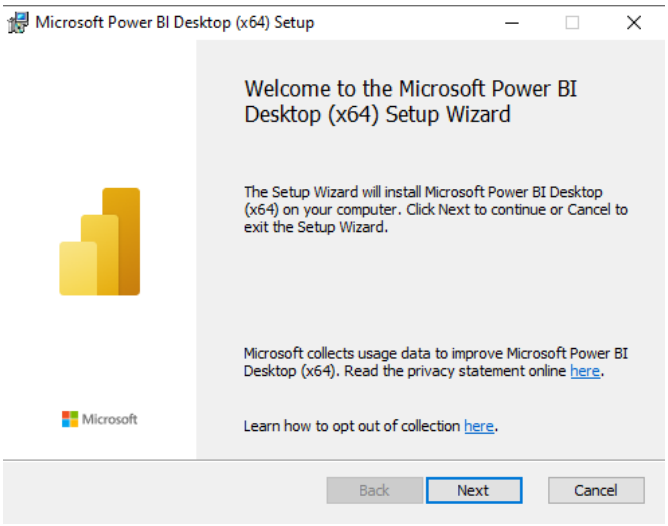
Nama : Jefry Lianto
NIM : 191402027
KOM : C

Tugas DBWI

Get Started Building with Power BI

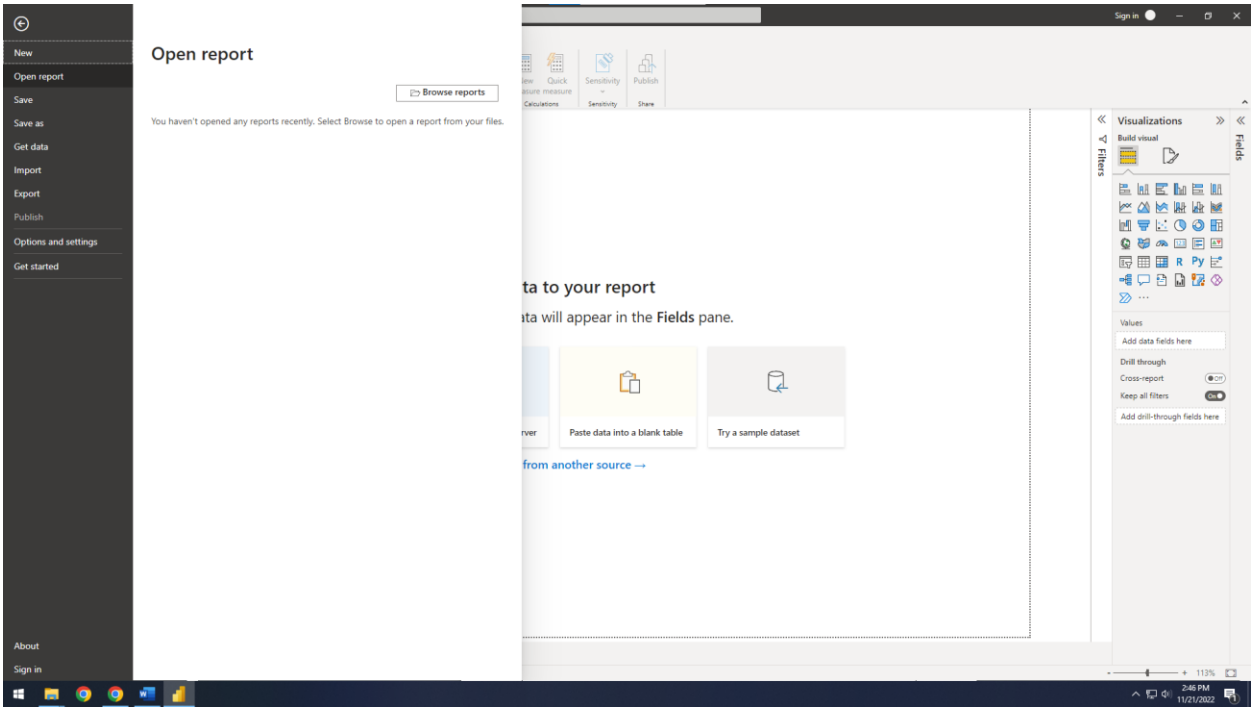
Download power BI Desktop

Link download : https://powerbi.microsoft.com/en-us/downloads/

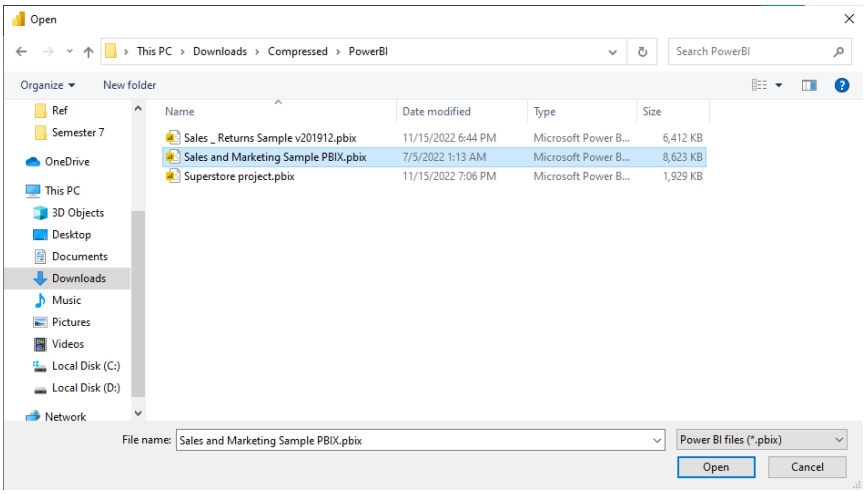


Building Blocks of Power BI: Visualizations

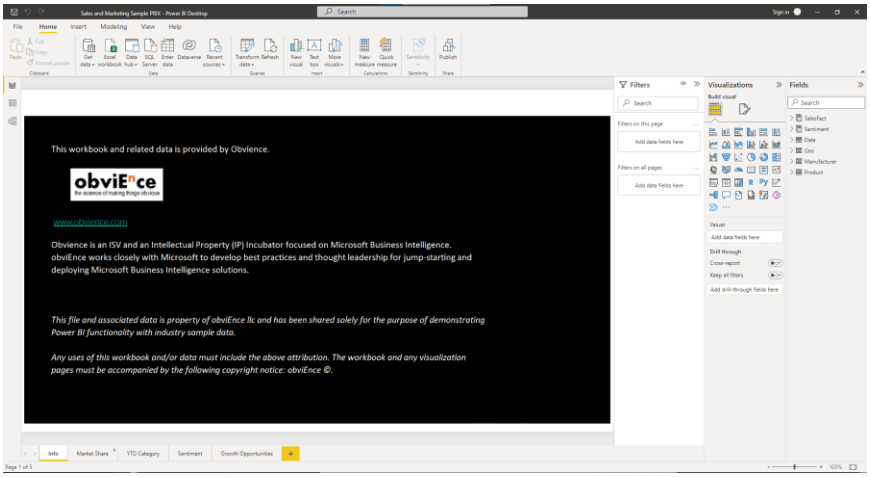
Buka power BI dan klik bagian file, setelah itu klik Open report.



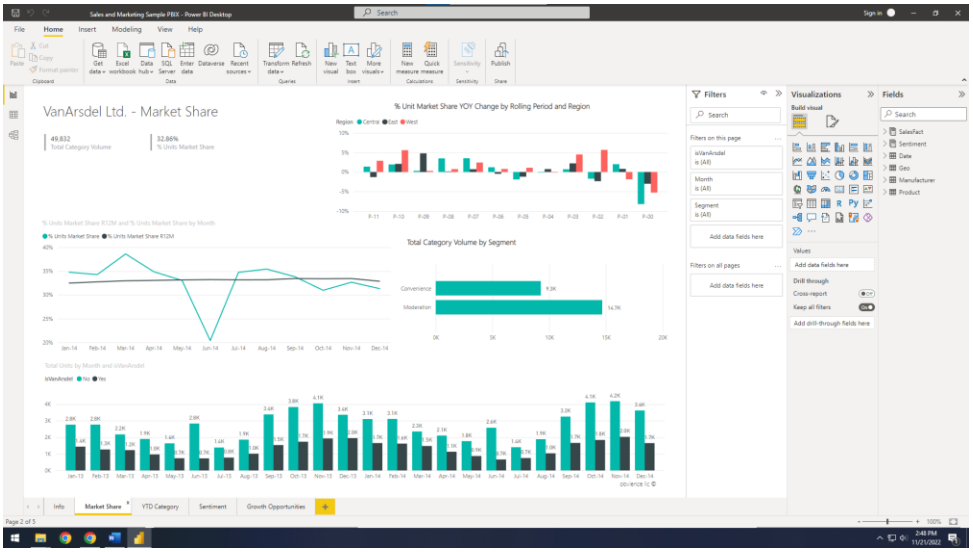
Open file Sales and Marketing Sample PBIX.



Ini merupakan tampilan awal file setelah dibuka.

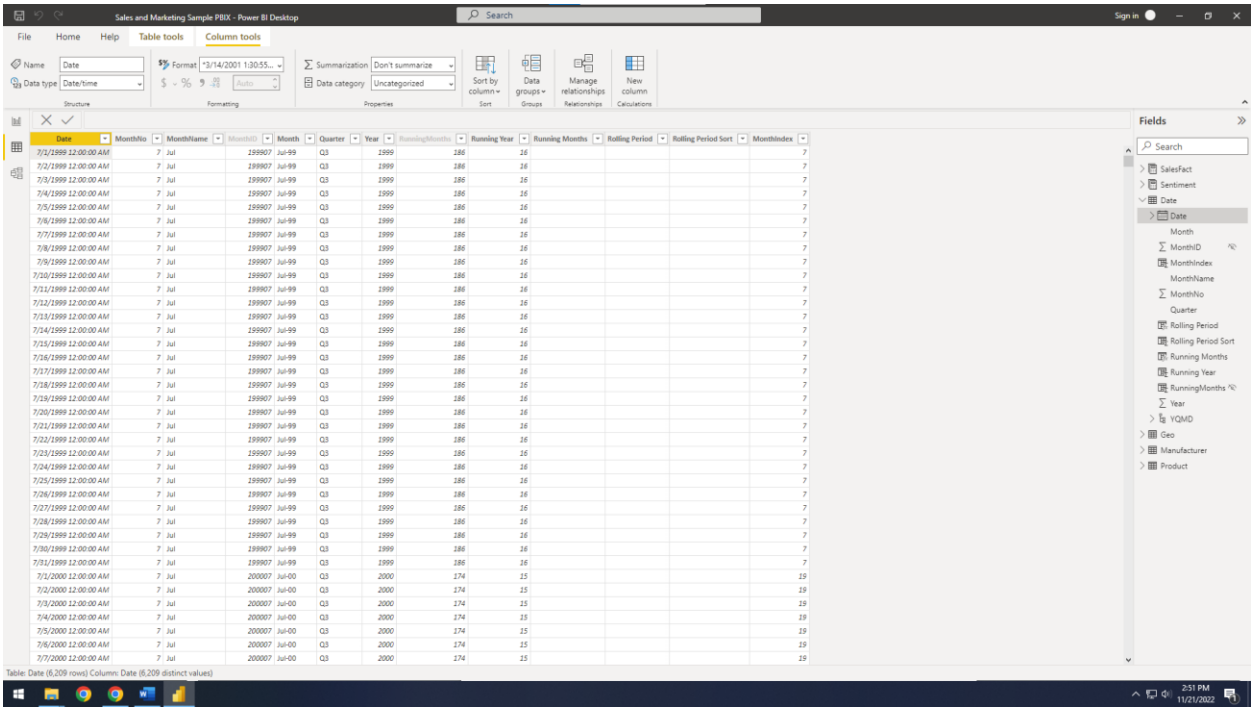


Pada bagian bawah, klik Market Share. Maka akan menunjukkan visualisasi dari data.



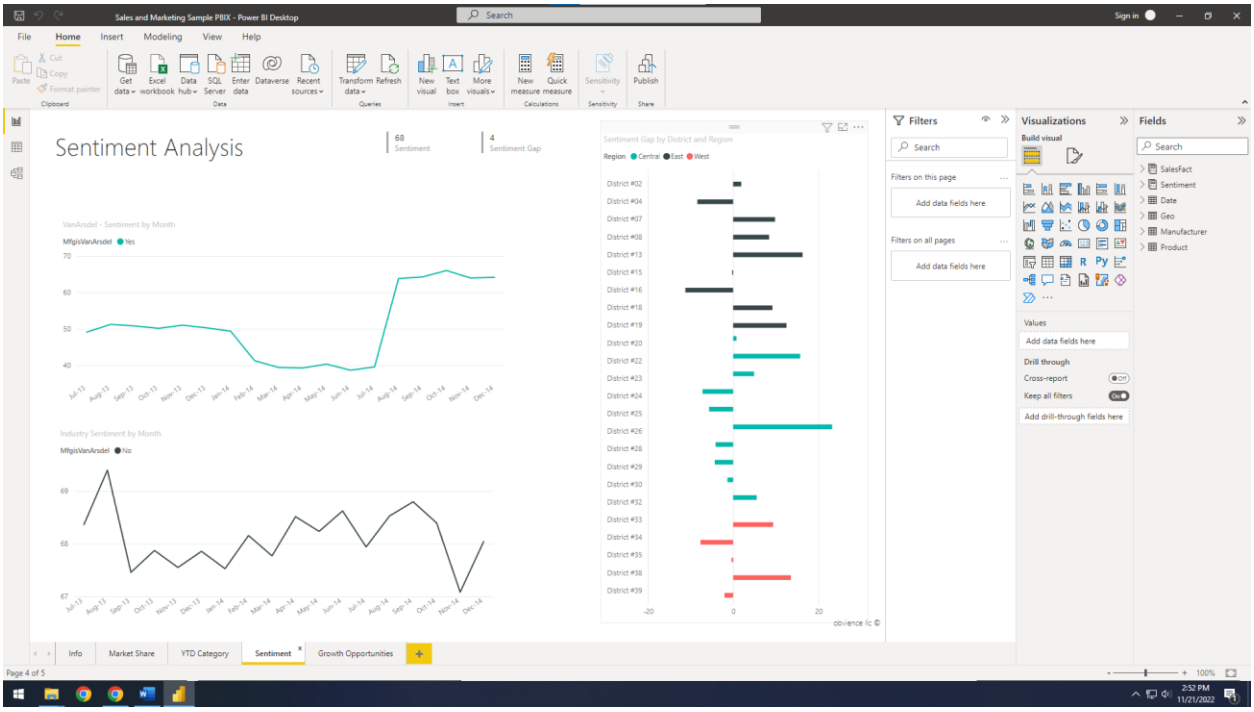
Building Blocks of Power BI: Datasets

Untuk dataset, pada bagian kiri navigation, klik bagian data.



