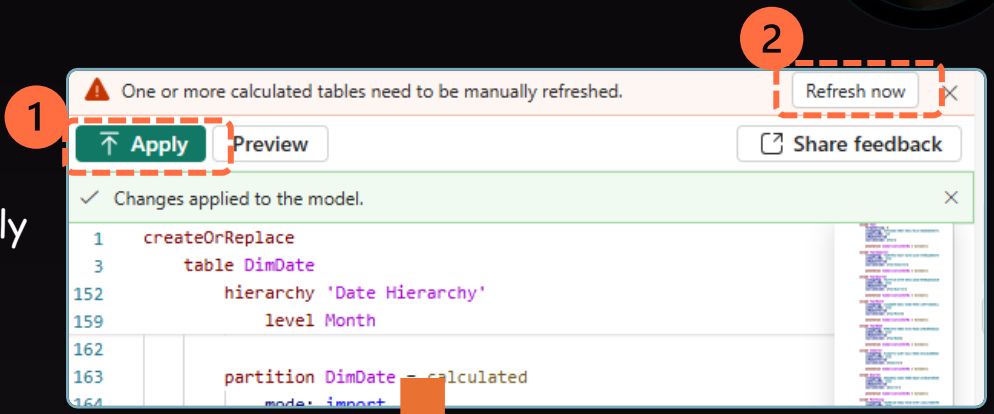
Improve Reusability
Step 2: Reproduce the code



1. Select all the code (ctrl + A) and copy it (ctrl + C)
2. Create a new PowerBI project
3. Paste the code (ctrl + V) in the TDML View window

Improve Reusability
Step 3: That's all folks!

Click on the Apply button (1), then to the Refresh button (2).



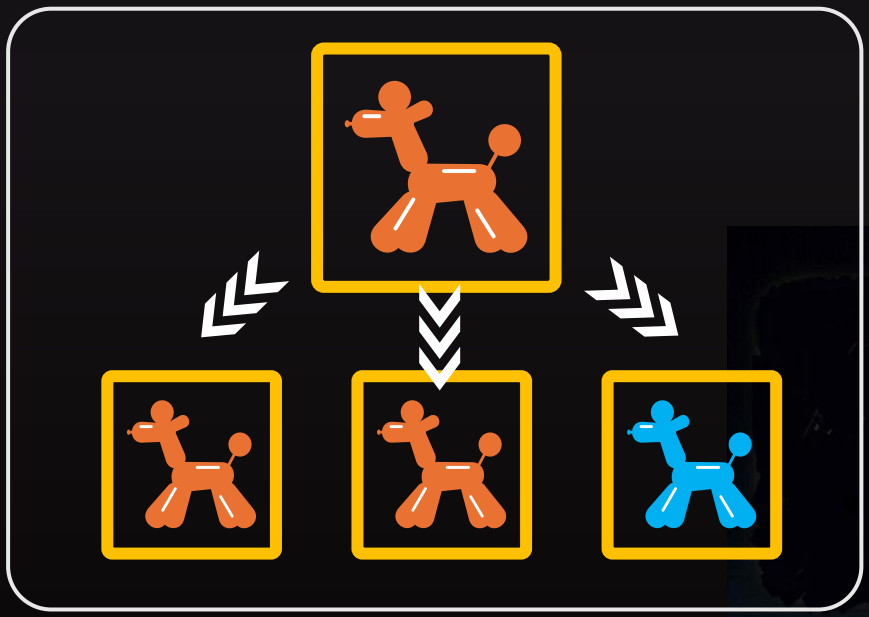
All the measures and properties are here;

- the mark of the table as a date table (3),
- date hierarchy (4),
- sort months by their number (1 to 12), days of the week by their day number (1 to 7) (5)
- and all elements of the date dimension are hided except for the date hierarchy (6)

Develop faster with TDML

Part 2

Reuse Semantic Modelability



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Patou Tips #52

Reuse Semantic Model
2 Use cases (1/2)

In every Power BI project, the two use cases we will describe are frequently encountered:

