Leveraging Large Language Models with Power BI

January 31st, 2026

About Me

Experience

- 12+ years with Microsoft BI stack
- 10+ years with Power BI
- 7+ years with Azure DevOps

Credentials

- MCSE: Productivity
- MS: PBI Data Analyst
- PMP

John Kerski

MVP Microsoft® Most Valuable Professional

Contact Me

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Slides:

Agenda

- The Challenge

- Scenarios
  - GitHub Copilot
  - MCP
  - Azure OpenAI
  - Copilot in Fabric

- Lessons Learned

The Challenge

The Challenge (cont.)

Scenario 1

Scenario

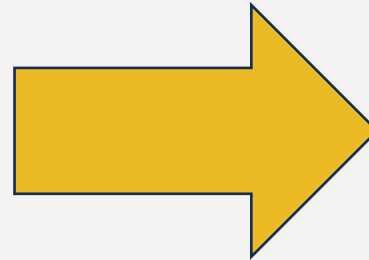**What was the table this was merged with?**

What column was removed?

What column was added?

◢ APPLIED STEPS

Source
Changed Type
Split Column by Delimiter ⚙
Changed Type1
Added Custom ⚙
Replaced Value ⚙
Removed Columns
Merged Queries ⚙
Expanded DateDim ⚙
Removed Columns1
Renamed Columns
Sorted Rows
Removed Columns2
Merged Queries1 ⚙
Expanded EyeColorDim ⚙
Removed Columns3
Merged Queries2 ⚙
Added Custom1 ⚙
Changed Type2
Added Custom2 ⚙
Added Custom3 ⚙
Expanded AlignmentDim ⚙
Renamed Columns2
Removed Columns4
Renamed Columns1
Changed Type3
✕ Sorted Rows1

Comment Your Code

Manual Commenting Code

Prerequisites
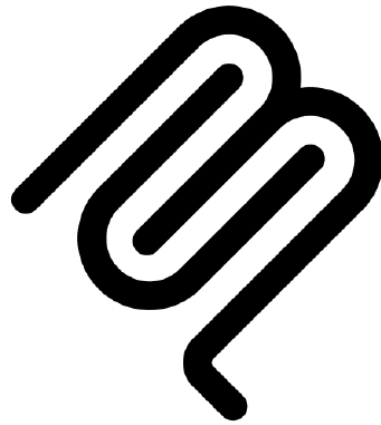
- GitHub Copilot
- PBIP Format

GitHub CoPilot Prompts

You are an assistant to help Power Query developers comment their code. Please update each line of code by performing the following:

1) Insert a comment above the code explaining what that piece of code is doing.

2) Do not start the comment with the word Step or a number

3) Do not copy code into the comment.

4) Keep the comments to a maximum of 225 characters.

You are an assistant to help Power Query developers comment their code.

   Please update each line of code by performing the following:

   1) Update the variable name explaining what that piece of code is doing.

   2) The variable name should always start with a verb in the past tense.

   3) The variable name should have spaces between words.

   4) Please keep the variable to a maximum of 50 characters.

   5) The variable name should be wrapped in double quotes and preceded by the '#'

You are an assistant to help Power Query developers comment their code. Please update each line of code by performing the following:

1) Insert a comment above the code explaining what that piece of code is doing.

