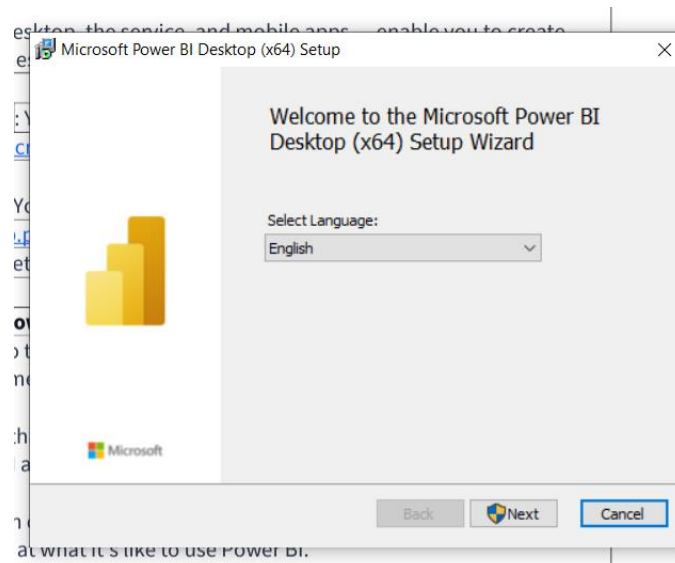


Nama : Dolok Malau

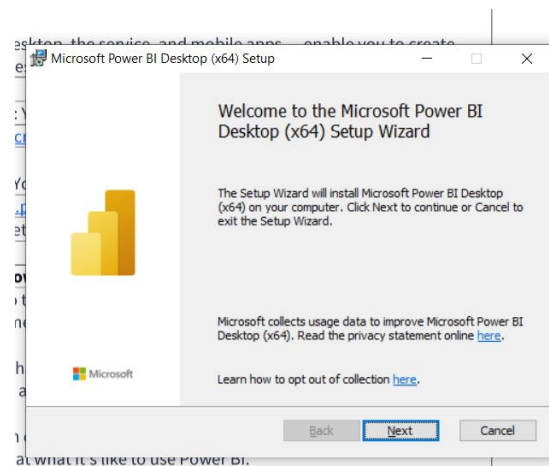
NIM : 191402114

Instalasi PowerBI

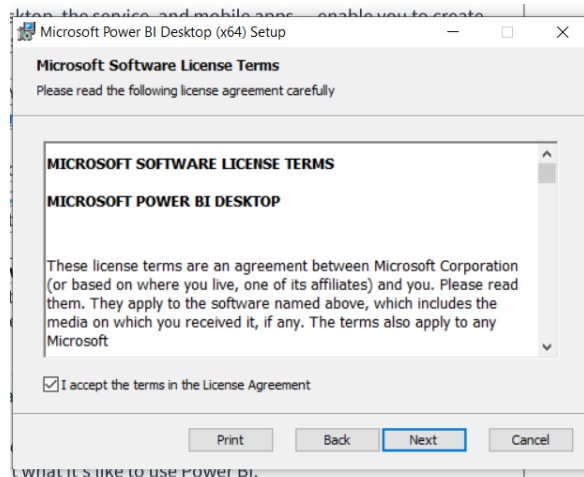
1. Unduh terlebih dahulu PowerBI Desktop



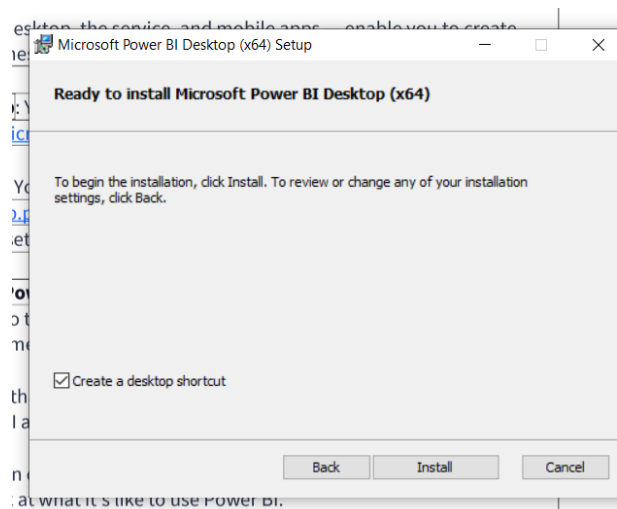
2. Kemudian buka file unduhan, dan klik next.



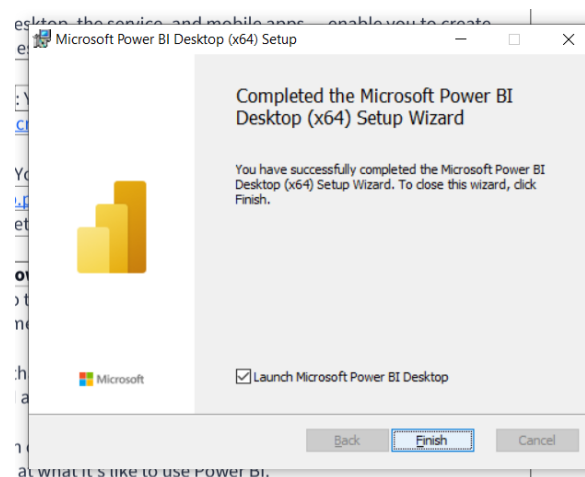
3. Kemudian klik next lagi.