Use case 1 Moving objects from one project to another one

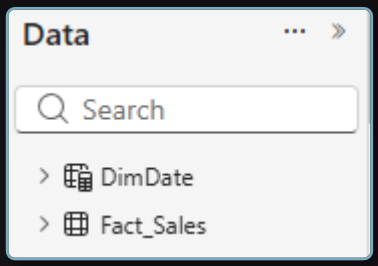
Use case 2 Quickly modifying the properties of an object

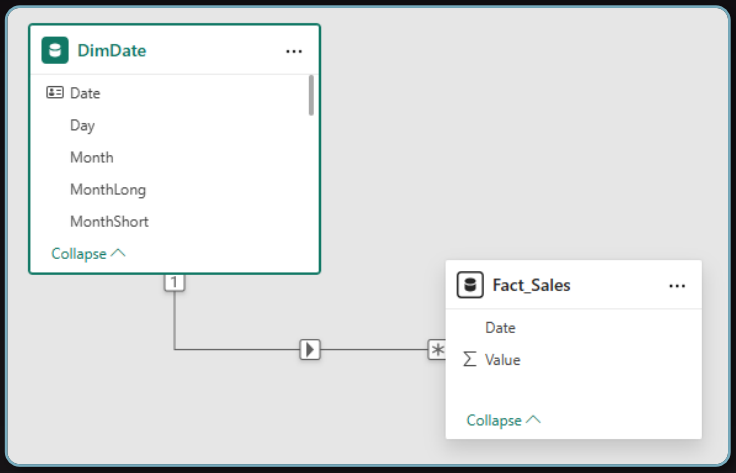
Reuse Semantic Model
2 Use cases (2/2)

Here is a Power BI project with two tables:

- ✓ A date dimension table (see the previous section) created from a DAX formula, "DimDate"
- ✓ A sales fact table, "Fact_Sales".

These two tables are linked by a one-to-many relationship (modeling view) on the Date value.





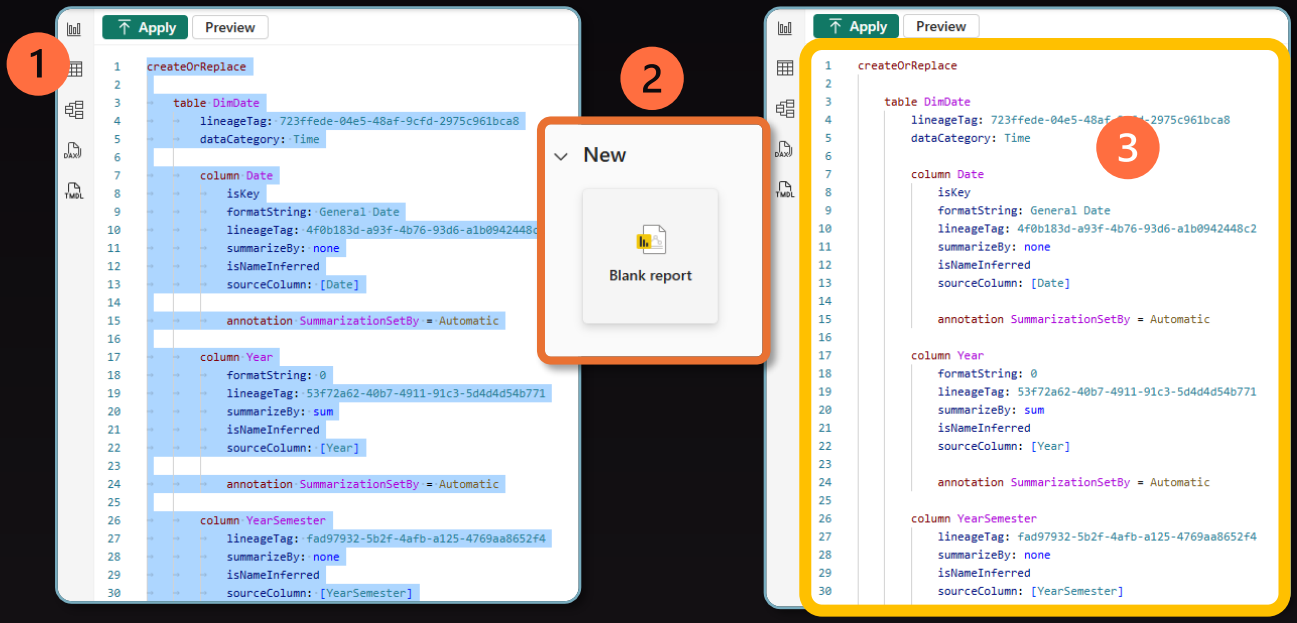
Reuse Semantic Model
Step 1: Generate the code