2) Do not start the comment with the word Step or a number

3) Do not copy code into the comment.
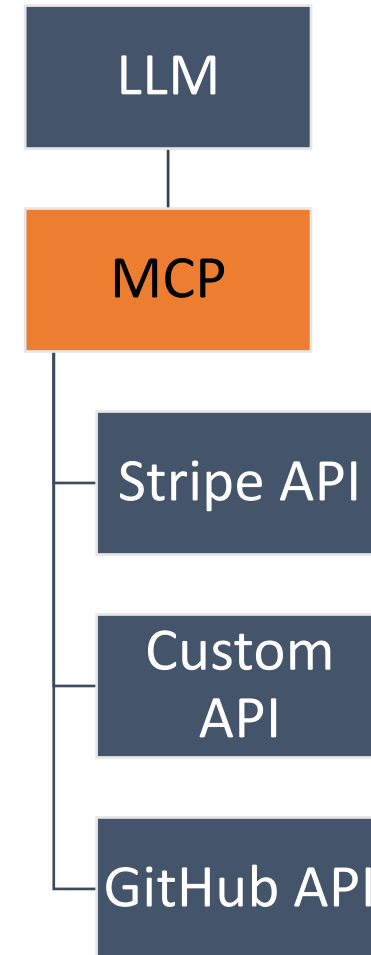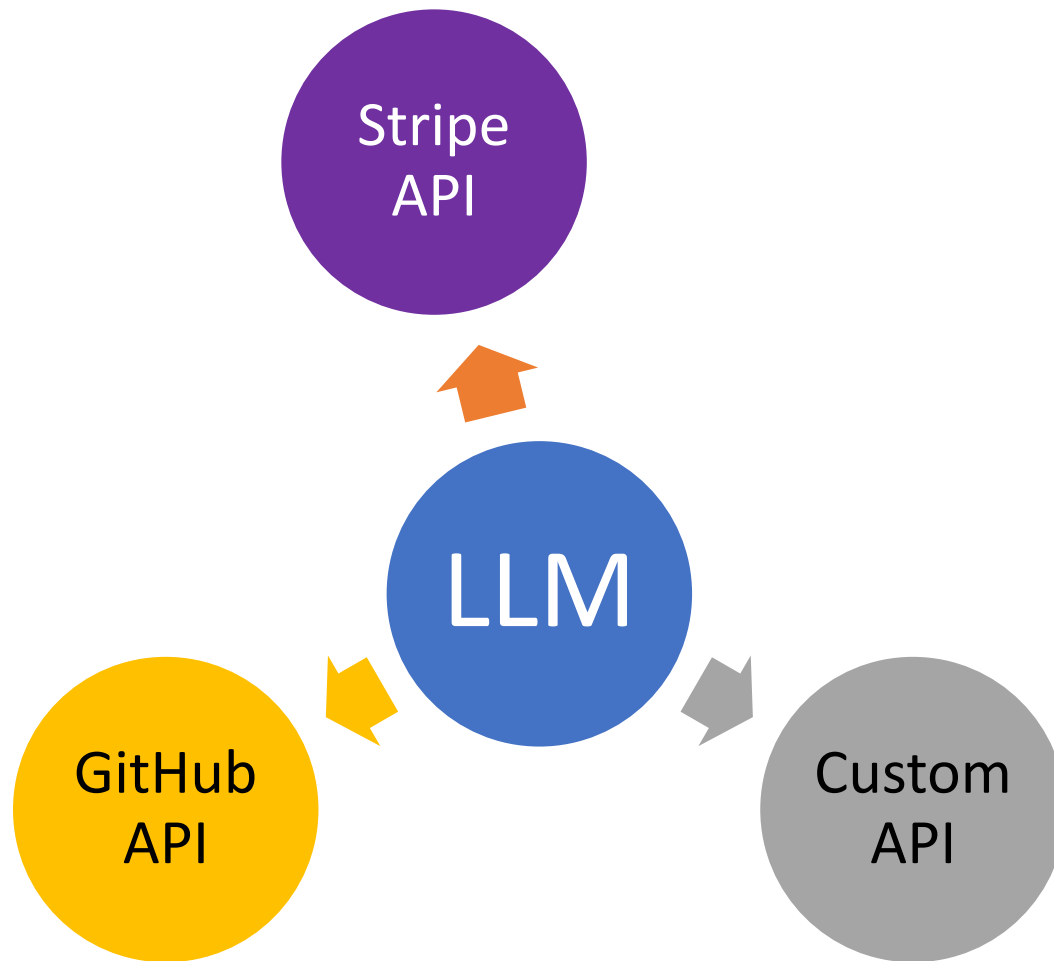
4) Keep the comments to a maximum of 225 characters.

Please also update each line of code by performing the following:

   1) Update the variable name explaining what that piece of code is doing.

   2) The variable name should always start with a verb in the past tense.

   3) The variable name should have spaces between words.

   4) Please keep the variable to a maximum of 50 characters.

   5) The variable name should be wrapped in double quotes and preceded by the '#'

Scenario 2

Model Context Protocol (MCP)

MCP

- Microsoft
  - [Power BI Modeling MCP Server](#)
  - [Introducing Fabric MCP (Preview) | Microsoft Fabric Blog | Microsoft Fabric](#)
  - [A Model Context Protocol (MCP) server implementation for Microsoft Fabric Real-Time Intelligence (RTI).](#)
- Community
  - [Microsoft Fabric Analytics MCP Server](#)
  - [DAX Formatter MCP Server](#)

Lessons Learned - MCP

- Best Practices
  - Too many tools, too much context
  - Don't trust and Do Verify
  - Have a safety net with Git (version control)
- AI-Enabled Power BI Developer
  - YouTube Series

Scenario 3

Scenario 3 - Prerequisites

- Premium, Premium Per User or Fabric Workspace
  - Requires XMLA connection
- Azure OpenAI
  - A ChatGPT 4.0 model deployed. Instructions can be followed at this link.
  - GCC
    - Federal-Business-Applications/whitepapers/copilot at main · microsoft/Federal-Business-Applications (github.com)

DEMO

https://github.com/kerski/pbi-pq-commenter-with-azure-openai/tree/main

Scenario 4

Scenario 4 - Prerequisites

- [Enable Copilot in Fabric](#)

Prompts

Generate a test case for each measure with the following columns:

1) TestName - This should describe the test conducted and be less than 255 characters

2) ExpectedValue - The expected value for the test.

3) ActualValue - The actual value returned from the DAX query.

4) Passed - A boolean value that compares ExpectedValue and ActualValue

The test should compare a static value with the measure to see if they match.

Generate a test case for each table that checks the table has more than zero rows using the COUNTROWS function. The output should contain following columns:

1) TestName - This should describe the test conducted and be less than 255 characters

2) ExpectedValue - The expected value for the test.

3) ActualValue - The actual value returned from the COUNTROWS function.

4) Passed - A boolean value that compares ExpectedValue and ActualValue

Lessons Learned

Lessons Learned - Prompts

[ChatGPT Prompt Engineering for Developers](#)

You are an assistant to help Power Query developers comment their code.

*Please take the code between the ``` * Indicate markers *n the following:*

1) Return a comment explaining what that piece of code is doing.,

2) Do not start the comment with the word Step or a number,

3) Do not copy code into the comment.

4) Keep the comments to a maximum of 225 characters.

``` [Code] ```

Set the premise

Indicate markers

Set boundaries

Security Considerations

- [Data, privacy, and security for Azure OpenAI Service](#)
- Protect the Key
  - [Vote Microsoft make this easier](#)
- Make this Easier
  - [Power Query Commenting with Co-Pilot/Large Language Models](#)

Questions?