4. Centang kotak pada bagian kiri bawah dan klik next



5. Setelah itu pilih lokasi penyimpanan software PowerBI dan klik next, lalu klik install.

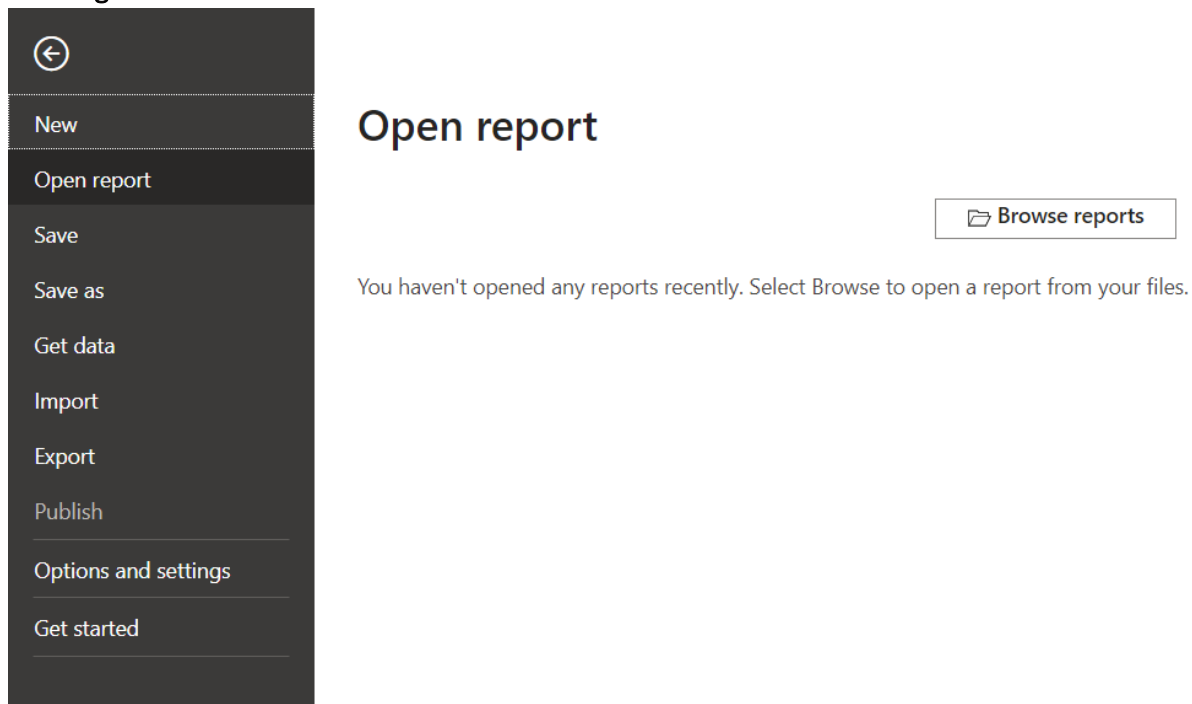


6. Jika instalasi sudah selesai, klik finish dan PowerBI akan terbuka.

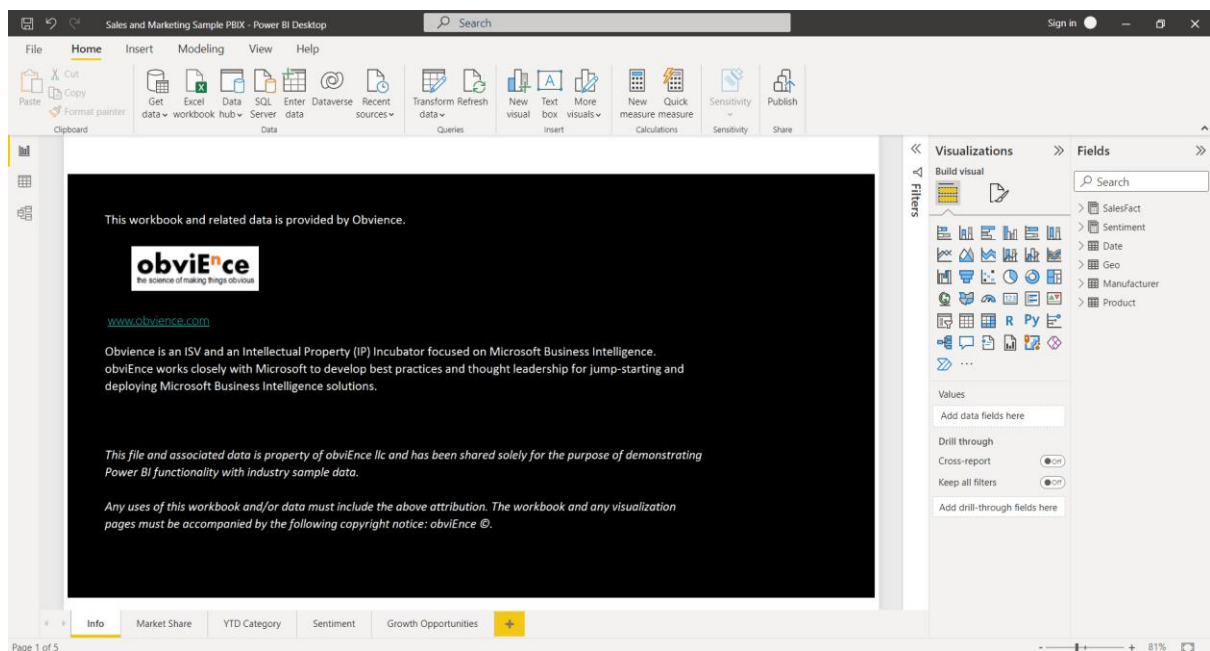
Instruction

Get Started Building with Power BI

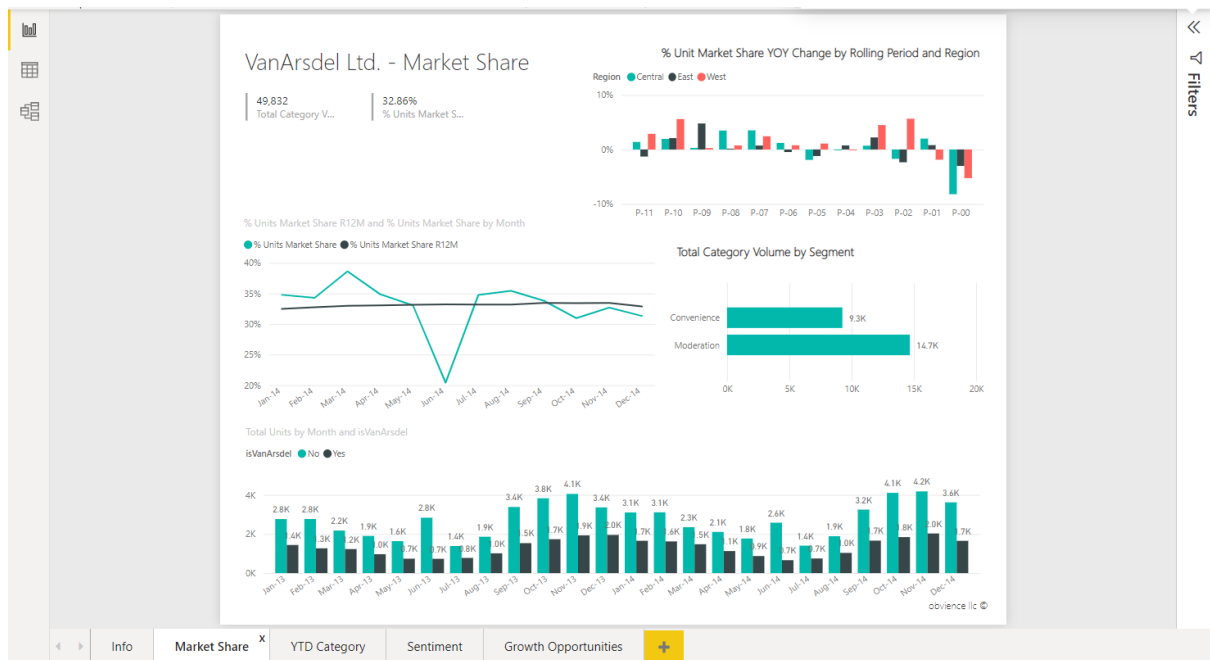
Building Blocks of Power BI: Visualizations



1. Pertama, klik **File > Browse reports**, lalu cari file yang akan digunakan.



2. Tampilannya akan seperti diatas, pastikan untuk memilih **Report** pada bagian kiri.



3. Pada bagian bawah, pilih **Market Share**.

Building Blocks of Power BI: Datasets

Date	MonthNo	MonthName	MonthID	Month	Quarter	Year	RunningMonths	Running Year	Running Months	Rolling Period	Rolling Period Sort	Monthindex
01/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
02/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
03/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
04/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
05/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
06/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
07/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
08/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
09/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
10/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
11/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
12/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
13/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
14/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
15/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
16/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
17/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
18/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
19/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
20/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
21/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
22/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
23/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
24/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
25/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
26/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
27/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7
28/07/1999 00:00:00	7	Jul	199907	Jul-99	Q3	1999	186	16				7

Table: Date (6,209 rows)

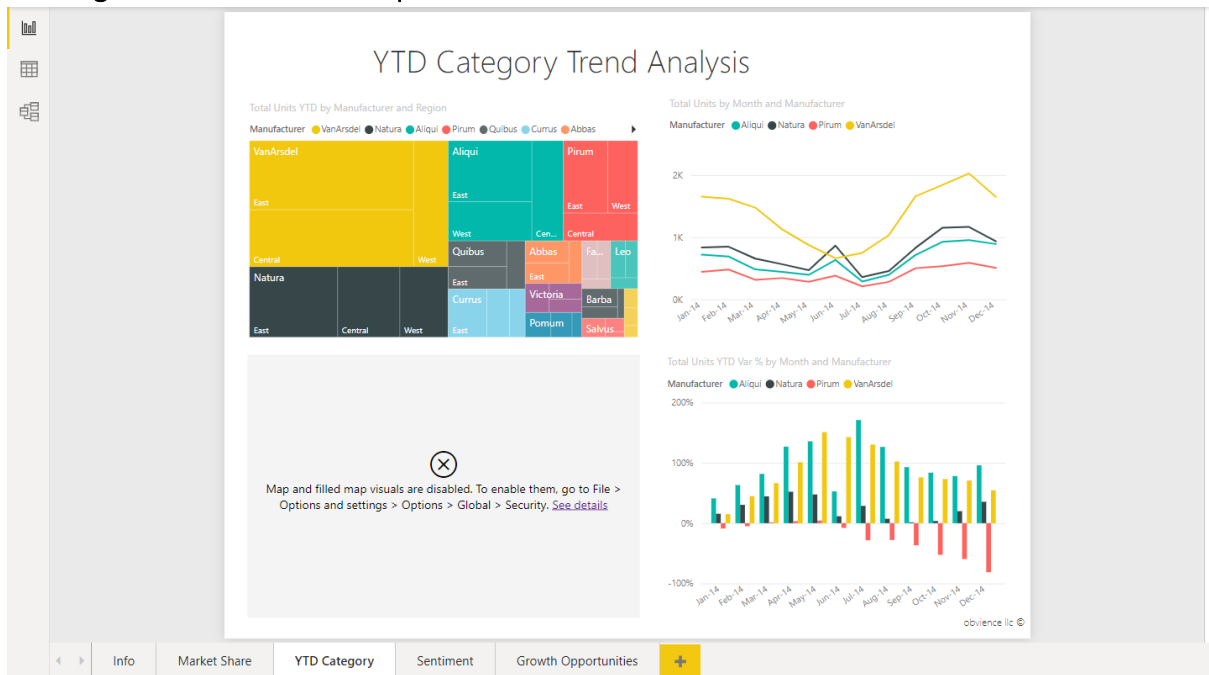
4. Pada bagian kiri, klik tombol **Data**, maka akan tampil seperti gambar diatas.