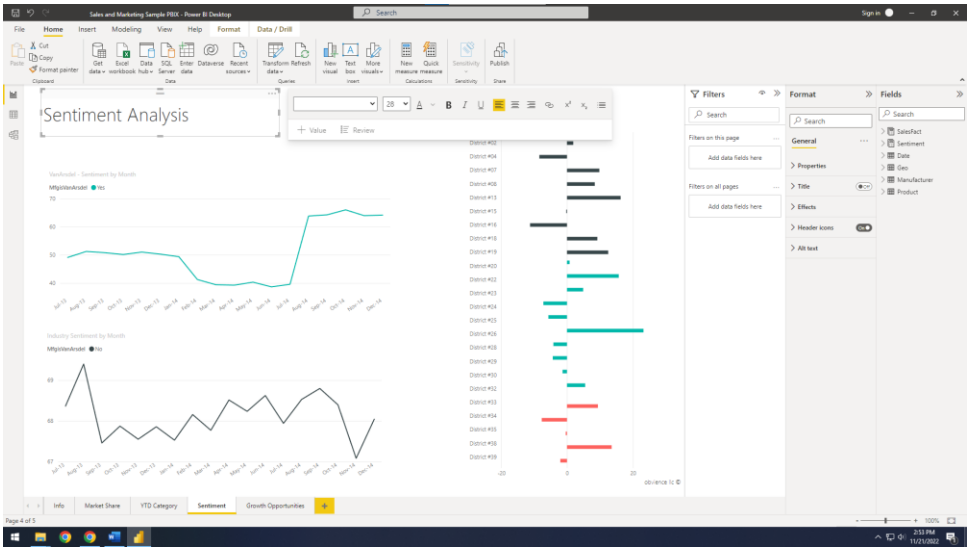
Building Blocks of Power BI: Reports

Untuk report, pada bagian kiri navigation, klik bagian report.



Building Blocks of Power BI: Dashboard and Tiles

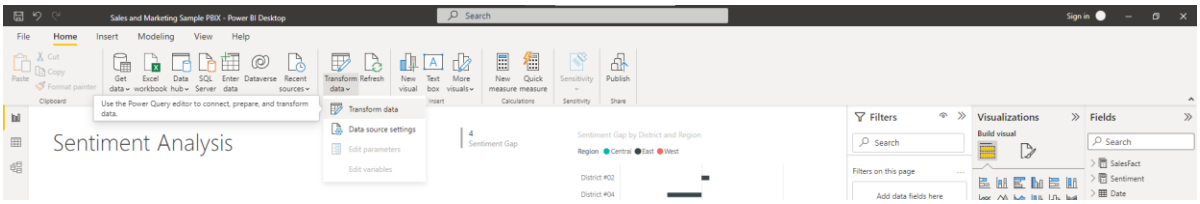
Halaman utama dan utilities pada power BI



Load, Clean, and Transform Data in Power BI – I

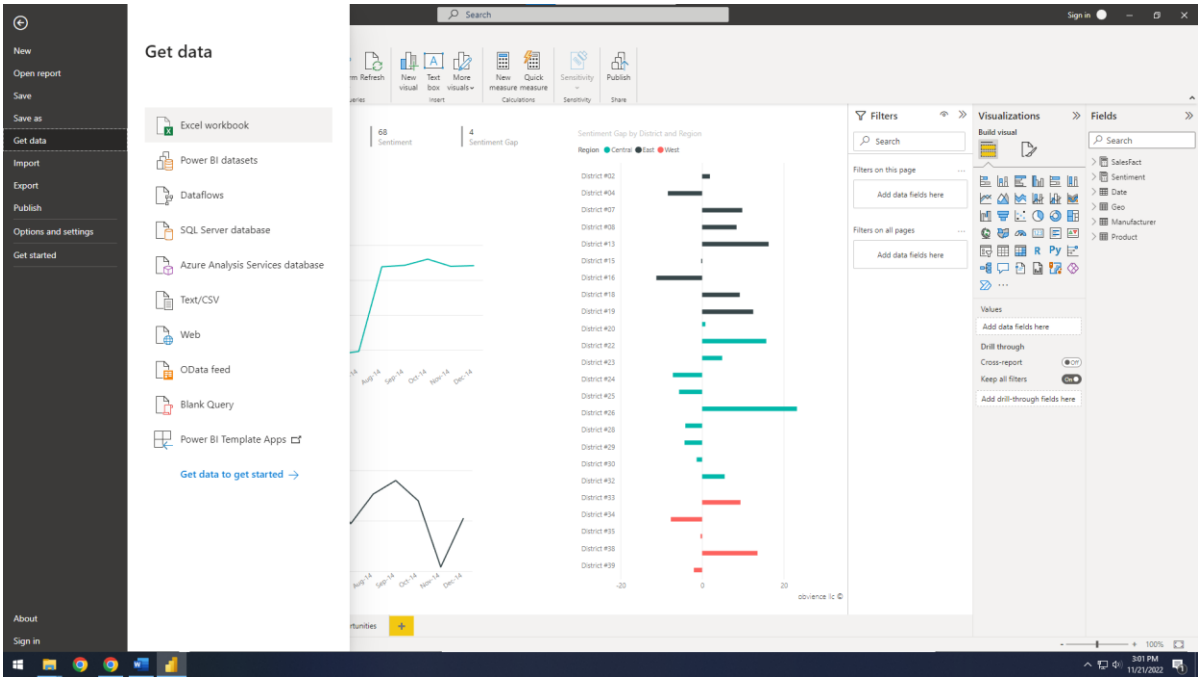
Shape the Initial Data

Pada bagian Home, klik transform data untuk inisiasi data.

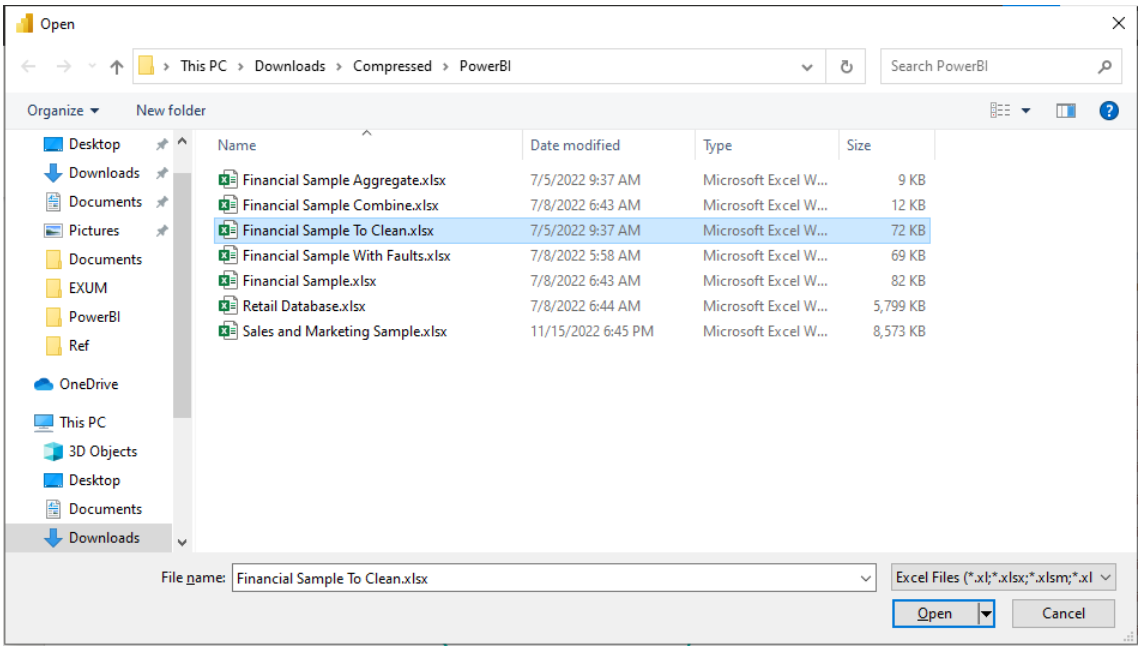


Identify Column Headers and Names

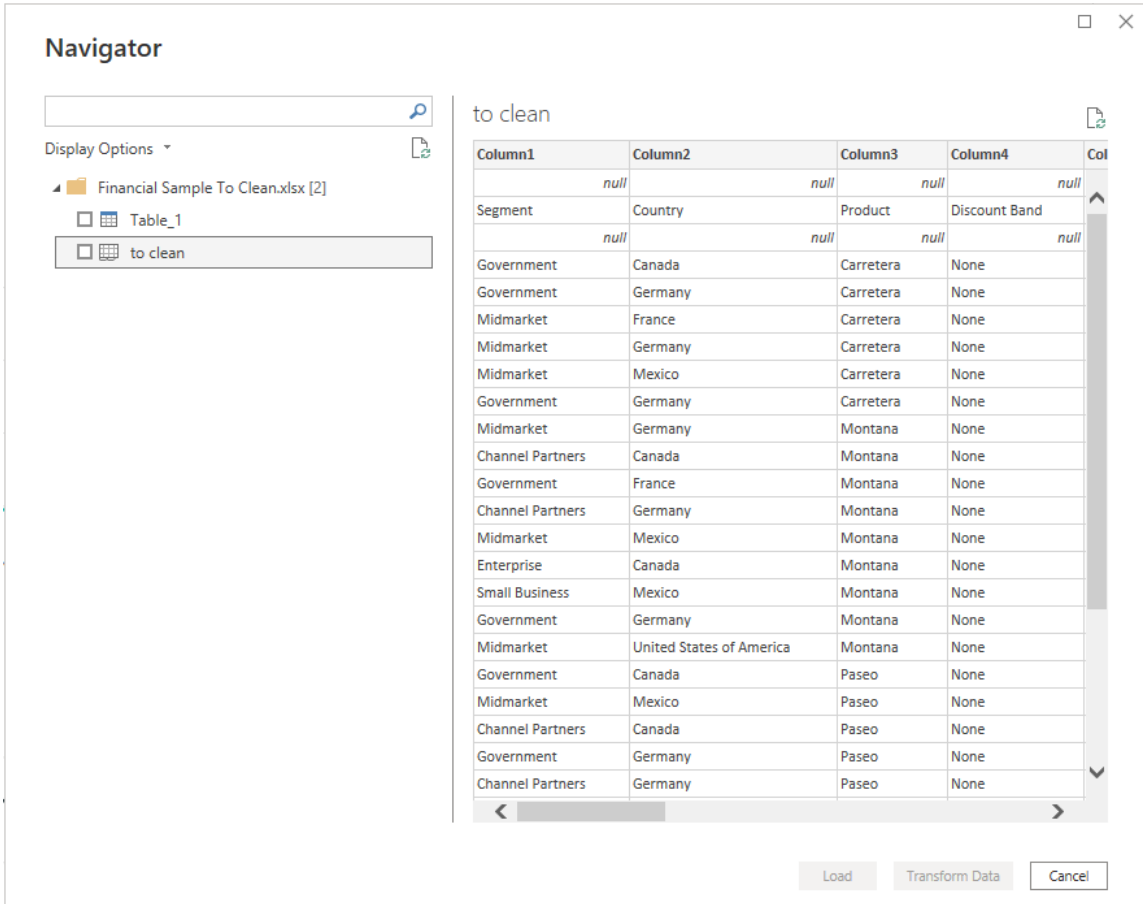
Pada bagian file, klik get data, setelah itu klik excel workbook.