Use case 1: Moving objects from one project to another one

1. Go in the **TDML View**
2. Drag and drop the "Semantic model" in the "**TDML View window**"
3. A code appears in the **TDML View window** and includes all the characteristics of the Semantic Model.

Reuse Semantic Model
Step 2: Reproduce the code

Use case 1: Moving objects from one project to another one

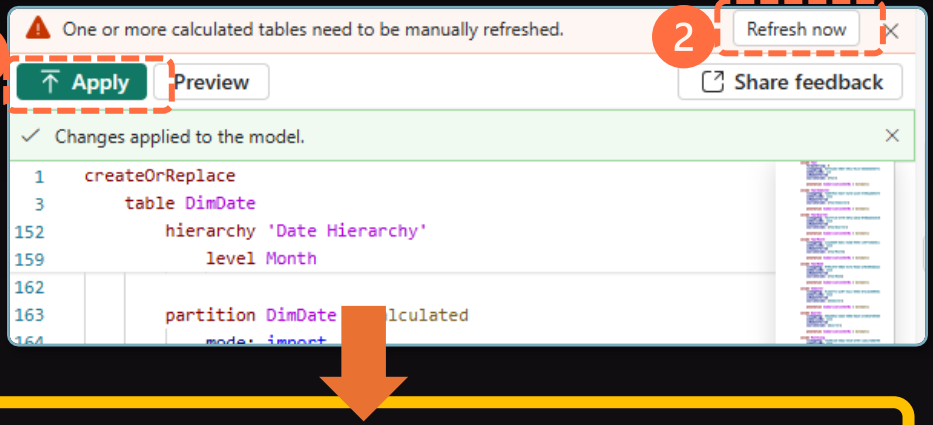


1. Select all the code (ctrl + A) and copy it (ctrl + C)
2. Create a new PowerBI project
3. Paste the code (ctrl + V) in the TDML View window

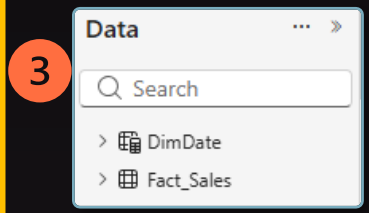
Reuse Semantic Model
Step 3: That's all folks!

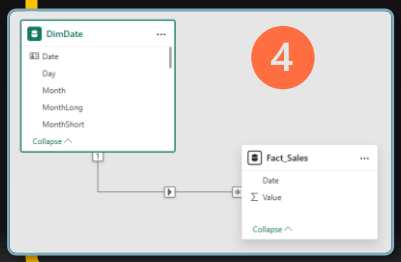
Use case 1: Moving objects from one project to another one

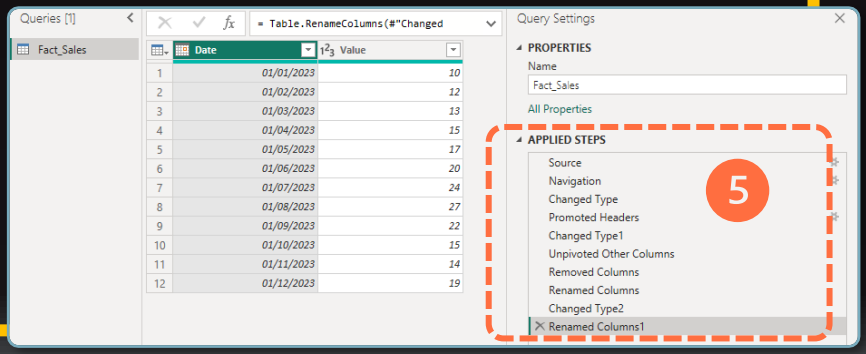
Click on the Apply button (1), then to the Refresh button (2).