Manufacturer	Category	Segment	Product	ProductID	IsVanArsdel	IsCompeteHide	ManufacturerID	IsCompete
VanArsdel	Urban	Convenience	Maximus UC-01	536	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-02	537	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-03	538	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-04	539	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-05	540	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-06	541	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-07	542	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-08	543	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-09	544	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-10	545	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-11	546	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-12	547	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-13	548	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-14	549	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-15	550	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-16	551	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-17	552	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-18	553	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-19	554	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-20	555	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-21	556	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-22	557	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-23	558	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-24	559	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-25	560	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-26	561	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-27	562	Yes	N		7 No
VanArsdel	Urban	Convenience	Maximus UC-28	563	Yes	N		7 No

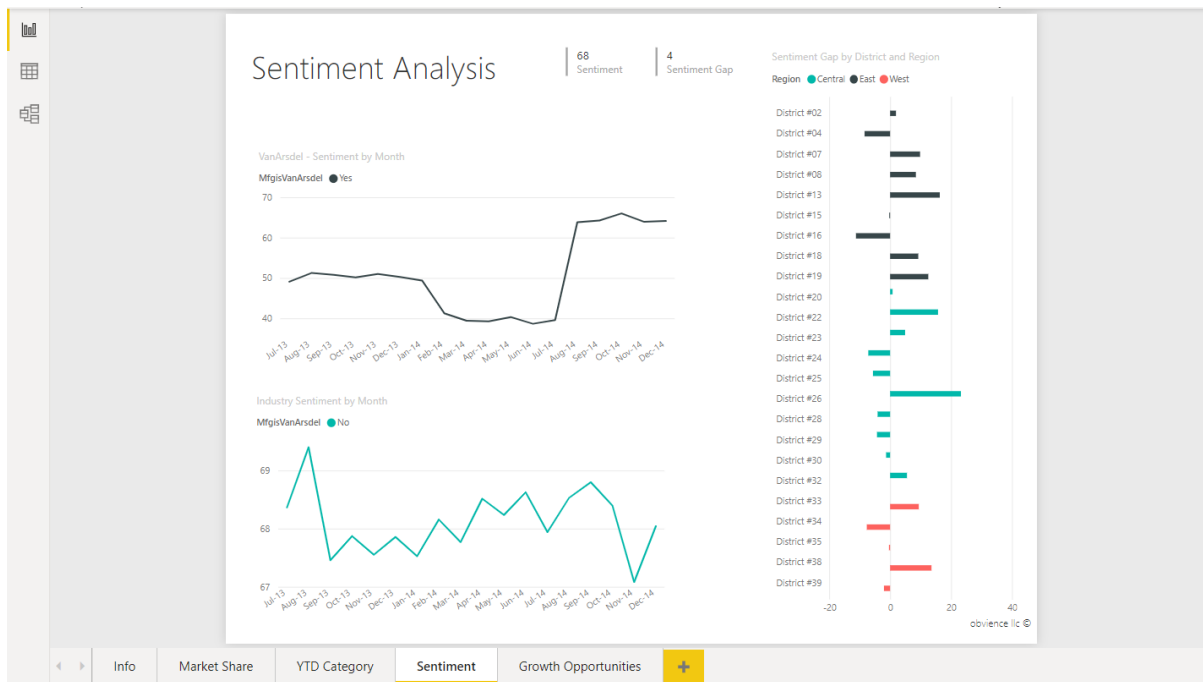
Table: Product (2,412 rows)

5. Pada bagian **Fields**, pilih label **Product**.

Building Blocks of Power BI: Reports & Dashboard and Tiles



1. Tampilan dari halaman YTD Category

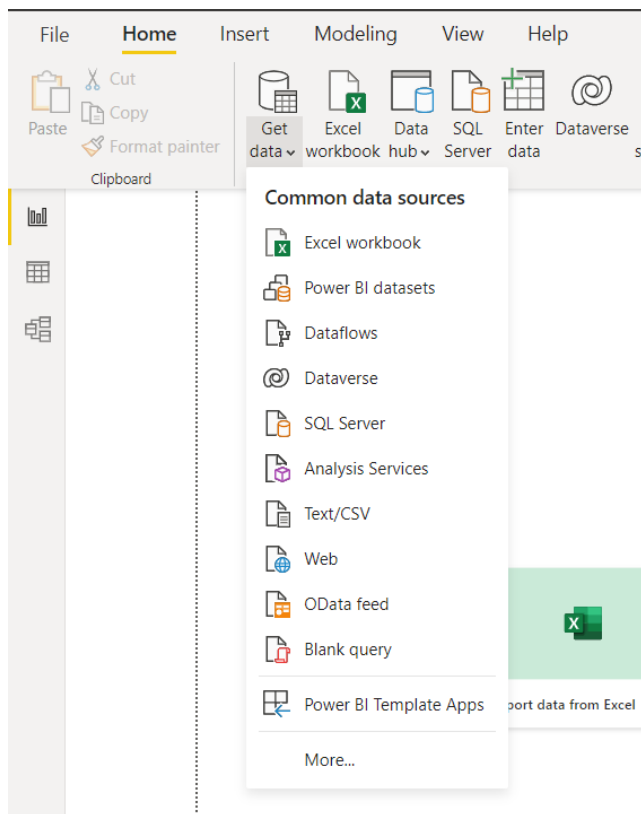


2. Tampilan dari halaman Sentiment



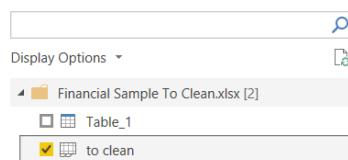
3. Tampilan dari halaman Growth Opportunities

Load, Clean, and Transform Data in Power BI – I
 Identify Column Headers and Names



1. Pada bagian home, klik **Get Data > Excel workbook**, kemudian pilih file **Financial Sample To Clean**

Navigator



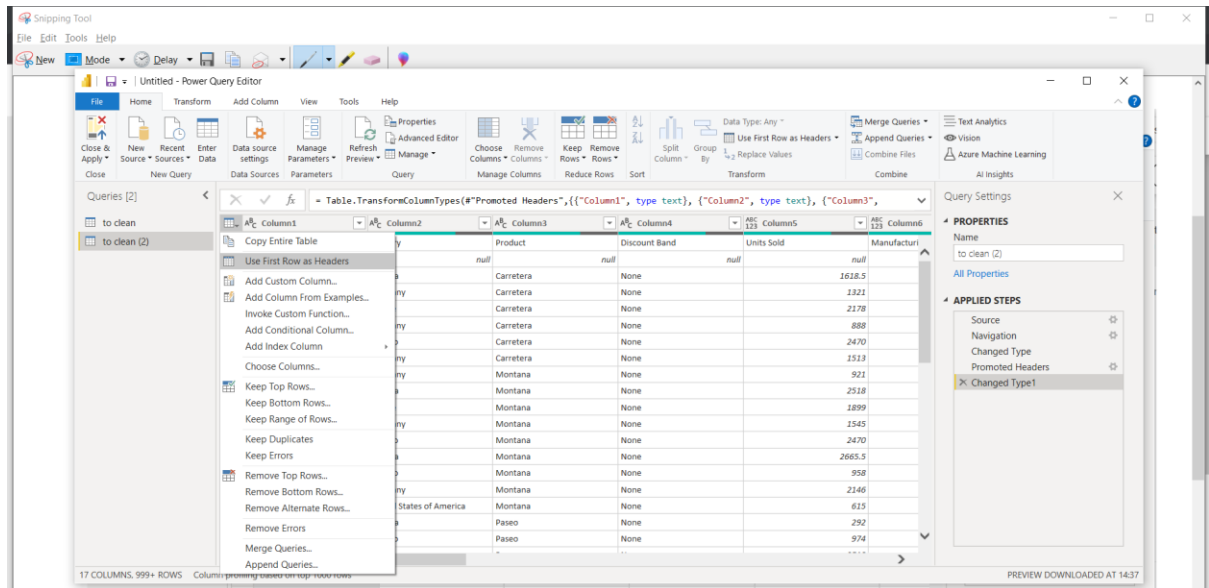
to clean

Column1	Column2	Column3	Column4	Column5
	null	null	null	null
Segment	Country	Product	Discount Band	
	null	null	null	null
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	
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	