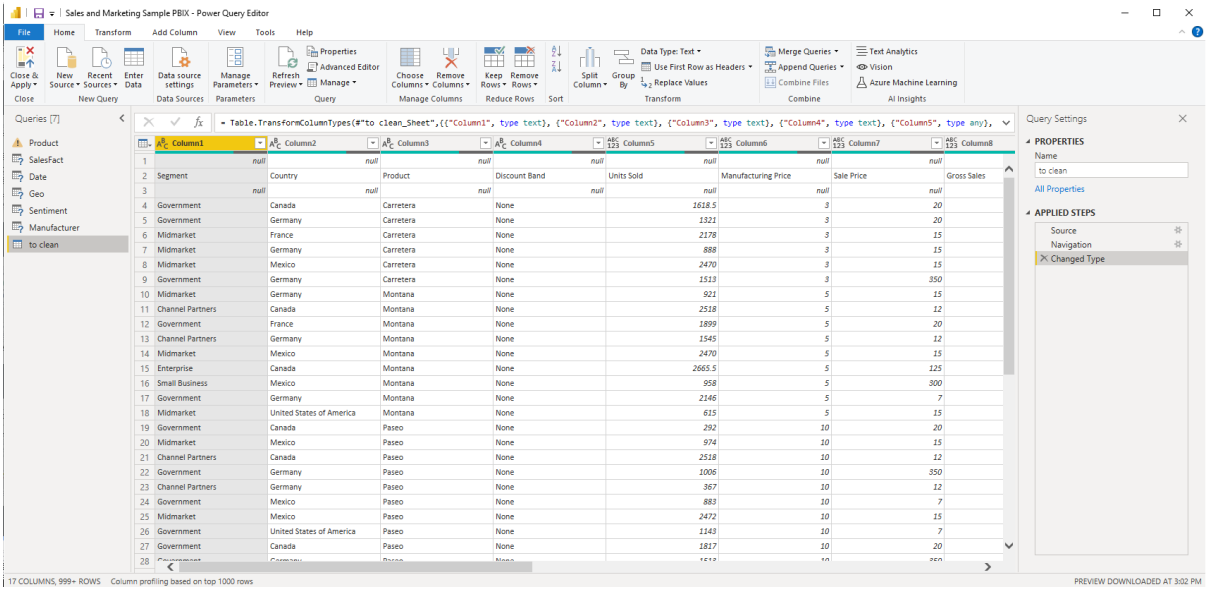
Masukkan file yang ingin digunakan dan open file.



Pilih table yang akan digunakan. Kali ini kita akan menggunakan table to clean. Select table dan klik transform data.

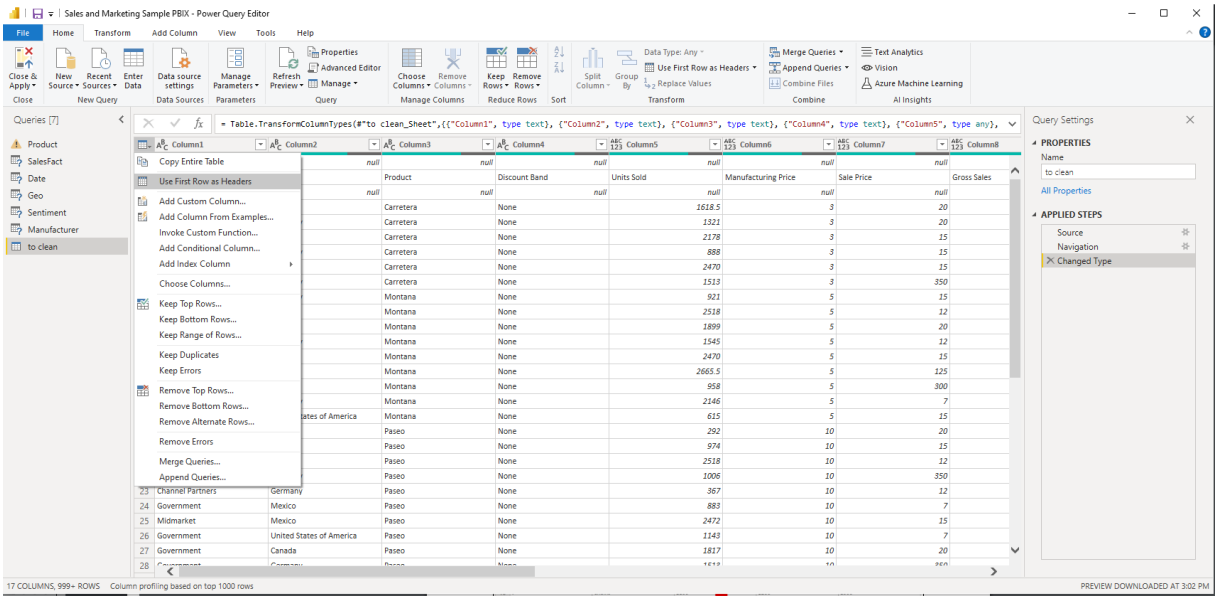


Tampilan pada table to clean.

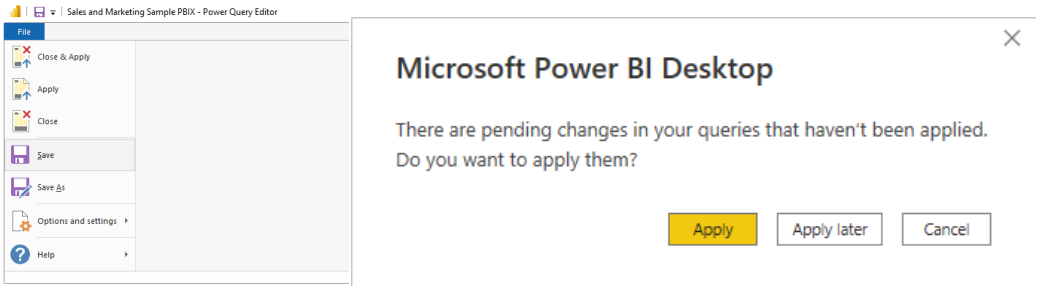


Promote Headers

Pada table to clean, select Use First Row as Header untuk membuat baris pertama sebagai header.

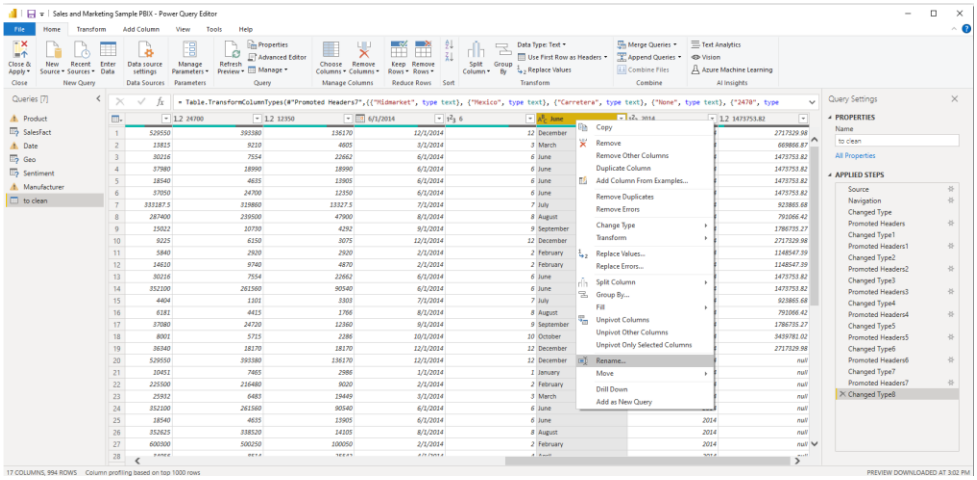


Klik save dan apply



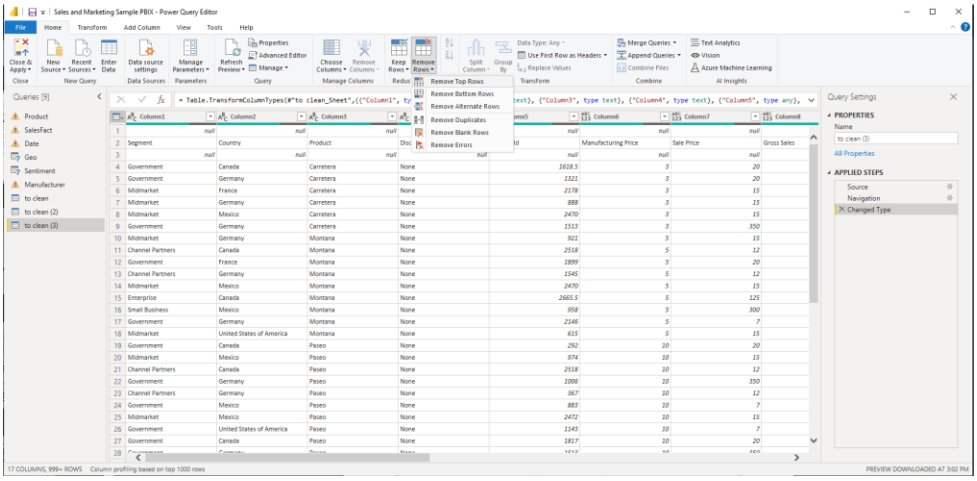
Rename Columns

Untuk mengubah nama kolom, Klik kanan pada kolom, setelah itu select rename.

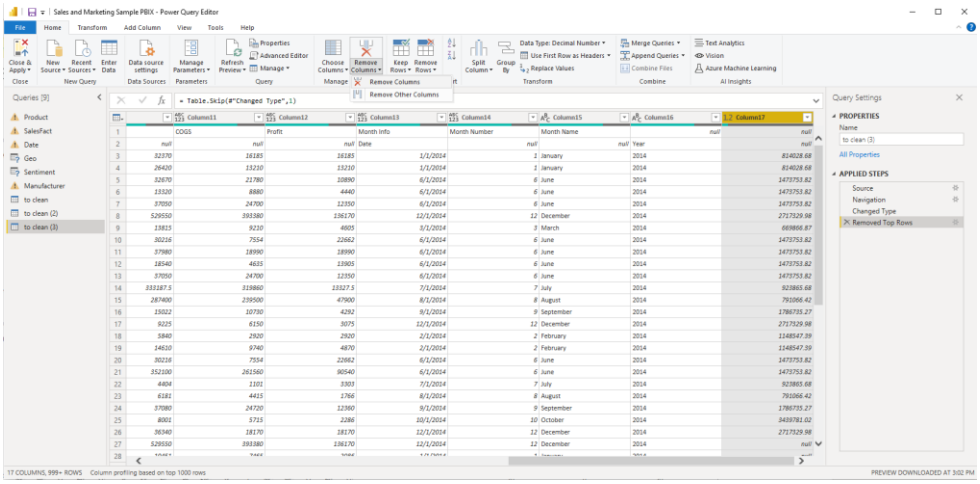


Remove Rows or Columns

Menghapus Top Rows atau baris pertama.

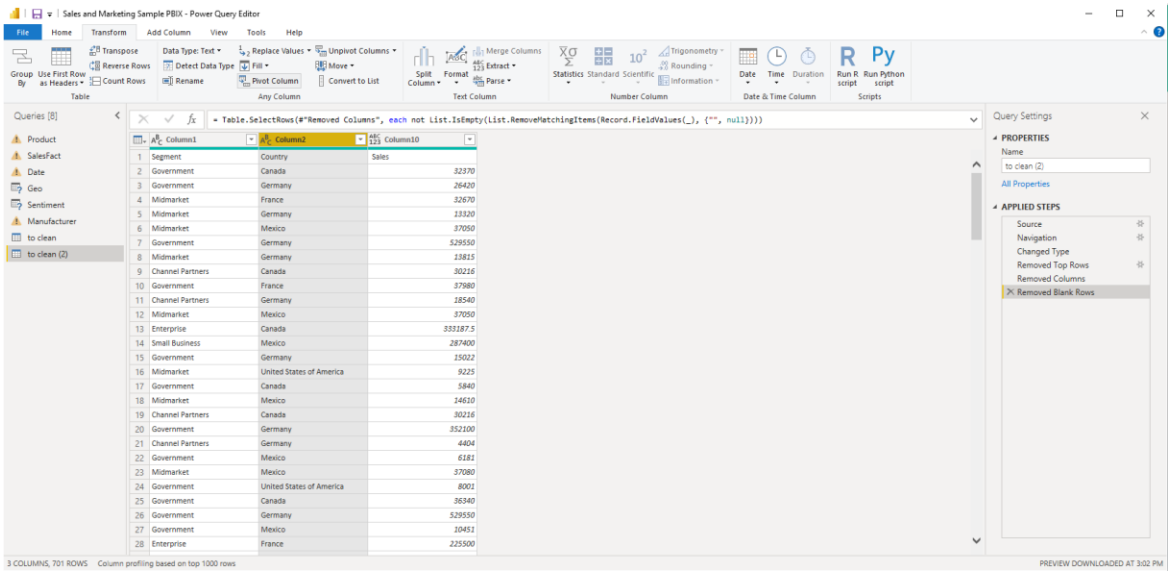


Untuk menghapus kolom, klik kanan pada kolom yang ingin dihapus, selanjutnya klik remove colomn.