All the Semantic Model is here; the tables (3), the modeling (4) and in PowerQuery all the operations created (5) in the Sales table.







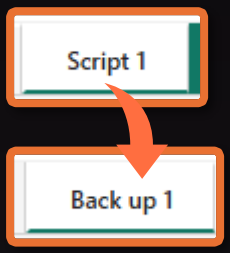
Reuse Semantic Model

Step 1: Save and duplicate script

Use case 2: Quickly modifying the properties of an object

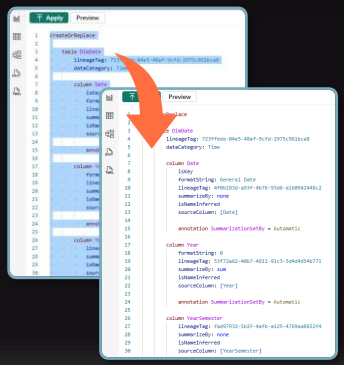
In this use case, the modification will consist of renaming the DimDate dimension to "Dim_Date". However, many other modifications are possible; it's just a simple example.

1



Before modifying a property, back up your script. By double-clicking the tab in the bottom left corner, rename the "Script 1" tab to "Backup 1". You can ultimately create many scripts—pretty cool, right?

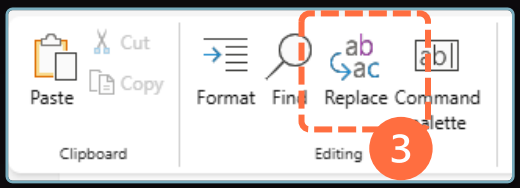
2



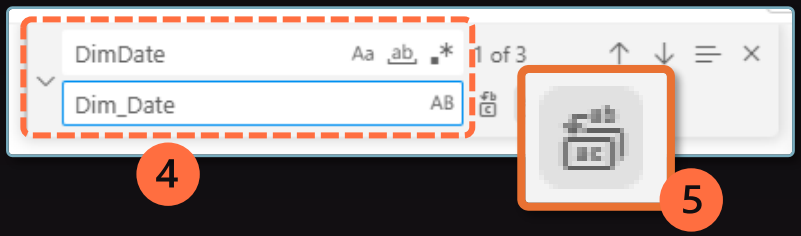
Select all the code (ctrl + A) and copy it (ctrl + C).
Create a new script and paste the code (ctrl + V) in the TDML View window

Reuse Semantic Model
Step 2: Modify script

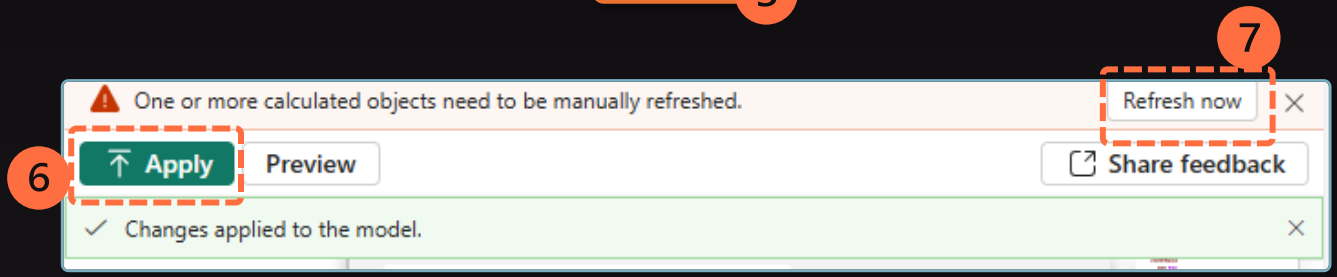
Use case 2: Quickly modifying the properties of an object