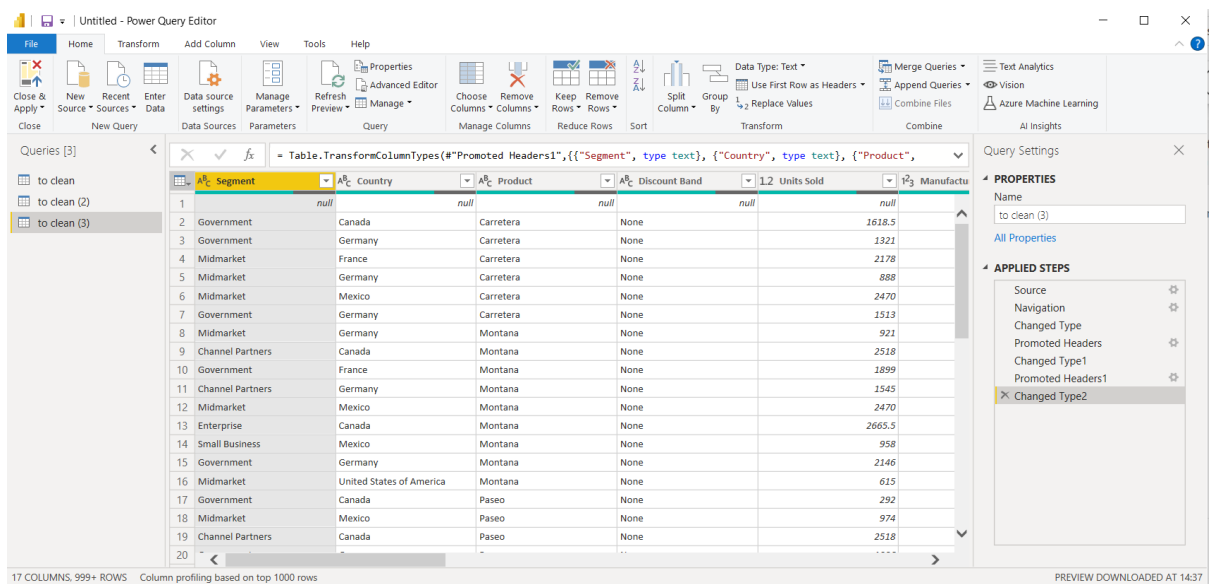
Load Transform Data Cancel

2. Centang sheet **to clean**, kemudian klik **Transform Data**.

Promote Headers



3. Klik ikon tabel dibagian kiri, kemudian klik tombol **Use First Row as Header**.



4. Sampai seperti pada gambar diatas, kemudian klik **Close & Apply**.

Rename Columns

fx = Table.TransformColumnTypes(#Promoted Headers1,{{"Segment", type text}, {"Country", type text}, {"Product", type text}, {"Month Info", type text}, {"Month Number", type text}, {"Month Name", type text}})

1.2	COGS	1.2	Profit	1.2	Month Info	1.2	Month Number	1.2	Month Name
null		null		null	Date			null	
32370		16185		16185	01/01/2014		1	January	
26420		13210		13210	01/01/2014		1	January	
32670		21780		10890	01/06/2014		6	June	
13320		8880		4440	01/06/2014		6	June	
37050		24700		12350	01/06/2014		6	June	
529550		393380		136170	01/12/2014		12	December	
13815		9210		4605	01/03/2014		3	March	
30216		7554		22662	01/06/2014		6	June	
37980		18990		18990	01/06/2014		6	June	
18540		4635		13905	01/06/2014		6	June	
37050		24700		12350	01/06/2014		6	June	
333187.5		319860		13327.5	01/07/2014		7	July	
287400		239500		47900	01/08/2014		8	August	
15022		10730		4292	01/09/2014		9	September	
9225		6150		3075	01/12/2014		12	December	
5840		2920		2920	01/02/2014		2	February	
14610		9740		4870	01/02/2014		2	February	
30216		7554		22662	01/06/2014		6	June	

filtering based on top 1000 rows

5. Klik dua kali pada kolom yang ingin diubah, lalu ubah nama kolomnya.
6. Pada bagian ini kita mengubah tabel **Month Info** dan **Column 16**.

Remove Rows or Columns

to clean - Power Query Editor

fx = Table.RenameColumns(#"Changed Type2",{{"Column16", "Month Info", "Column17", "Month Number", "Column18", "Month Name", "Column19", "Units Sold", "Column20", "Manufacturers"}}

1.2	Segment	Country	Product	1.2	Units Sold	1.2	Manufacturers
1	Government	Canada	Carretera		1618.5		
2	Government	Germany	Carretera		1321		
3	Government	France	Carretera		2178		
4	Midmarket	Germany	Carretera		888		
5	Midmarket	Mexico	Carretera		2470		
6	Midmarket	Germany	Carretera		1513		
7	Government	Germany	Montana		921		
8	Midmarket	Canada	Montana		2518		
9	Channel Partners	France	Montana		1899		
10	Government	Germany	Montana		1545		
11	Channel Partners	Mexico	Montana		2470		
12	Midmarket	Canada	Montana		2665.5		
13	Enterprise	Mexico	Montana		958		
14	Small Business	Germany	Montana		2146		
15	Government	United States of America	Montana		615		
16	Midmarket	Canada	Paseo		292		
17	Government	Mexico	Paseo		974		
18	Midmarket	Canada	Paseo		2518		
19	Channel Partners						
20							

17 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 14:37

7. Pertama klik **Remove Rows**, kemudian **Remove Top Rows**, lalu isi berapa jumlah baris yang ingin dihapus.

	Segment	Country	Product	Discount Band	Units Sold	Manufacture
1	Government	Canada	Carretera	None	1618.5	
2	Government	Germany	Carretera	None	1321	
3	Midmarket	France	Carretera	None	2178	
4	Midmarket	Germany	Carretera	None	888	
5	Midmarket	Mexico	Carretera	None	2470	
6	Government	Germany	Carretera	None	1513	
7	Midmarket	Germany	Montana	None	921	
8	Channel Partners	Canada	Montana	None	2518	
9	Government	France	Montana	None	1899	
10	Channel Partners	Germany	Montana	None	1545	
11	Midmarket	Mexico	Montana	None	2470	
12	Enterprise	Canada	Montana	None	2665.5	
13	Small Business	Mexico	Montana	None	958	
14	Government	Germany	Montana	None	2146	
15	Midmarket	United States of America	Montana	None	615	
16	Government	Canada	Paseo	None	292	
17	Midmarket	Mexico	Paseo	None	974	
18	Channel Partners	Canada	Paseo	None	2518	
19	Government	Germany	Paseo	None	1006	
20						

8. Hasilnya akan seperti diatas.

	Month Info	Month Number	Month Name	Year	Column12
1	16185	01/01/2014	1 January	2014	814028.68
2	13210	01/01/2014	1 January	2014	814028.68
3	10890	01/06/2014	6 June	2014	1473753.82
4	4440	01/06/2014	6 June	2014	1473753.82
5	12350	01/06/2014	6 June	2014	1473753.82
6	136170	01/12/2014	12 December	2014	2717329.98
7	4605	01/03/2014	3 March	2014	669866.87
8	22662	01/06/2014	6 June	2014	1473753.82
9	18990	01/06/2014	6 June	2014	1473753.82
10	13905	01/06/2014	6 June	2014	1473753.82
11	12350	01/06/2014	6 June	2014	1473753.82
12	13327.5	01/07/2014	7 July	2014	923865.68
13	47900	01/08/2014	8 August	2014	791066.42
14	4292	01/09/2014	9 September	2014	1786735.27
15	3075	01/12/2014	12 December	2014	2717329.98
16	2920	01/02/2014	2 February	2014	1148547.39
17	4870	01/02/2014	2 February	2014	1148547.39
18	22662	01/06/2014	6 June	2014	1473753.82
19	90540	01/06/2014	6 June	2014	1473753.82
20					

9. Untuk menghapus kolom, pertama-tama pilih dahulu kolom yang ingin dihapus, kemudian klik **Remove Columns > Remove Columns**.