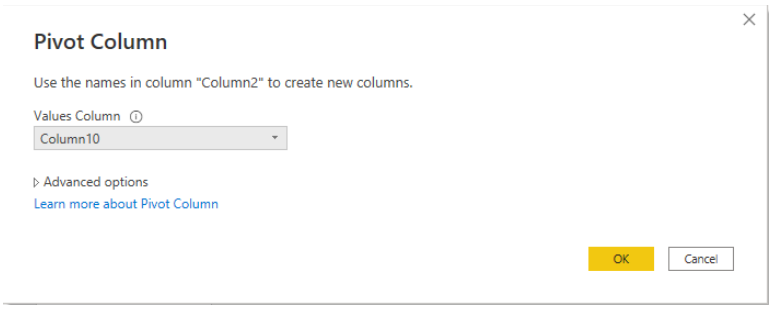


Pivot Columns

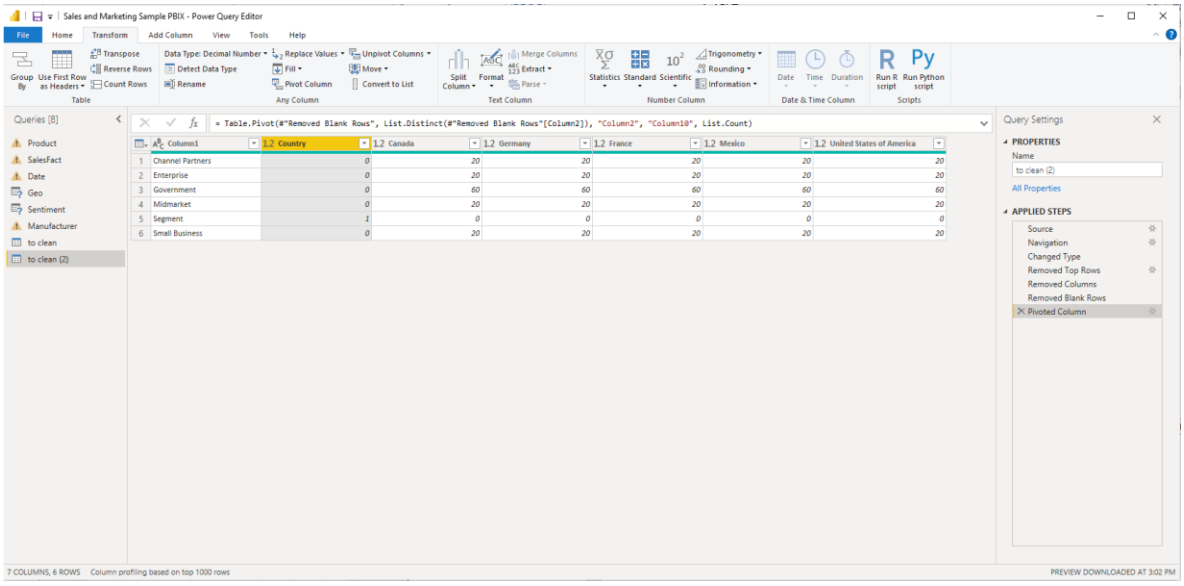
Select Column 2, Setelah itu pada bagian Transform, select Pivot Column.



Masukkan values untuk membuat kolom yang baru.

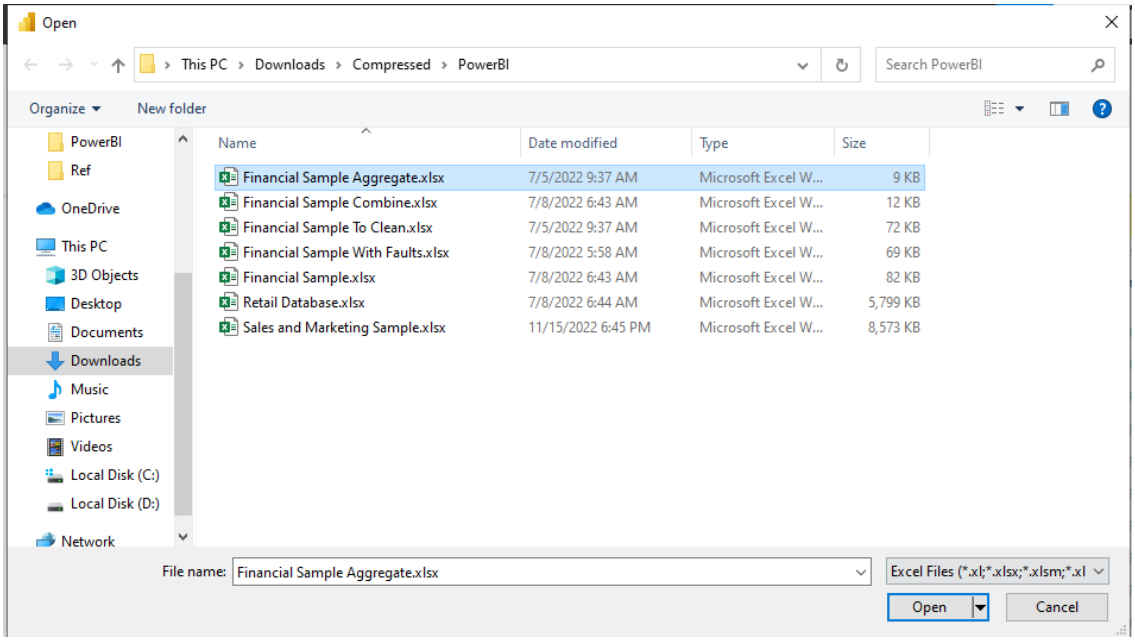


Hasilnya sebagai berikut.

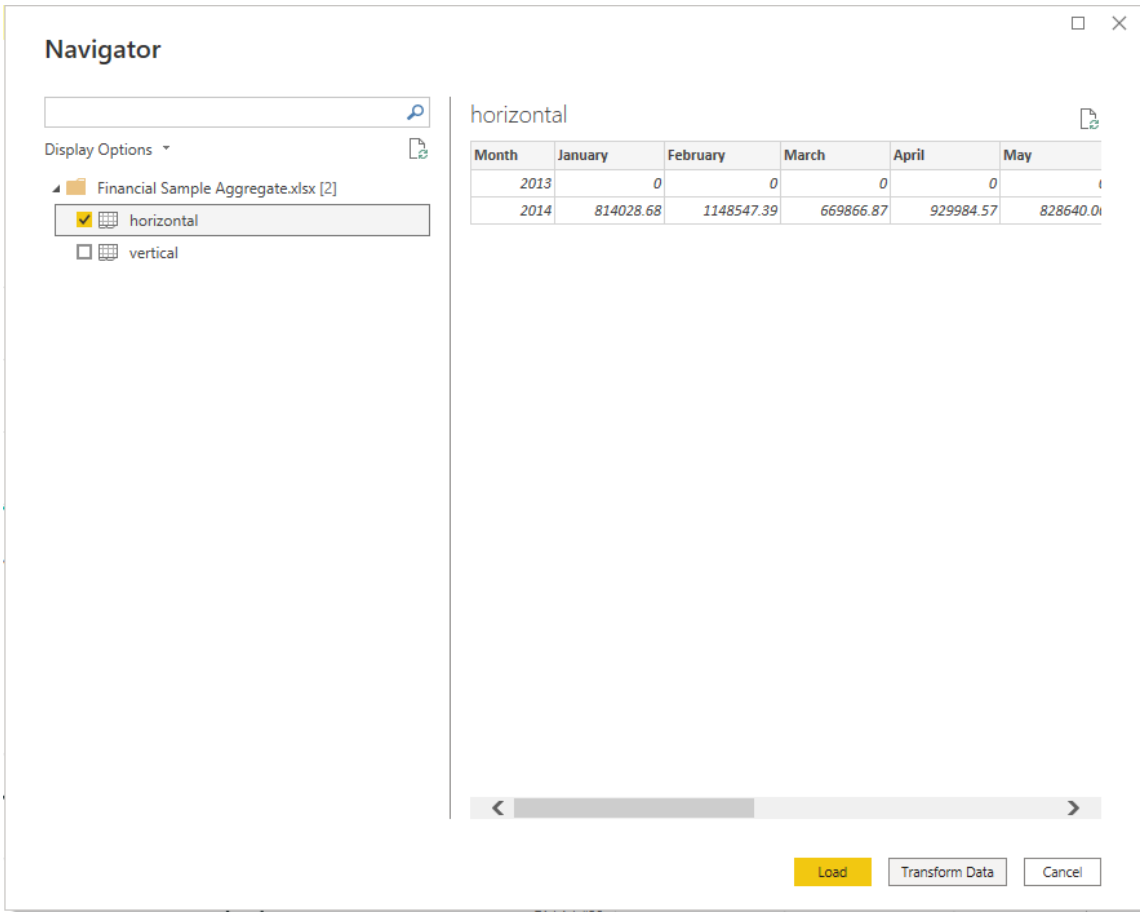


Unpivot Columns

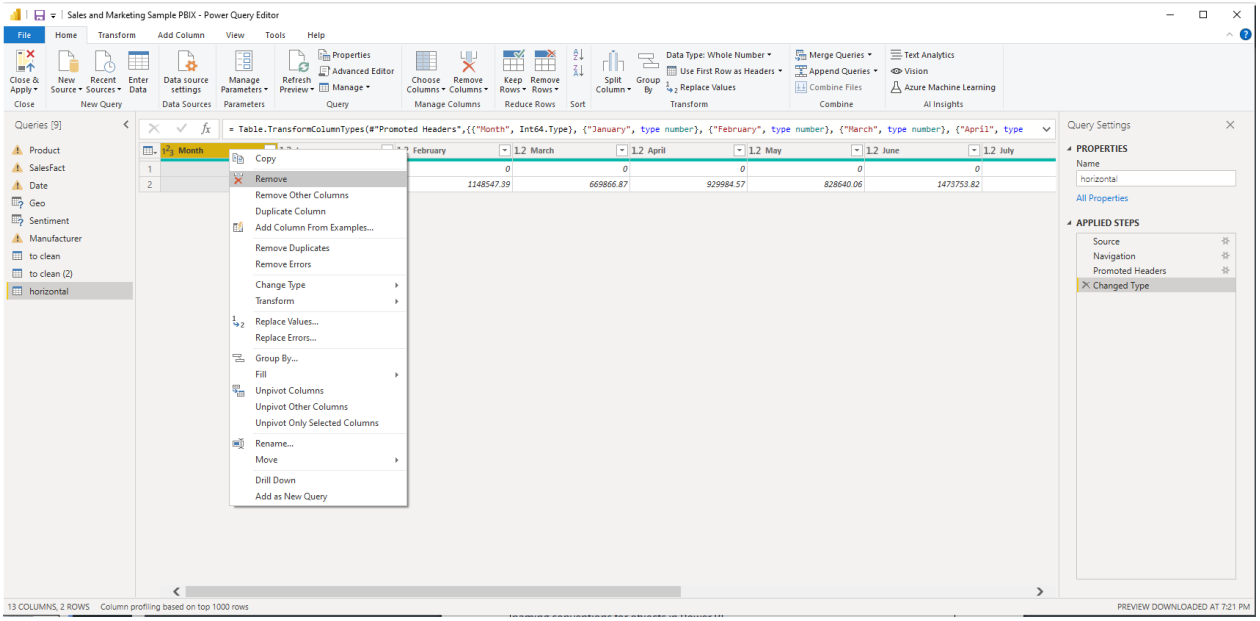
Pada bagian file, klik get data. Setelah itu buka file Finansial Sampe Aggregate



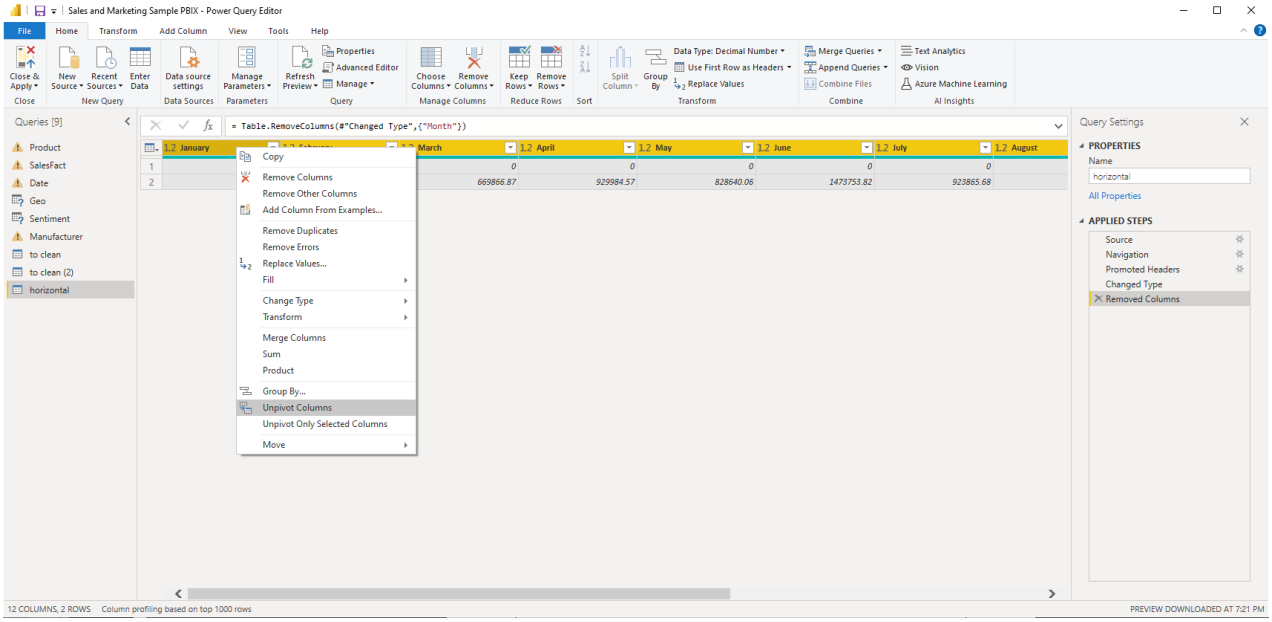
Select Table Horizontal, Setelah itu klik Transform Data.



Remove Colomn Month.



Select All column dan unpivot column.