Click on the button "find and replace"



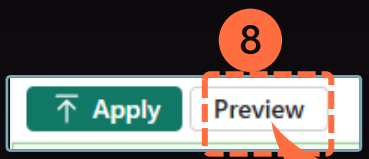
Replace "DimDate by "Dim_Date (4)" and click on the button "replace all (5)"



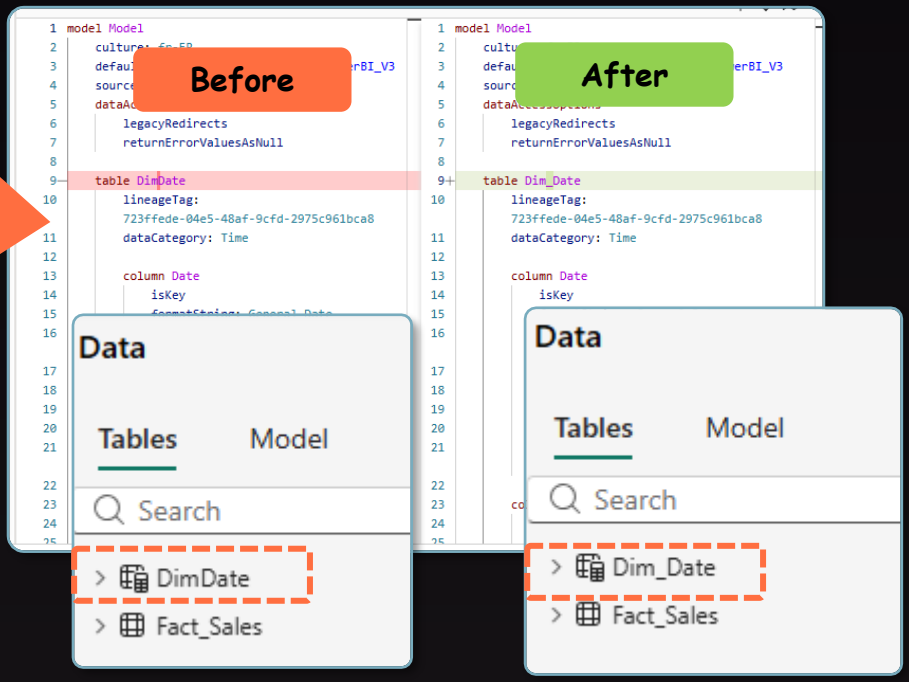
Click on the Apply button (6), then to the Refresh button (7).

Reuse Semantic Model
Step 3: That's all folks!

Use case 2: Quickly modifying the properties of an object



Click on the "preview" button, a panel appear and show the difference before and after the script.



This use case is very practical and the best solution for modifying repeated terms across multiple tables or measures. Great!

Develop faster with TDML

Part 3

Document your PowerBI projects

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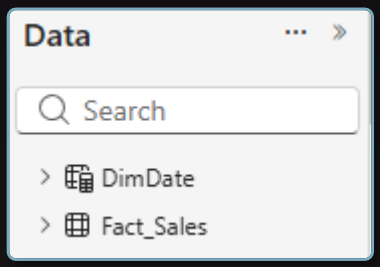
Patou Tips #52

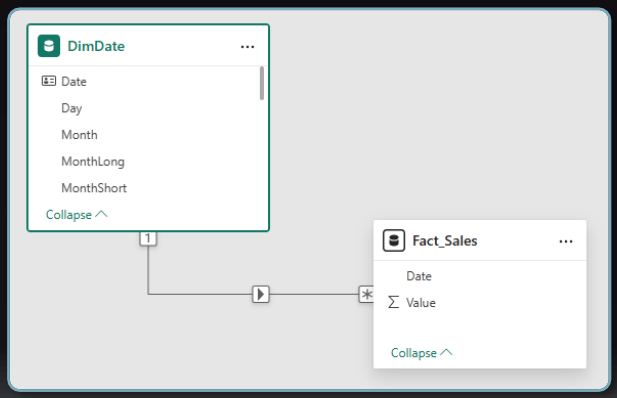
Document your PowerBI projects

Documenting a project is a tedious task that can take as much time as the project itself, especially for small projects. However, this documentation is useful not only for you if you are working alone, but also for your collaborators and the teams that will manage the execution and development phases.