Pivot Kolom

to clean - Power Query Editor

Queries [1]

to clean

AB Segment AB Country 1.2 Sales

1	Government	Canada	32370
2	Government	Germany	26420
3	Midmarket	France	32670
4	Midmarket	Germany	13320
5	Midmarket	Mexico	37050
6	Government	Germany	529550
7	Midmarket	Germany	13815
8	Channel Partners	Canada	30216
9	Government	France	37980
10	Channel Partners	Germany	18540
11	Midmarket	Mexico	37050
12	Enterprise	Canada	333187.5
13	Small Business	Mexico	287400
14	Government	Germany	15022
15	Midmarket	United States of America	9225
16	Government	Canada	5840
17	Midmarket	Mexico	14610
18	Channel Partners	Canada	30216
19	Government	Germany	352100
20	Channel Partners	Germany	4404

3 COLUMNS, 999 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 14:37

1. Hapus semua kolom kecuali, segment, country, dan sales; seperti gambar diatas.

to clean - Power Query Editor

Queries [1]

to clean

AB Segment AB Country 1.2 Sales

1	Government	Canada	32370
2	Government	Germany	26420
3	Midmarket	France	32670
4	Midmarket	Germany	13320
5	Midmarket	Mexico	37050
6	Government	Germany	529550
7	Midmarket	Germany	13815
8	Channel Partners	Canada	30216
9	Government	France	37980
10	Channel Partners	Germany	18540
11	Midmarket	Mexico	37050
12	Enterprise	Canada	333187.5
13	Small Business	Mexico	287400
14	Government	Germany	15022
15	Midmarket	United States of America	9225
16	Government	Canada	5840
17	Midmarket	Mexico	14610
18	Channel Partners	Canada	30216
19	Government	Germany	352100
20	Channel Partners	Germany	4404

3 COLUMNS, 700 ROWS Column profiling based on top 1000 rows

2. Kemudian pilih kolom **Country**, lalu masuk ke tab **Transform** > **Pivot Column**.

×

Values Column ⓘ

▼

[Learn more about Pivot Column](#)

Cancel

to clean - Power Query Editor

to clean - Power Query Editor

File Home Transform Add Column View Tools Help

Data Type: Decimal Number 1.2 Replace Values 1.2 Unpivot Columns 1.2 Split Column 1.2 Merge Columns 1.2 X 1.2 10² 1.2 Trigonometry 1.2

Group Use First Row as Headers 1.2 Reverse Rows 1.2 Detect Data Type 1.2 Fill 1.2 Extract 1.2 Statistics Standard Scientific 1.2 Rounding 1.2 Information 1.2

Count Rows 1.2 Rename 1.2 Pivot Column 1.2 Convert to List 1.2 Text Column 1.2 Number Column 1.2 Date & Time Column 1.2 Time 1.2 Duration 1.2 Run R script 1.2 Run Python script 1.2 Scripts 1.2

Table

Queries [1]

to clean

Table.Pivot(*Removed Bottom Rows1, List.Distinct(*Removed Bottom Rows1[Country]), "Country", "Sales", List.Sum)

Segment	1.2 Canada	1.2 Germany	1.2 France	1.2 Mexico	1.2 United States of America
1 Channel Partners	491164.14	336425.88	372090.36	234379.08	366534.18
2 Enterprise	3967491.25	4086826.25	3890890.625	3315881.25	4350605
3 Government	10741236.52	11452895.94	12127782.72	9791599.38	8390746.11
4 Midmarket	510213.975	801344.75	593802.075	511136.4	465385.875
5 Small Business	9177549	7327848	7369608.5	7096356	11456559

Query Settings

PROPERTIES

Name

to clean

APPLIED STEPS

- Source
- Navigation
- Changed Type
- Promoted Headers
- Changed Type1
- Promoted Headers1
- Changed Type2
- Renamed Columns
- Removed Top Rows
- Removed Columns
- Removed Bottom Rows
- Removed Bottom Rows1
- Pivoted Column

pivot Kolom

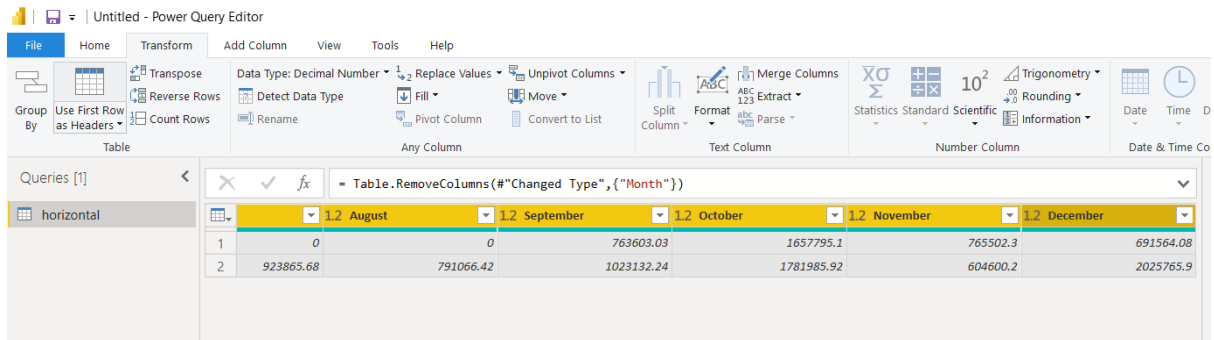
□ △

horizontal

Month	January	February	March	April	May
2013	0	0	0	0	0
2014	814028.68	1148547.39	669866.87	929984.57	828640.00

Cancel

1. Buka PowerBI yang baru, kemudian buka file **Financial Sample Aggregate**, pilih horizontal data dan klik **Transform Data**.



Power Query Editor - Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Group By Use First Row as Headers Count Rows

Table

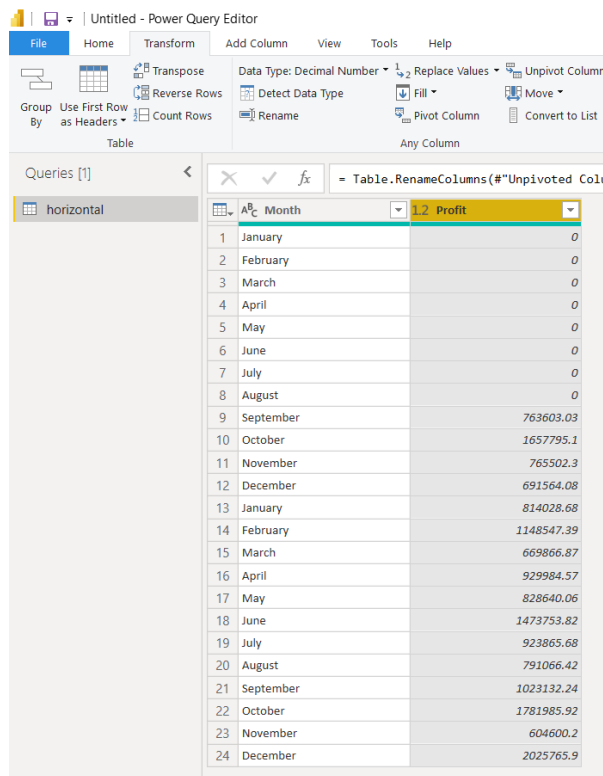
Queries [1]

horizontal

Table.RemoveColumns("#Changed Type",{"Month"})

	1.2 August	1.2 September	1.2 October	1.2 November	1.2 December
1	0	0	763603.03	1657795.1	765502.3
2	923865.68	791066.42	1023132.24	1781985.92	604600.2

2. Hapus kolom **Month**, lalu pilih kolom januari-desember, lalu klik masuk ke tab **Transform > Unpivot Column**.



Power Query Editor - Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Group By Use First Row as Headers Count Rows

Table

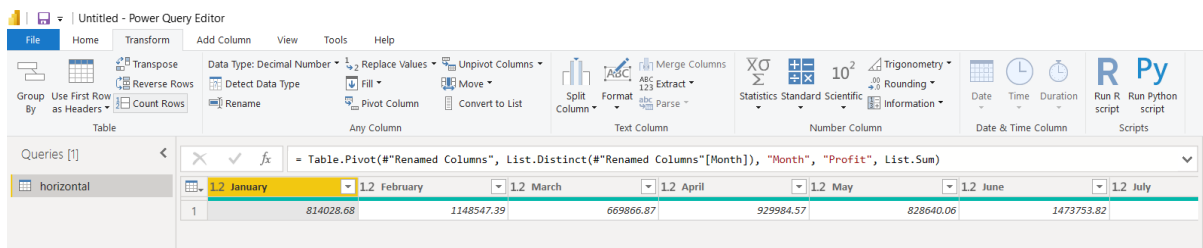
Queries [1]

horizontal

Table.RenameColumns("#Unpivoted Columns",{"Month", "Profit"})

	Month	Profit
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

3. Hasilnya akan seperti ini, ubah header seperti pada gambar diatas, kemudian **pivot** kembali tabel untuk mendapatkan rata-rata profit perbulan.