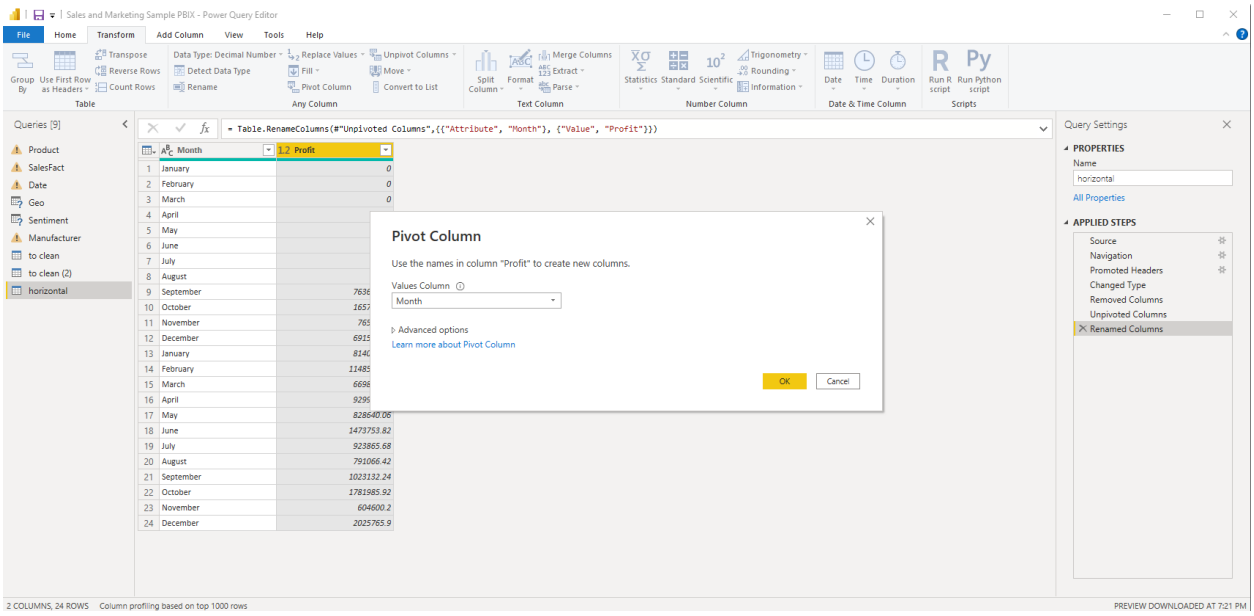


Setelah itu akan muncul hasil sebagai berikut.

```
= Table.UnpivotOtherColumns(#"Removed Columns", {}, "Attribute", "Value")
```

	Attribute	Value
1	January	0
2	February	0
3	March	0
4	April	0
5	May	0
6	June	0
7	July	0
8	August	0
9	September	763603.03
10	October	1657795.1
11	November	765502.3
12	December	691564.08
13	January	814028.68
14	February	1148547.39
15	March	669866.87
16	April	929984.57
17	May	828640.06
18	June	1473753.82
19	July	923865.68
20	August	791066.42
21	September	1023132.24
22	October	1781985.92
23	November	604600.2
24	December	2025765.9

Selanjutnya pivot column profit berdasarkan bulan.



Maka akan muncul hasilnya sebagai berikut.

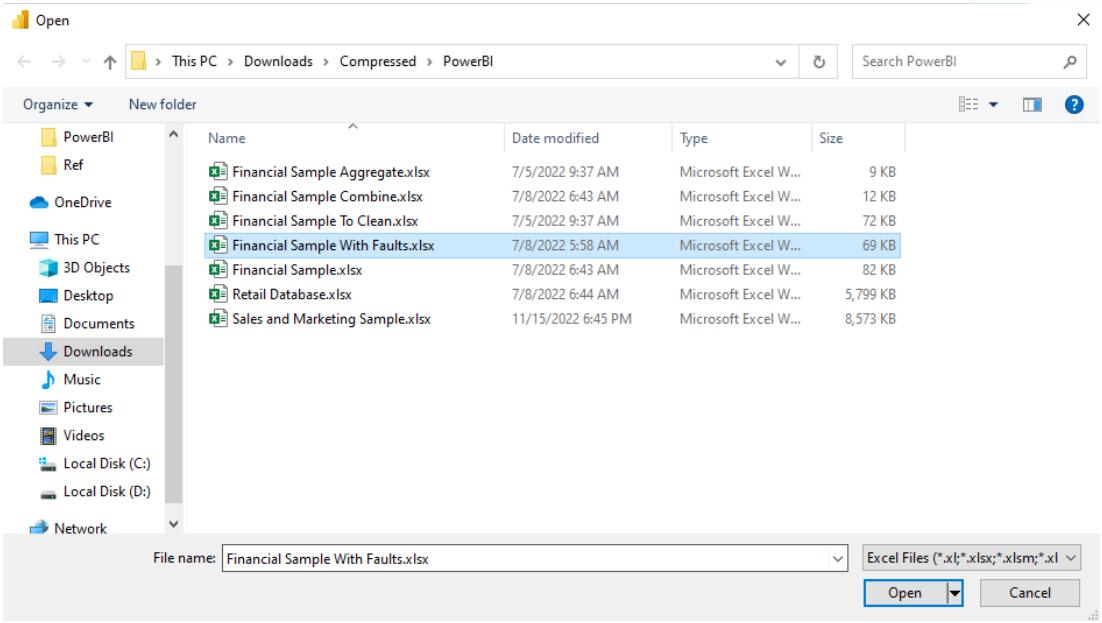
```
= Table.Pivot(Table.TransformColumnTypes(#"Renamed Columns", {{"Profit", type text}}, "en-US"), List.Distinct(Table.TransformColumnTypes(#"Renamed Columns", {
```

	0	763603.03000000014	1657795.0999999999	765502.3	691564.08000000007	814028.67999999993	1148547.3899999999	669866.87
1	8	1	1	1	1	1	1	

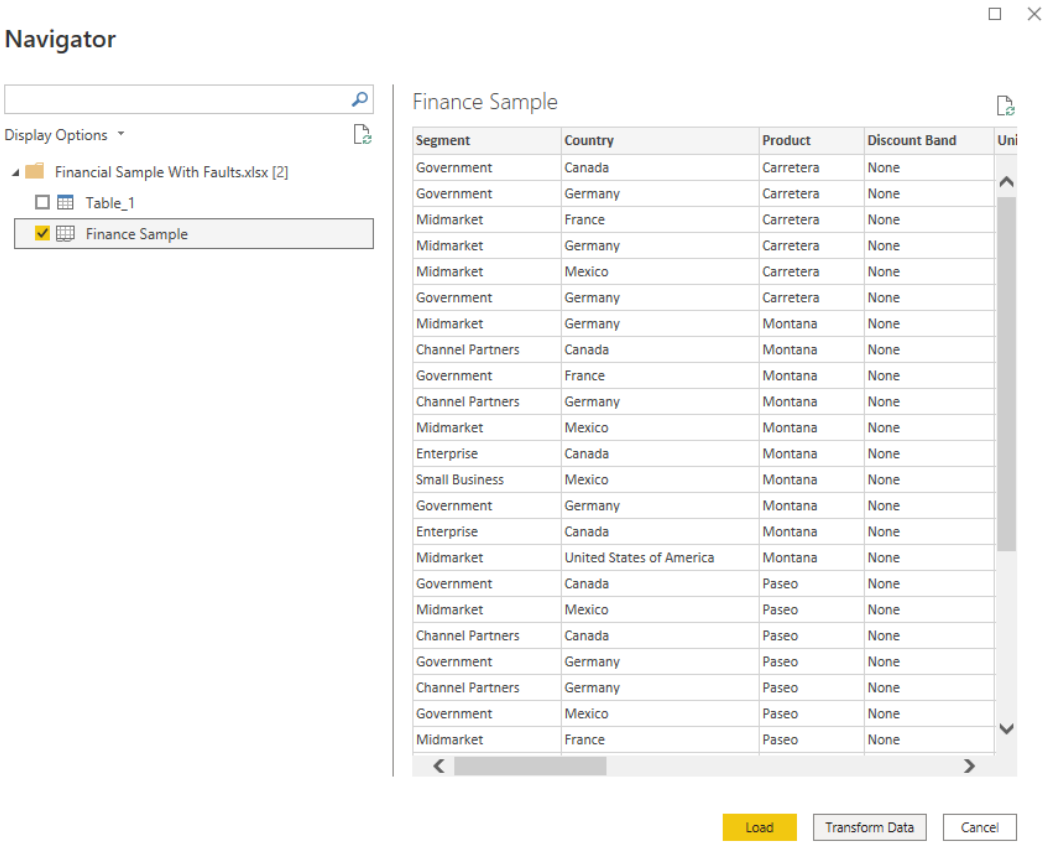
Load, Clean, and Transform Data in Power BI – II

Simplify the Data Structure

Pada bagian file, klik get data. Setelah itu buka file Finansial Sampe With Faults.

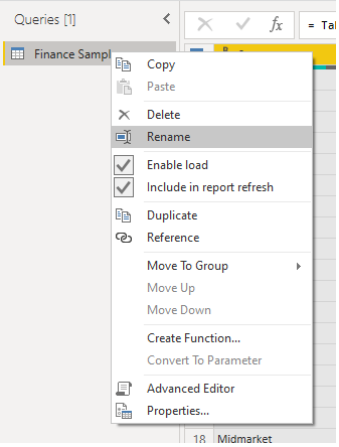


Select Finance Sample, Kemudian Transform Data.



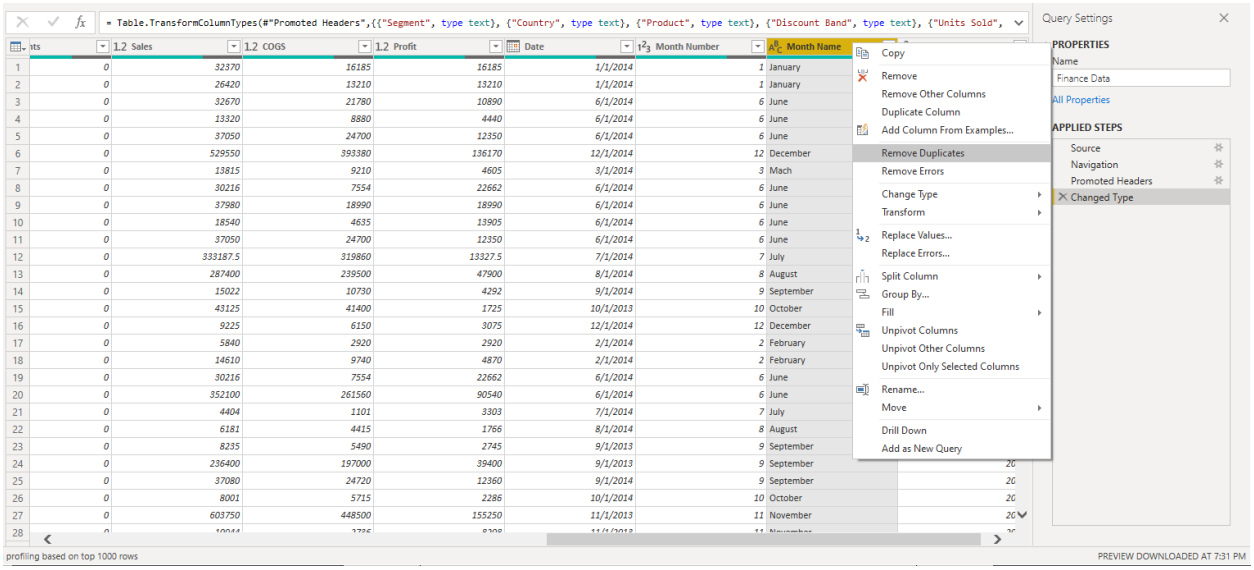
Segment	Country	Product	Discount Band	Uni
Government	Canada	Carretera	None	
Government	Germany	Carretera	None	
Midmarket	France	Carretera	None	
Midmarket	Germany	Carretera	None	
Midmarket	Mexico	Carretera	None	
Government	Germany	Carretera	None	
Midmarket	Germany	Montana	None	
Channel Partners	Canada	Montana	None	
Government	France	Montana	None	
Channel Partners	Germany	Montana	None	
Midmarket	Mexico	Montana	None	
Enterprise	Canada	Montana	None	
Small Business	Mexico	Montana	None	
Government	Germany	Montana	None	
Enterprise	Canada	Montana	None	
Midmarket	United States of America	Montana	None	
Government	Canada	Paseo	None	
Midmarket	Mexico	Paseo	None	
Channel Partners	Canada	Paseo	None	
Government	Germany	Paseo	None	
Channel Partners	Germany	Paseo	None	
Government	Mexico	Paseo	None	
Midmarket	France	Paseo	None	

Pada bagian Queries, rename Finance Sample menjadi Finace Data.

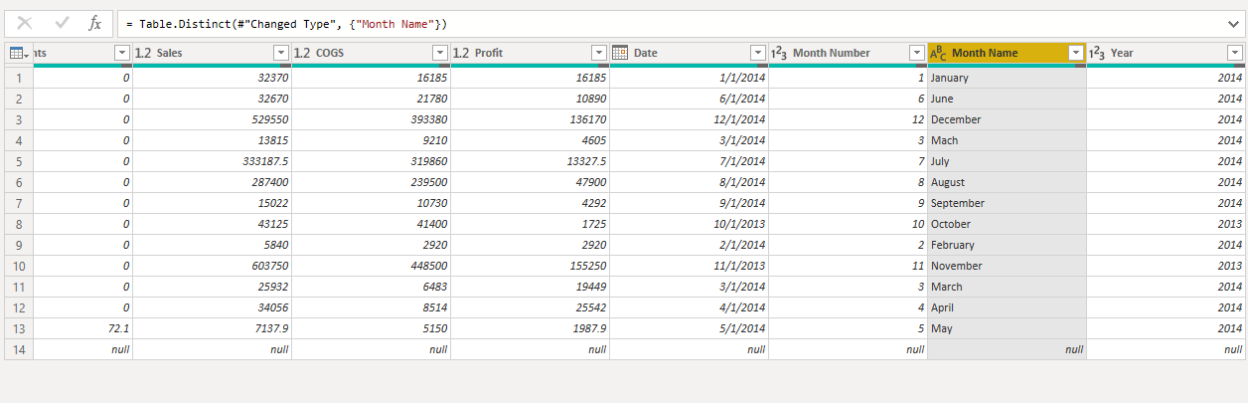


Simplify the Data Structure: Remove Duplicates

Pada kolom Month Name, klik kanan pada kolom, kemudian pilih Remove Duplicates.