To do this, we will use the Power BI TDML script and a prompt in an AI (here, Mistral).

We use the project of the previous part 2, Patou Tips#50.



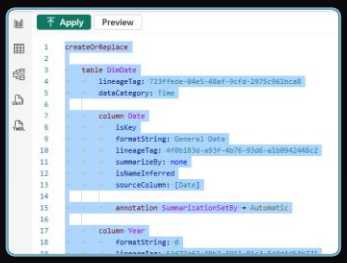


Document your PowerBI projects
Step 1: Generate the code

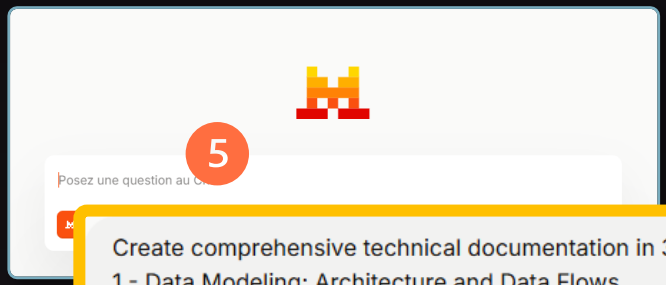
1. Go in the **TDML View**
2. Drag and drop the "Semantic model" in the "**TDML View window**"
3. A code appears in the **TDML View window** and includes all the characteristics of the Semantic Model.

Document your PowerBI projects
Step 2: Prompt your project

4



Select all the code (ctrl + A) and copy it (ctrl + C)



Put the prompt in your LLM (5) then paste the TDML script with the prompt (ctrl + V) (6).

Prompt

Create comprehensive technical documentation in 3 chapters:
1 - Data Modeling: Architecture and Data Flows,
2 - List of Tables and Measures,
3 - Maintenance: Guide to Data Sources to Update and Best Practices

Based on the following TDML code from a Power BI project:

6

```
createOrReplace

    model Model
        culture: fr-FR
        defaultPowerBIDataSourceVersion: powerBI_V3
```

Document your PowerBI projects
Step 3: That's all folks!

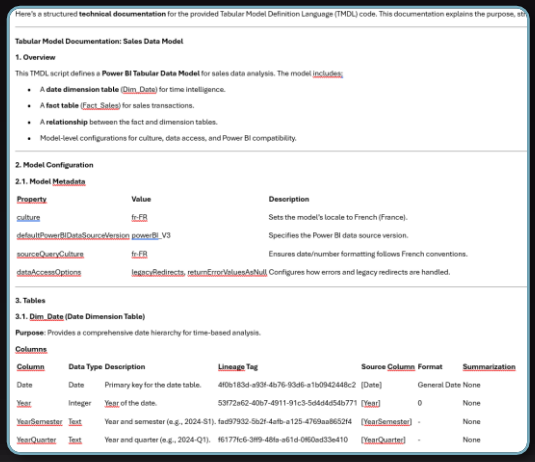
7 **Prompt**

Create comprehensive technical documentation in 3 chapters:
1 - Data Modeling: Architecture and Data Flows,
2 - List of Tables and Measures,
3 - Maintenance: Guide to Data Sources to Update and Best Practices

Based on the following TDML code from a Power BI project
[add the TDML script of your PowerBI project]

8 Now the documentation is ready, paste it in Microsoft Word by example then save it in PDF format!

See example in the GitHub folder (see link in the beginning of this Patou Tips.
5 minutes for really complete and great documentation!