Power Query Editor - Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Group By Use First Row as Headers Count Rows

Table

Queries [1]

horizontal

Table.Pivot("#Renamed Columns", List.Distinct("#Renamed Columns"[Month]), "Month", "Profit", List.Sum)

	1.2 January	1.2 February	1.2 March	1.2 April	1.2 May	1.2 June	1.2 July
1	814028.68	1148547.39	669866.87	929984.57	828640.06	1473753.82	

4. Hasilnya akan seperti pada gambar diatas.

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

Simplify the Data Structure

Navigator

The screenshot shows the Power BI Navigator window. On the left, under 'Display Options', the 'Finance Sample' table is selected. On the right, a preview of the 'Finance Sample' table is shown with columns: Segment, Country, Product, Discount Band, and Unit. The table contains 20 rows of data. At the bottom right, there are buttons for 'Load', 'Transform Data', and 'Cancel'.

Segment	Country	Product	Discount Band	Unit
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	

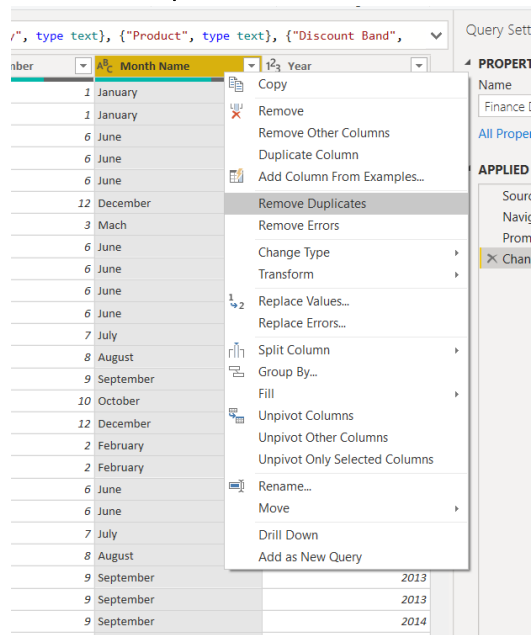
1. Buka PowerBI baru dan buka file **Financial Sample With Faults** pilih finance sample, lalu klik transform data.

The screenshot shows the Power BI Query Editor. The 'Queries [1]' pane on the left shows 'Finance Data' selected. The main area displays a table with columns 'Segment' and 'Country'. The formula bar at the top shows '= Table.TransformColumnNames'. The table contains the following data:

	Segment	Country
1	Government	Canada
2	Government	Germany
3	Midmarket	France
4	Midmarket	Germany

2. Ubah nama queri seperti gambar diatas.

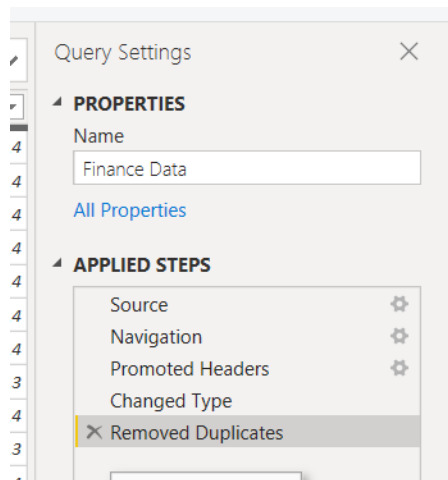
Simplify the Data Structure: Remove Duplicates



3. Pada tabel **Month Name**, klik kanan lalu klik **Remove Duplicate**

Month Name
January
June
December
Mach
July
August
September
October
February
November
March
April
May

4. Perhatikan nama bulan yang salah seperti **Mach**.



5. Jika sudah ketemu, pada bagian kiri klik **Removed Duplicates**, untuk mengembalikan data seperti semula.

Simplify the Data Structure: Replace Values

	1.2 COGS	1.2 Profit	Date	1.3 Month Number	1.4 Month Name	1.5 Year
1	32370	16185	01/01/2014	1	January	20
2	26420	13210	01/01/2014	1	January	20
3	32670	21780	01/06/2014	6	June	20
4	13320	8880	01/06/2014	6	June	20
5	37050	24700	01/06/2014	6	June	20
6	529550	393380	01/12/2014	12	December	20
7	13815	9210	01/03/2014	3	Mach	20
8	30216	7554	01/06/2014	6	June	20
9	37980	18990	01/06/2014	6	June	20
10	18540	4635	01/06/2014	6	June	20
11	37050	24700	01/06/2014	6	June	20
12	333187.5	319860	01/07/2014	7	July	20
13	287400	239500	01/08/2014	8	August	20
14	15022	10730	01/09/2014	9	September	20
15	43125	41400	01/10/2013	10	October	20
16	9225	6140	01/12/2014	12	December	20

6. Disini kita akan mengubah value nama bulan yang salah, pertama-tama pilih kolom **Month Name**, lalu buka tab **Transform > Replace Value**.

Replace Values

Replace one value with another in the selected columns.

Value To Find

Replace With

> Advanced options

7. Kemudian isi nama bulan yang salah, kemudian isi nama bulan yang seharusnya, lalu klik **OK**.



8. Hasilnya akan seperti ini

= Table.ReplaceValue("#Replaced Value",null,"Unknown",Replacer.ReplaceValue,{"Month Name"})							
	1.2 COGS	1.2 Profit	Date	1.2 Month Number	1.2 Month Name	1.2 Year	
697	139230	136500	2730	01/10/2014	10 October	20	
698	8139.6	6840	1299.6	01/02/2014	2 February	20	
699	4301.85	3615	686.85	01/04/2014	4 April	20	
700	18421.2	5418	13003.2	01/05/2014	5 May	20	
701	null	null	null	null	null Unknown	n	
702	null	null	null	null	null Unknown	n	
703	null	null	null	null	null Unknown	n	
704	null	null	null	null	null Unknown	n	
705	null	null	null	null	null Unknown	n	
706	null	null	null	null	null Unknown	n	

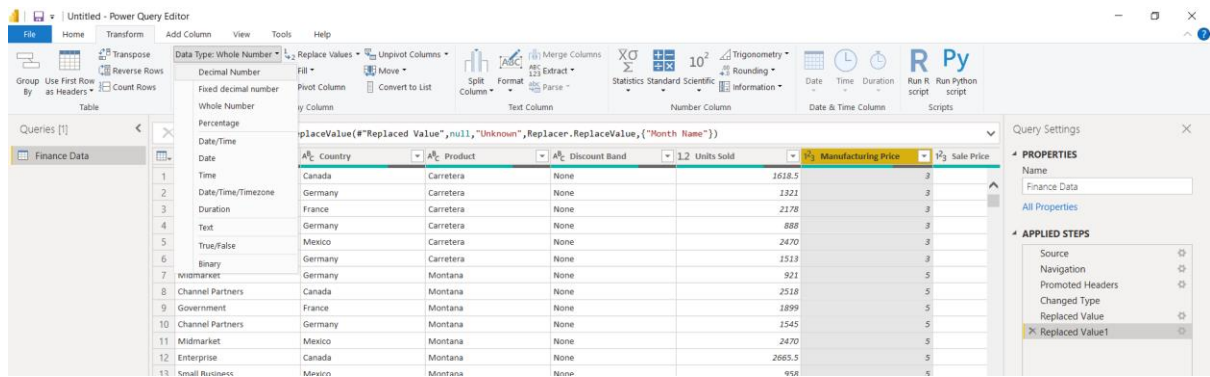
9. Kemudian ubah baris dengan nilai **NULL** menjadi **UNKNOWN** pada kolom **Month Name**, seperti gambar diatas.