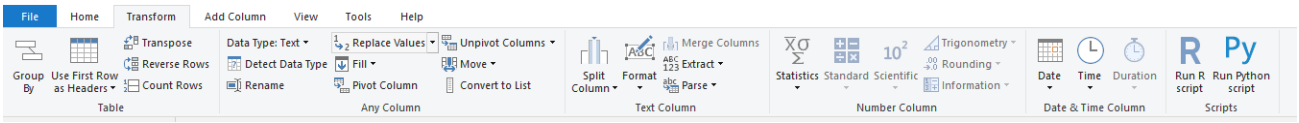
Hasilnya data yang duplikat akan dihapus.



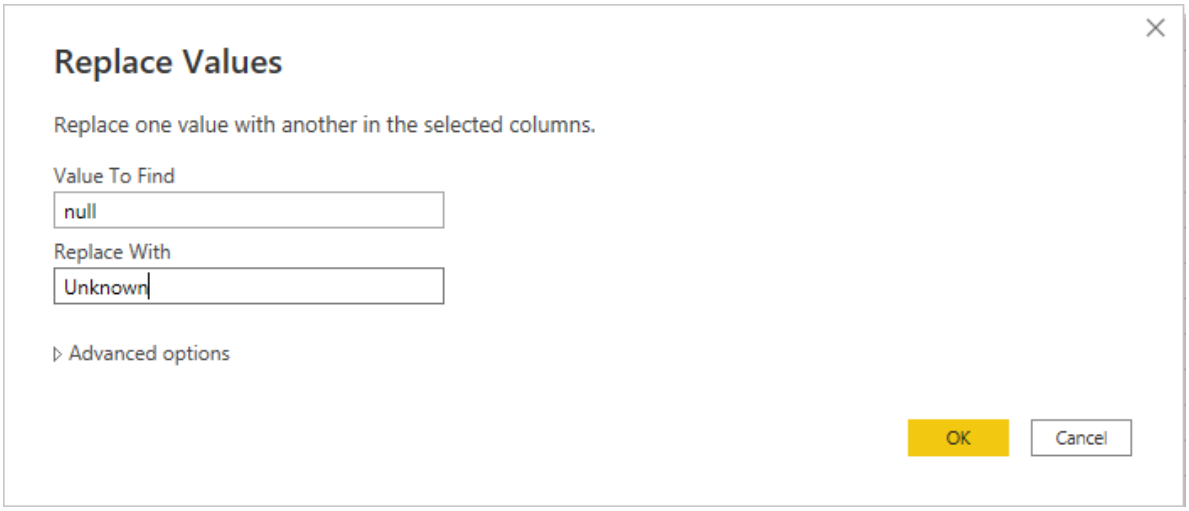
	nts	Sales	COGS	Profit	Date	Month Number	Month Name	Year
1	0	32370	16185	16185	1/1/2014	1	January	2014
2	0	32670	21780	10890	6/1/2014	6	June	2014
3	0	529550	393380	136170	12/1/2014	12	December	2014
4	0	13815	9210	4605	3/1/2014	3	Mach	2014
5	0	333187.5	319860	13327.5	7/1/2014	7	July	2014
6	0	287400	239500	47900	8/1/2014	8	August	2014
7	0	15022	10730	4292	9/1/2014	9	September	2014
8	0	43125	41400	1725	10/1/2013	10	October	2013
9	0	5840	2920	2920	2/1/2014	2	February	2014
10	0	603750	448500	155250	11/1/2013	11	November	2013
11	0	25932	6483	19449	3/1/2014	3	March	2014
12	0	34056	8514	25542	4/1/2014	4	April	2014
13	72.1	7137.9	5150	1987.9	5/1/2014	5	May	2014
14	null	null	null	null	null	null	null	null

Simplify the Data Structure: Replace Values

Pada bagian transform, select Replace Values.

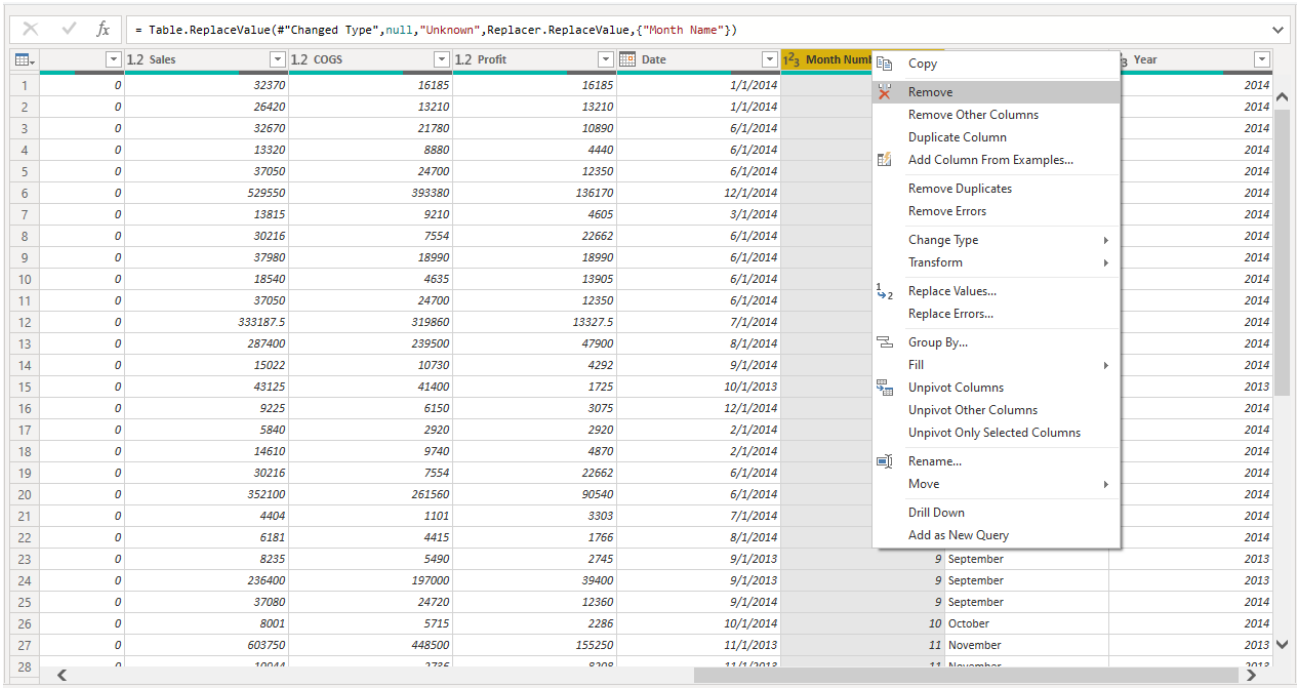


Replace null menjadi Unknown. Klik Ok. Maka data yang bernilai null akan diubah menjadi Unknown.

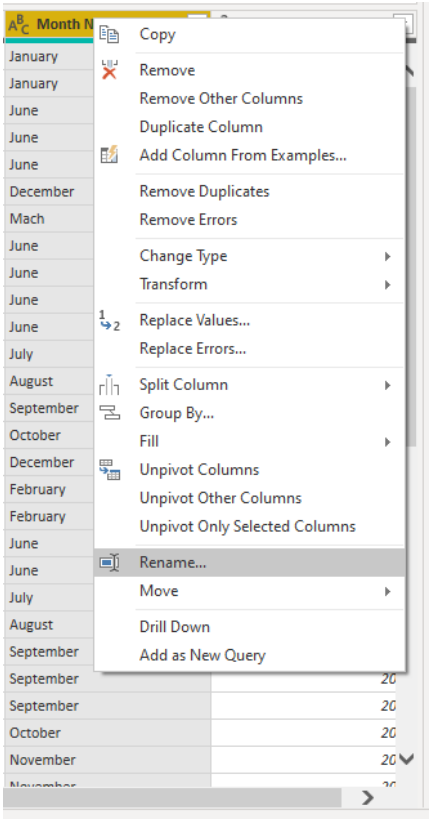


Best Practices for Naming Tables, Columns, and Values

Remove Kolom Month Number.

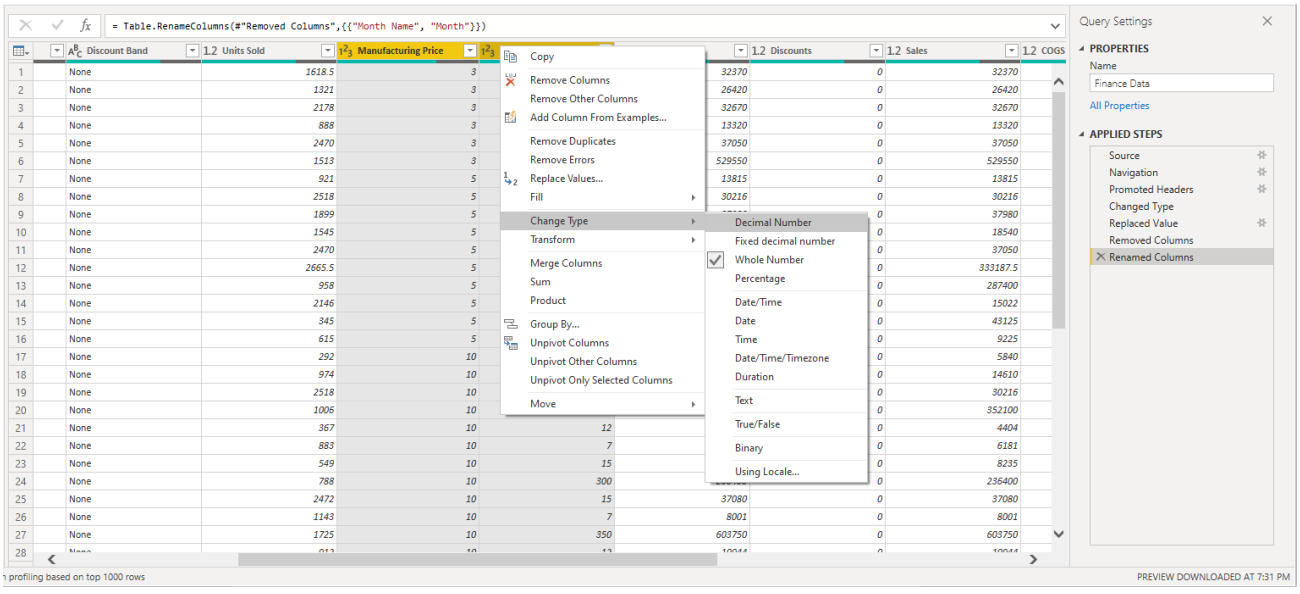


Setelah itu Rename Month Name menjadi Month.



Evaluate and Change Column Data Types

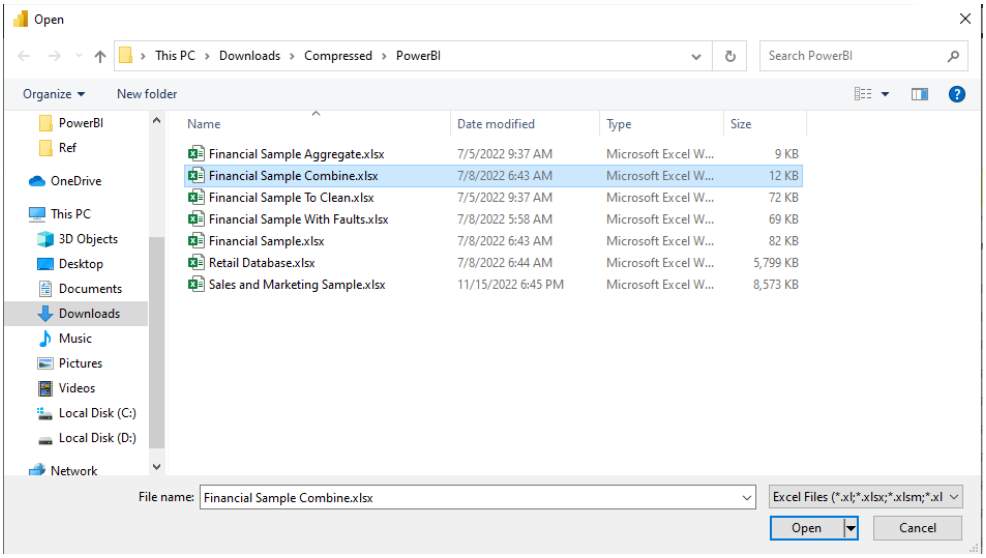
Select kolom Manufacturing Price and the Sale Price, setelah itu klik kanan pada kolom. Select Change Type dan ubah tipe dari whole number ke decimal number.