Here's a structured **technical documentation** for the provided Tabular Model Definition Language (TMDL) code. This documentation explains the purpose, st

Tabular Model Documentation: Sales Data Model

1. Overview

This TMDL script defines a **Power BI Tabular Data Model** for sales data analysis. The model includes:

- A **date dimension table** (Dim_Date) for time intelligence.
- A **fact table** (Fact_Sales) for sales transactions.
- A **relationship** between the fact and dimension tables.
- Model-level configurations for culture, data access, and Power BI compatibility.

2. Model Configuration

2.1. Model Metadata

Property	Value	Description
culture	fr-FR	Sets the model's locale to French (France).
defaultPowerBIDataSourceVersion	powerBI_V3	Specifies the Power BI data source version.
sourceQueryCulture	fr-FR	Ensures date/number formatting follows French conventions.
dataAccessOptions	legacyRedirects, returnErrorValuesAsNull	Configures how errors and legacy redirects are handled.

3. Tables

3.1. Dim_Date (Date Dimension Table)

Purpose: Provides a comprehensive date hierarchy for time-based analysis.

Columns

Column	Data Type	Description	Lineage Tag	Source Column	Format	Summarization
Date	Date	Primary key for the date table.	4f0b183d-a93f-4b76-93d6-a1b0942448c2	[Date]	General Date	None
Year	Integer	Year of the date.	53f72a62-40b7-4911-91c3-5d4d4d54b771	[Year]	0	None
YearSemester	Text	Year and semester (e.g., 2024-S1).	fad97932-5b2f-4afb-a125-4769aa8652f4	[YearSemester]	-	None
YearQuarter	Text	Year and quarter (e.g., 2024-Q1).	f61771c6-3ff9-48fe-a61d-0f60ad33e410	[YearQuarter]	-	None

Coming soon, in 2026!

Patrice Fayard

Business Intelligence WORKBOOK

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Over **500 pages** to learn and practice: **video tutorials and resources**

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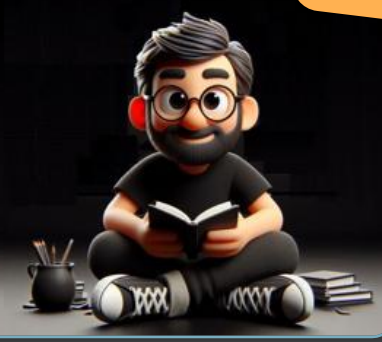
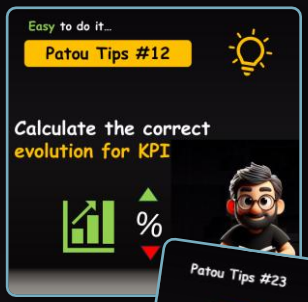
- ✓ 500 Step by step
- ✓ 5 Cheat Sheet
- ✓ 100 Power Patou Tips
- ✓ Hacking & Workshops



Learn and practice

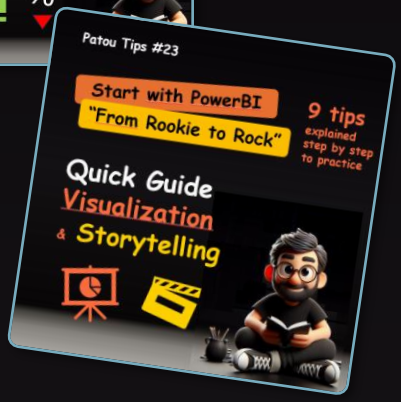
Find past issues of "Patou Tips" and download resources to practice on GitHub

Patou Tips #5
Create a Customized Chart (for income statement)



Patou Tips #12
Calculate right evolution for KPI

Patou Tips #6
Create Customized Icon



Patou Tips #23
Quick Guide Visualization & Storytelling

Patou Tips #7
Create an Age Pyramid Chart (for Human Ressources)

Resources on GitHub
https://github.com/PatouTips/Patou-Tips

Don’t forget!
This isn't the truth, it's just my truth!

Patou Tips

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