Best Practices for Naming Tables, Columns, and Values

10. Ubah nama header kolom yang dirasa akan lebih baik dari nama sebelumnya.

Evaluate and Change Column Data Types

11. Mengubah tipe data Manufacturing Price dan Sale Price menjadi **decimal number**.



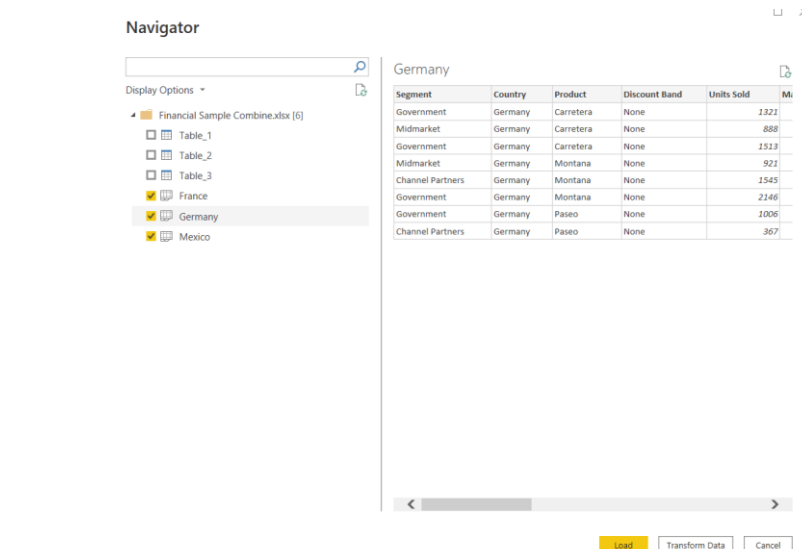
12. Pertama-tama pilih kolom yang ingin diubah tipe datanya, lalu masuk ke tab **transform > data type** lalu pilih tipe data yang diinginkan.

laced Value1",{"Manufacturing Price", type number}, {"Sale Price", type number}})

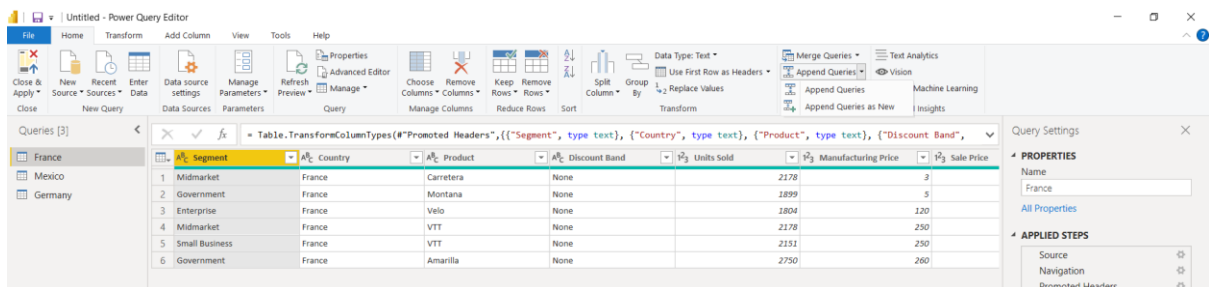
	1.2 Manufacturing Price	1.2 Sale Price	1.2 Gross Sales	1.2 Discou
8.5	3	20	32370	
121	3	20	26420	
178	3	15	32670	
388	3	15	13320	
170	3	15	37050	
113	3	350	529550	
121	5	15	13815	
118	5	12	30216	
399	5	20	37980	
145	5	12	18540	
170	5	15	37050	

13. Hasilnya akan seperti gambar diatas.

Load, Clean, and Transform Data in Power BI - III
Combine Tables by Appending Queries



1. Buka PowerBI baru dan buka file **Finance Sample Combine**, kemudian pilih tabel France, Germany, dan Mexico lalu klik transform data.



2. Pada bagian queries, pilih France dan kemudian buka tab transform > append queries, klik dropdown dan pilih **append queries as new**.

Append

Concatenate rows from two tables into a single table.

☒ Two tables ☐ Three or more tables

First table

France

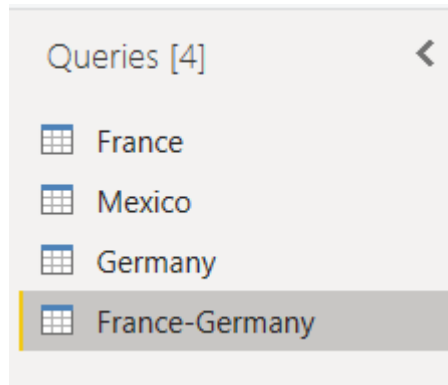
Second table

Germany

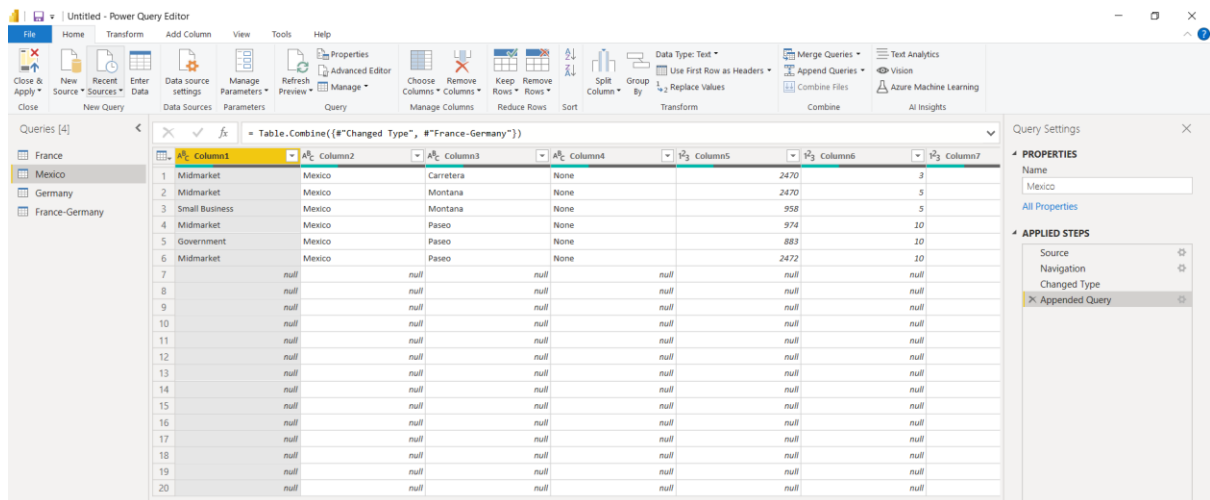
OK

Cancel

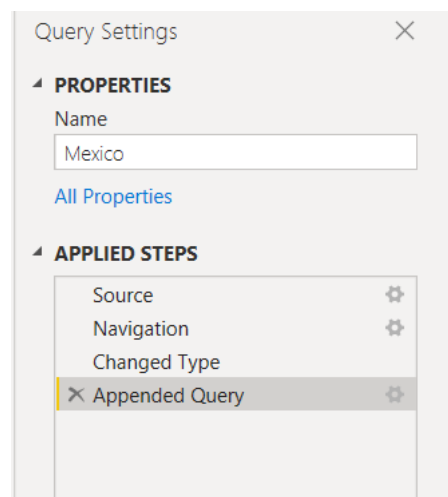
3. Tabel pertama adalah France dan kedua adalah Germany, lalu klik **OK**.