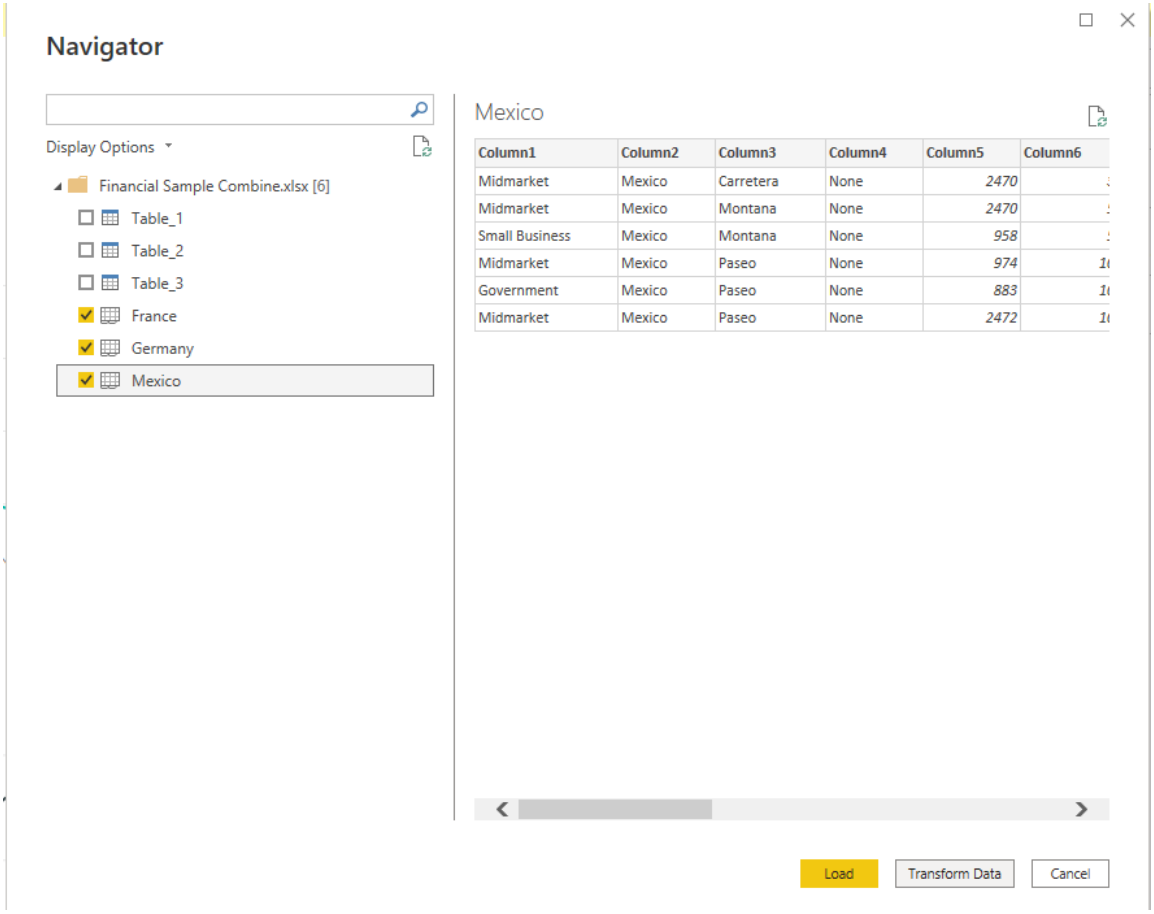
Load, Clean, and Transform Data in Power BI – III

Combine Tables by Appending Queries

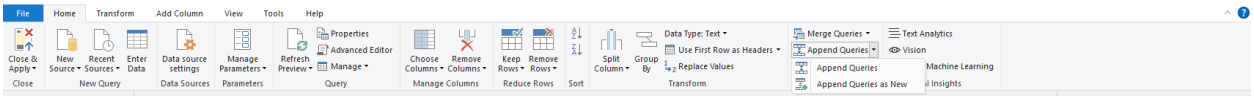
Pada bagian file, klik get data. Setelah itu buka file Finansial Sampe Combine.



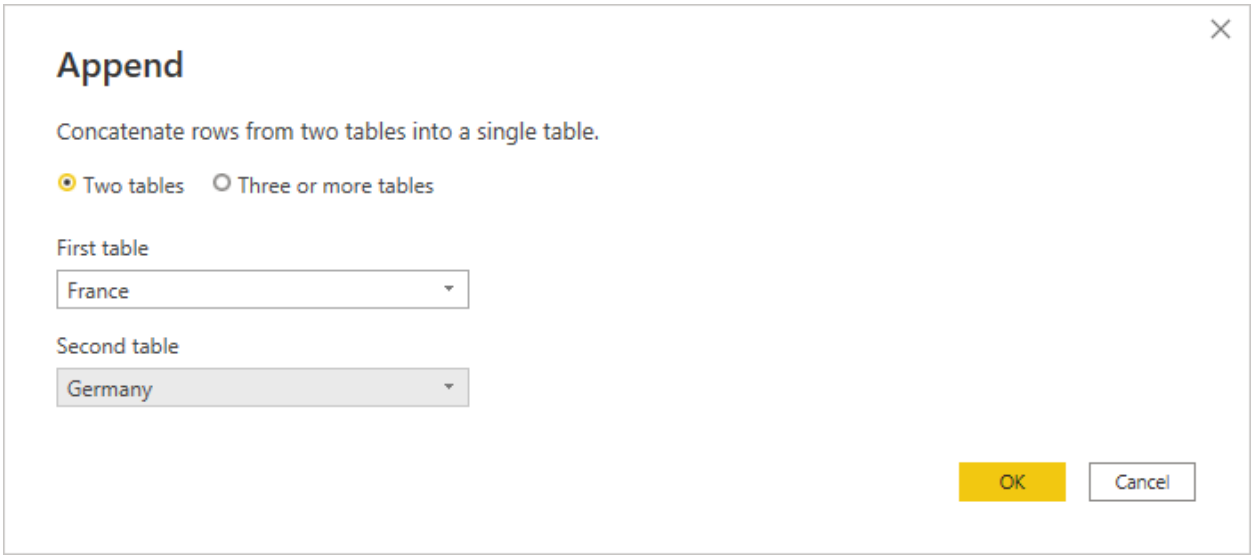
Select Table France. Germany dan Mexico, Kemudian Transform Data.



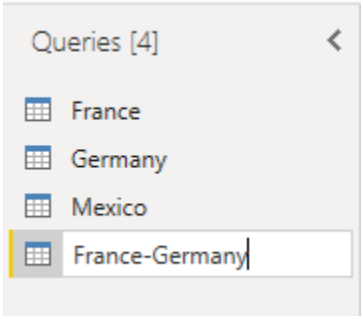
Pada bagian Home, select Append Queries -> Append Queries as New



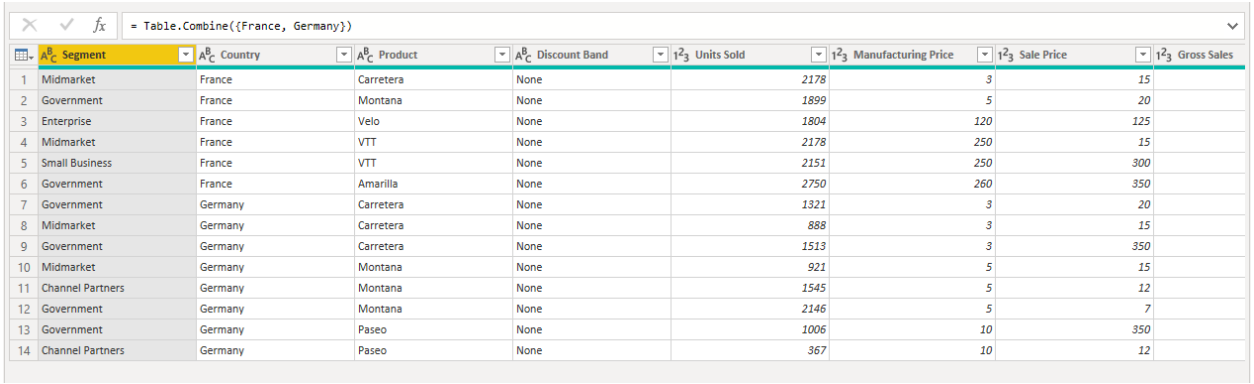
Append Table France dan Germany.



Setelah itu akan muncul query baru, rename menjadi France-Germany.



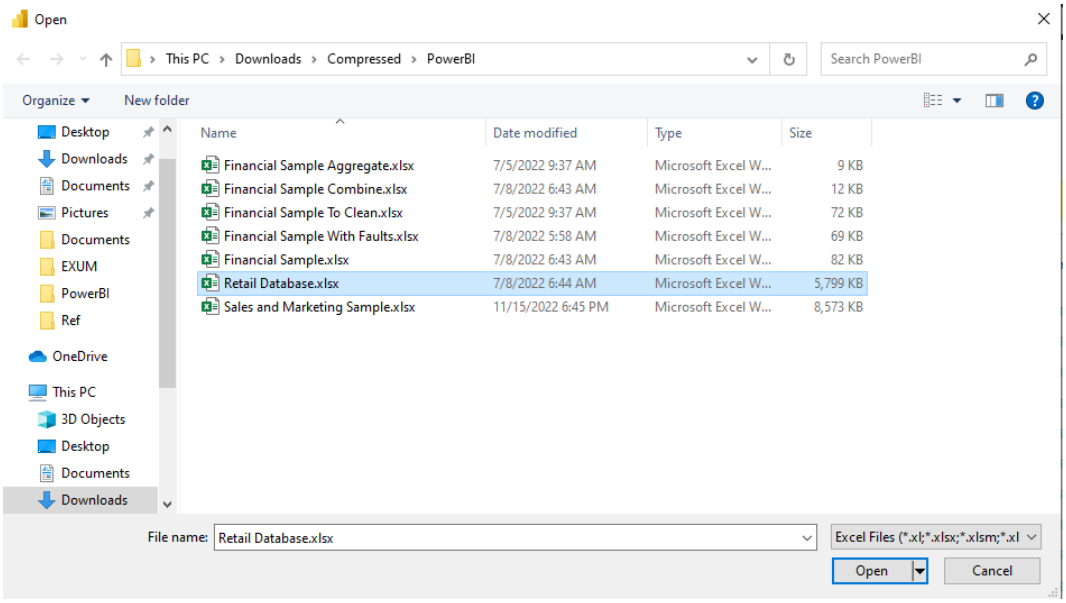
Klik table tersebut untuk melihat hasil dari append.



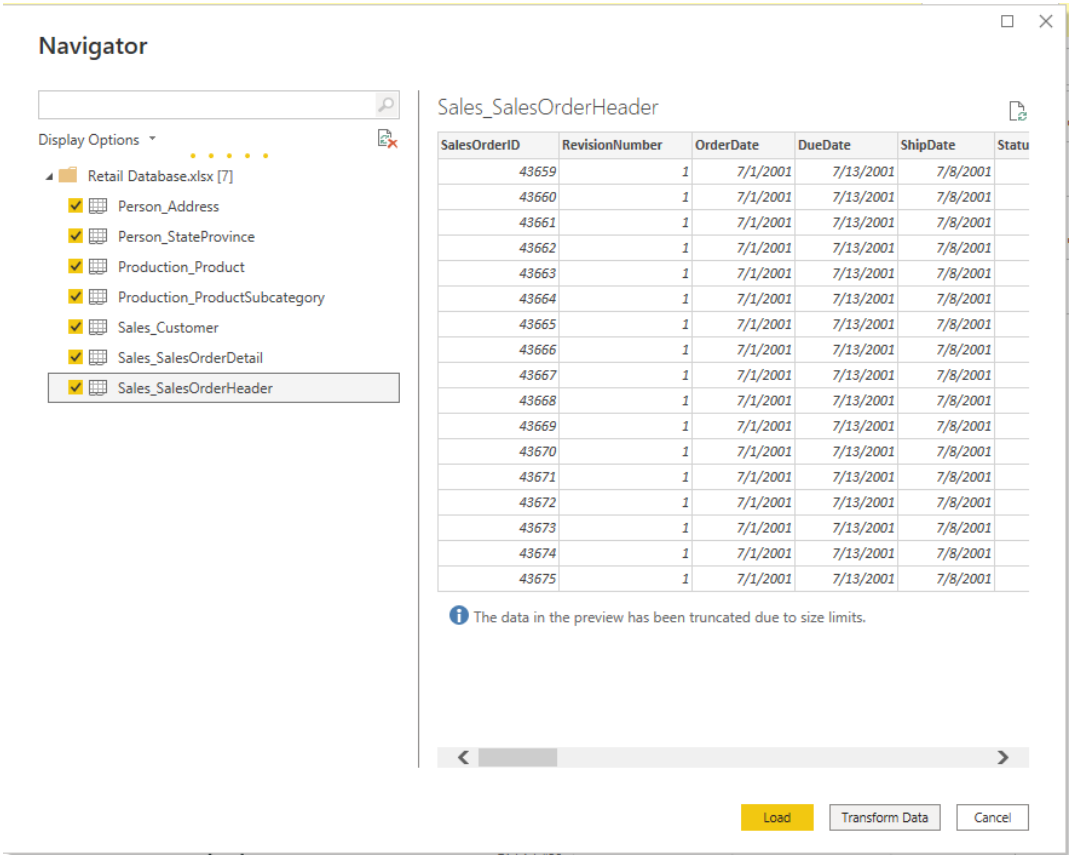
	Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price	Gross Sales
1	Midmarket	France	Carretera	None	2178	3	15	
2	Government	France	Montana	None	1899	5	20	
3	Enterprise	France	Velo	None	1804	120	125	
4	Midmarket	France	VTT	None	2178	250	15	
5	Small Business	France	VTT	None	2151	250	300	
6	Government	France	Amarilla	None	2750	260	350	
7	Government	Germany	Carretera	None	1321	3	20	
8	Midmarket	Germany	Carretera	None	888	3	15	
9	Government	Germany	Carretera	None	1513	3	350	
10	Midmarket	Germany	Montana	None	921	5	15	
11	Channel Partners	Germany	Montana	None	1545	5	12	
12	Government	Germany	Montana	None	2146	5	7	
13	Government	Germany	Paseo	None	1006	10	350	
14	Channel Partners	Germany	Paseo	None	367	10	12	

Combine Tables by Merging Queries

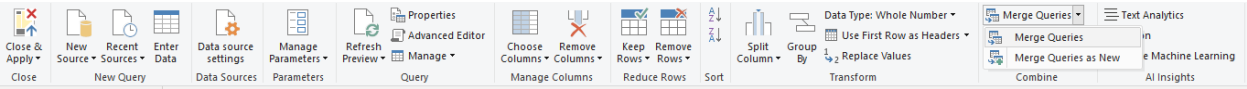
Pada bagian file, klik get data. Setelah itu buka file Retail Database.



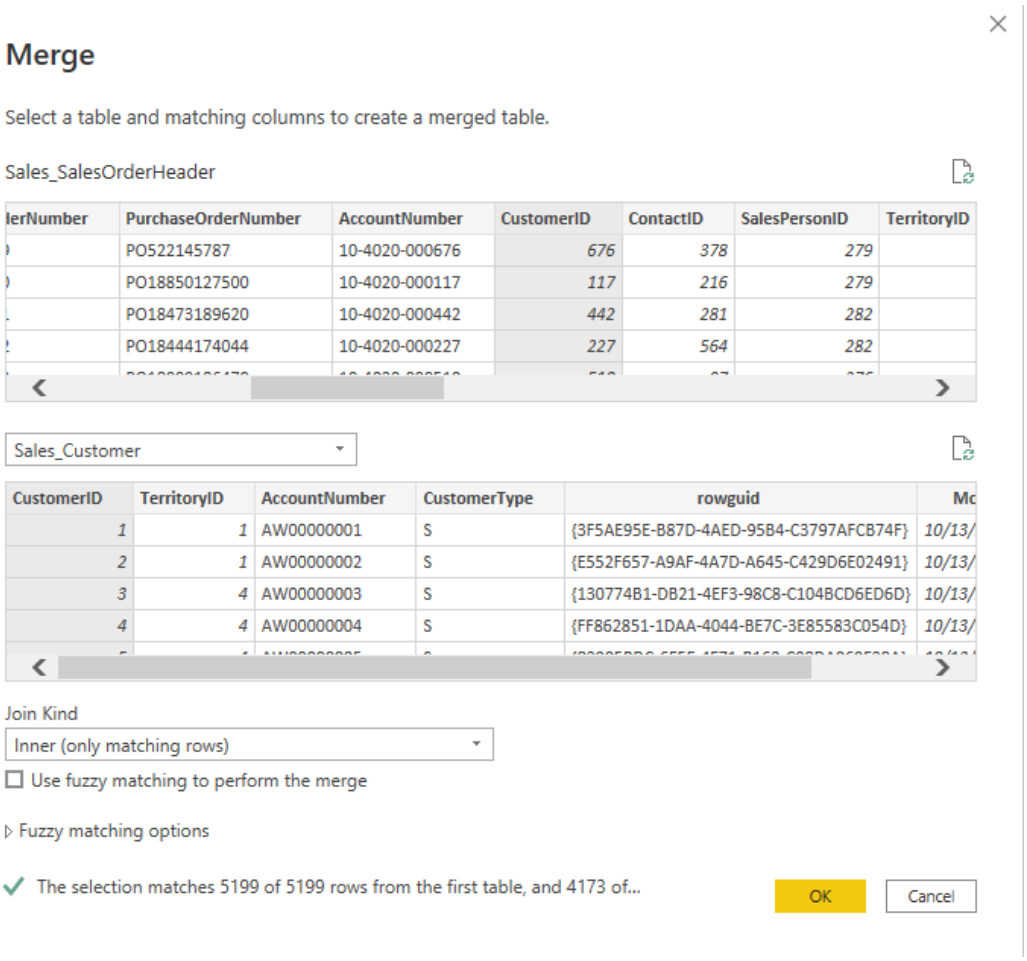
Select All Tables, Kemudian Transform Data.



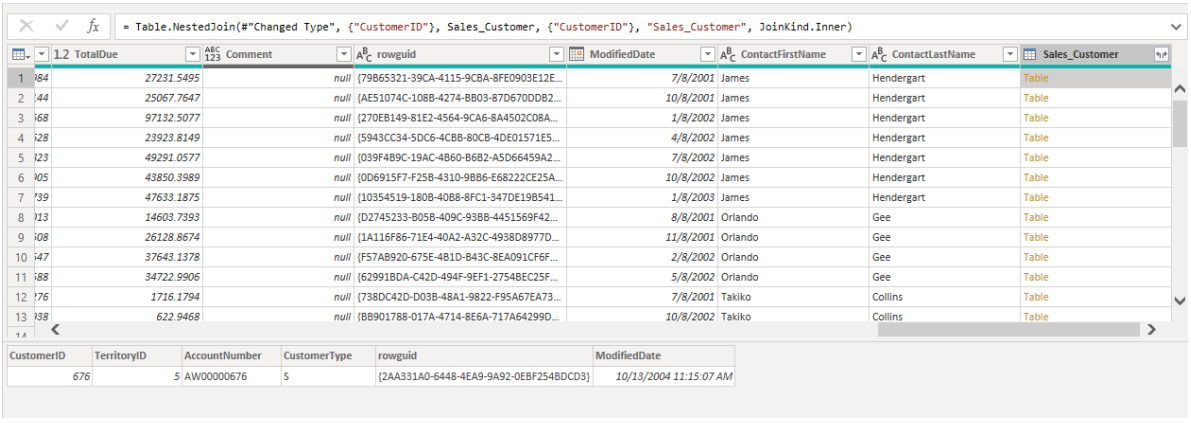
Pada bagian Transform, select Merge Queries-> Merge Queries as New.



Inner Sales_SalesOrderHeader dengan Sales_Customer dengan menggunakan CustomerID sebagai penghubung antara kedua table.

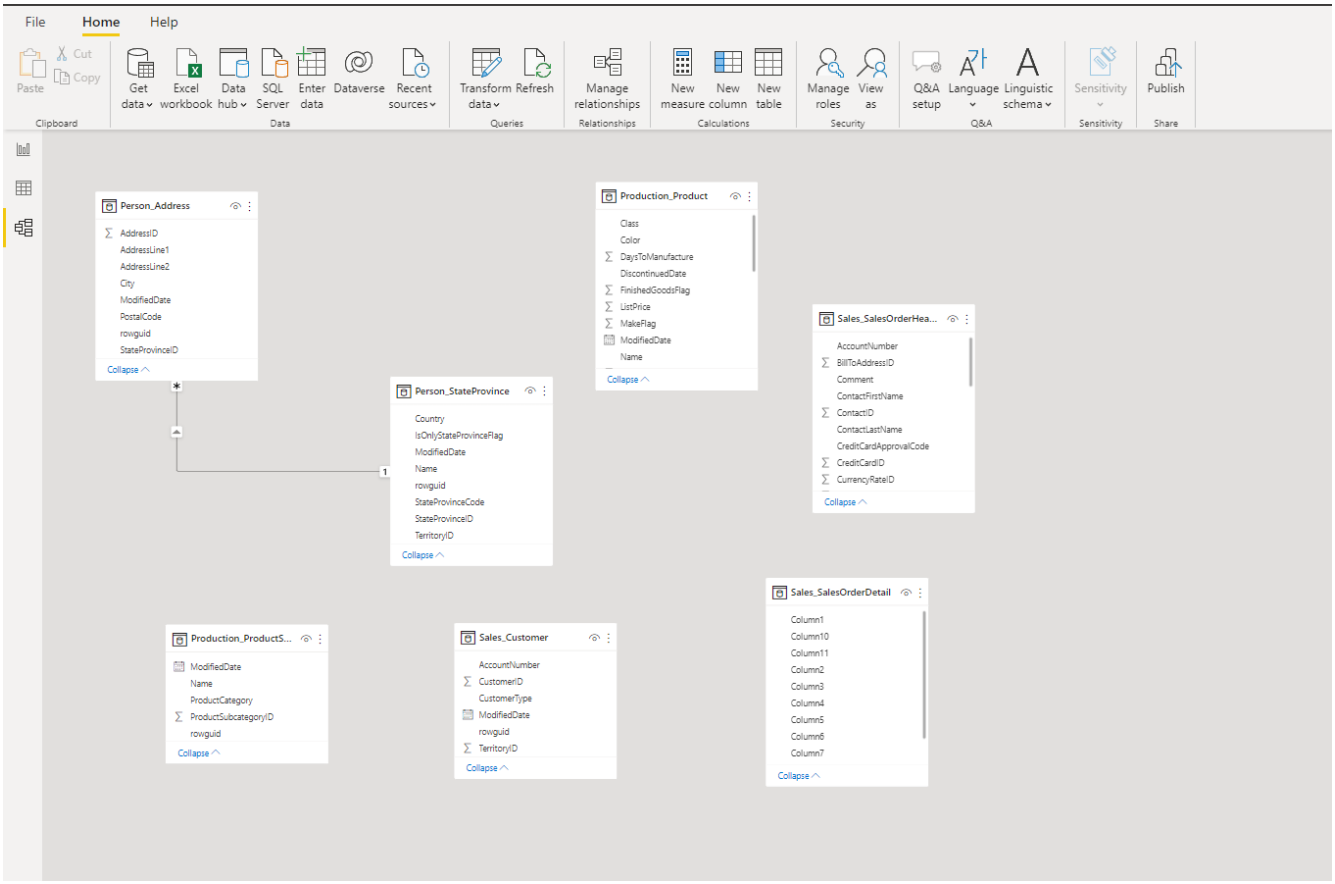


Maka hasilnya sebagai berikut.



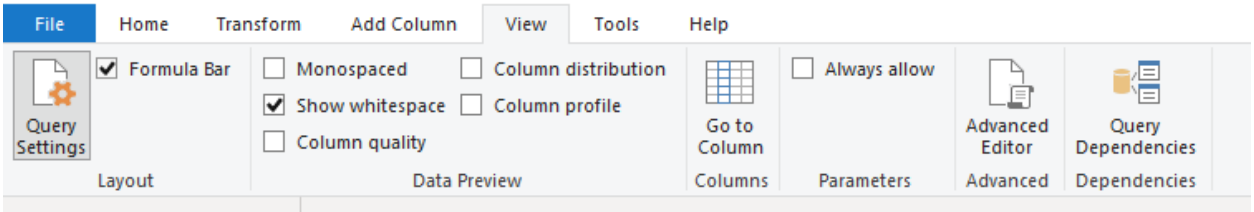
Profiling Data in Power BI: Examining Data Structures

Untuk melihat struktur data yang telah dibuat, pada Power BI Desktop, Select bagian Model. Maka kita bisa melihat struktur data yang telah dibuat dalam queries.

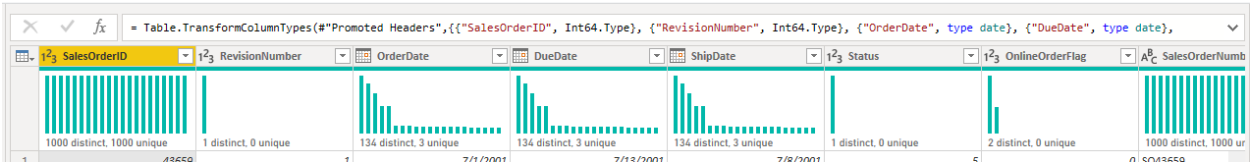


Profiling Data in Power BI: Finding Data Anomalies and Data Statistics

Pada bagian View, Select Column distribution. Column Distribution menampilkan distribusi data dalam kolom dan jumlah nilai yang berbeda dan unik, keduanya dapat memberi tahu Anda detailnya datanya diperhitungkan. Nilai yang berbeda adalah semua nilai dalam kolom, termasuk duplikat dan nilai nol, sedangkan nilai unik tidak menyertakan duplikat atau nol.

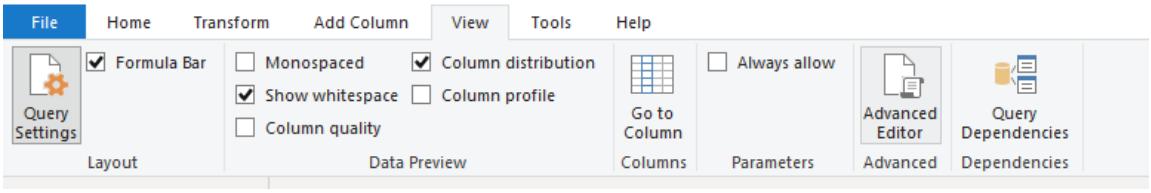


Hasilnya sebagai berikut.



Using Advanced Editor to Modify M Code

Pada bagian View, Select Advanced Editor.



Setiap kali Anda membentuk data di Power Query, Anda membuat langkah di proses Power Query. Langkah-langkah tersebut dapat disusun ulang, dihapus, dan dimodifikasi jika memungkinkan. Setiap langkah pembersihan yang anda buat kemungkinan besar dibuat dengan menggunakan antarmuka grafis, tetapi Power Query menggunakan bahasa M code di belakang layar. Langkah-langkah gabungan tersedia untuk dibaca dengan menggunakan Advanced Editor Power Query. Bahasa M selalu tersedia untuk dibaca dan memodifikasi secara langsung.