4. Beri nama queri yang baru dibuat seperti diatas.

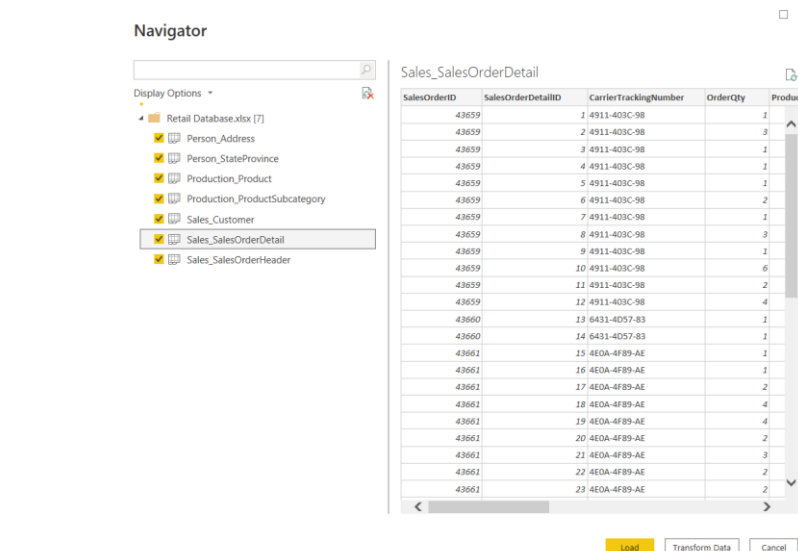


5. Kemudian append tabel Mexico dan France-Germany secara sementara, hasilnya akan seperti diatas.

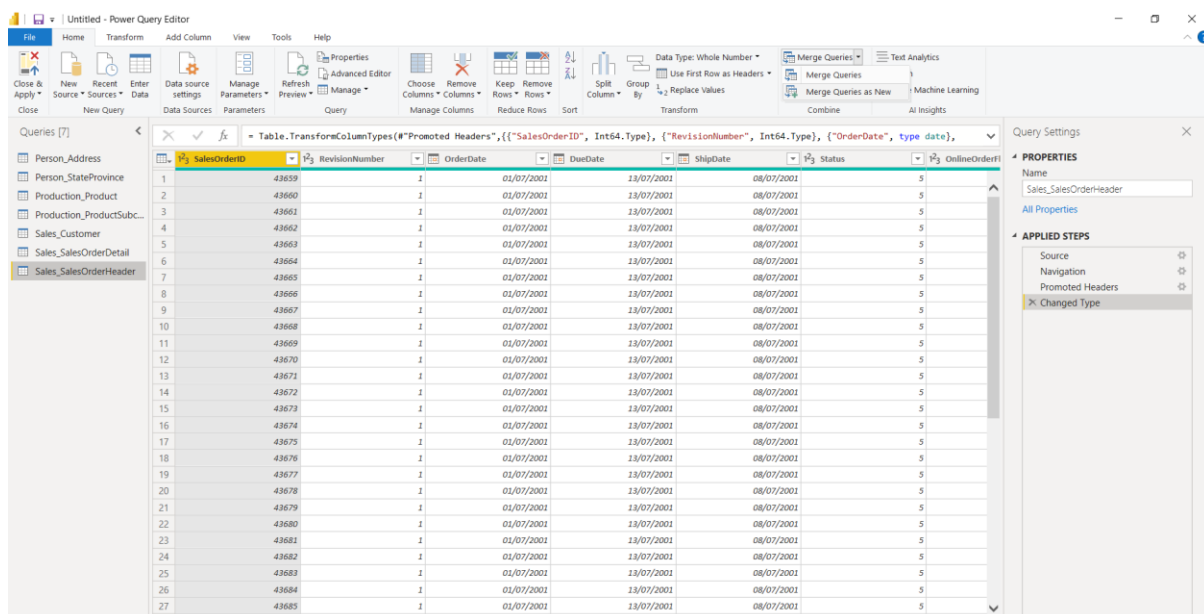


6. Kemudian hapus lagi, dengan cara menghapus **Appended Query** pada bagian kanan.

Combine Tables by Merging Queries



7. Buka PowerBI baru, lalu buka file Retail Database dan pilih semua tabel lalu klik **transform data**.



8. Kemudian pilih queri **Sales_SalesOrderHeader**, lalu buka tab Transform > Merge Queries, kemudian klik tombol dropdown dan klik Merge Queries as New.

Merge

Select tables and matching columns to create a merged table.

Sales_SalesOrderHeader

	SalesOrderNumber	PurchaseOrderNumber	AccountNumber	CustomerID	ContactID	SalesPersonID
0	SO43659	PO522145787	10-4020-000676	676	378	279
0	SO43660	PO18850127500	10-4020-000117	117	216	279
0	SO43661	PO18473189620	10-4020-000442	442	281	282
0	SO43662	PO18444174044	10-4020-000227	227	564	282

Sales_Customer

CustomerID	TerritoryID	AccountNumber	CustomerType	rowguid	Modi
1	1	AW00000001	S	{3F5AE95E-B87D-4AED-95B4-C3797AFCB74F}	13/10/
2	1	AW00000002	S	{E552F657-A9AF-4A7D-A645-C429D6E02491}	13/10/
3	4	AW00000003	S	{130774B1-DB21-4EF3-98C8-C104BCD6ED6D}	13/10/
4	4	AW00000004	S	{FF862851-1DAA-4044-BE7C-3E85583C054D}	13/10/

Join Kind

Inner (only matching rows)

☐ Use fuzzy matching to perform the merge

> Fuzzy matching options

✓ The selection matches 5199 of 5199 rows from the first table, and 4173 of...

OK

Cancel

- Kemudian pada bagian bawah pilih **Sales_Customer**, lalu pada masing-masing query pilih tabel **CustomerID** lalu pilih **Inner JOIN**, jika dipaling bawah jumlah matches sudah sesuai, maka klik **OK**.

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Choose Columns Remove Columns Keep Rows Remove Rows Sort Split Column Group By Data Type: Whole Number Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Text Analytics Vision Azure Machine Learning

Queries [8]

Person_Address
Person_StateProvince
Production_Product
Production_ProductSubc...
Sales_Customer
Sales_SalesOrderDetail
Sales_SalesOrderHeader
Merge1

Table.NestedJoin(Sales_SalesOrderHeader, {"CustomerID"}, Sales_Customer, {"CustomerID"}, "Sales_Customer", JoinKind.Inner)

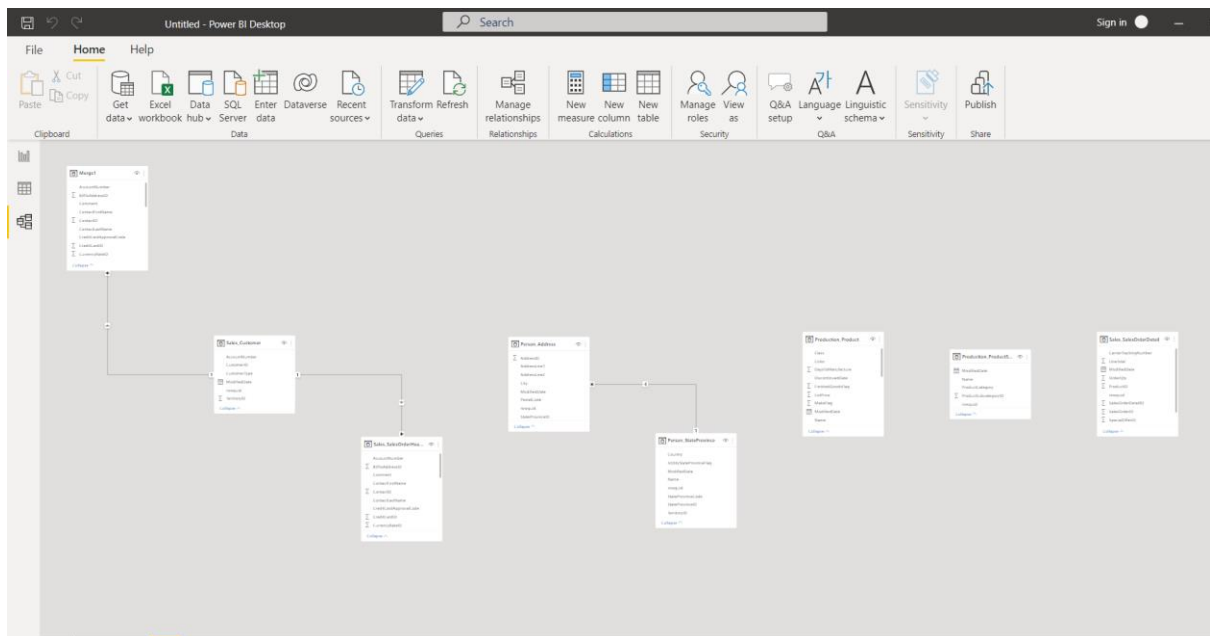
	SalesOrderID	RevisionNumber	OrderDate	DueDate	ShipDate	Status	OnlineOrderFI
1	43659	1	01/07/2001	13/07/2001	08/07/2001	5	
2	44305	1	01/10/2001	13/10/2001	08/10/2001	5	
3	45061	1	01/01/2002	13/01/2002	08/01/2002	5	
4	45779	1	01/04/2002	13/04/2002	08/04/2002	5	
5	46604	1	01/07/2002	13/07/2002	08/07/2002	5	
6	47693	1	01/10/2002	13/10/2002	08/10/2002	5	
7	48730	1	01/01/2003	13/01/2003	08/01/2003	5	
8	43860	1	01/08/2001	13/08/2001	08/08/2001	5	
9	44501	1	01/11/2001	13/11/2001	08/11/2001	5	
10	45283	1	01/02/2002	13/02/2002	08/02/2002	5	
11	46042	1	01/05/2002	13/05/2002	08/05/2002	5	
12	43660	1	01/07/2001	13/07/2001	08/07/2001	5	
13	47660	1	01/10/2002	13/10/2002	08/10/2002	5	
14	46976	1	01/08/2002	13/08/2002	08/08/2002	5	
15	47997	1	01/11/2002	13/11/2002	08/11/2002	5	
16	43661	1	01/07/2001	13/07/2001	08/07/2001	5	
17	44282	1	01/10/2001	13/10/2001	08/10/2001	5	
18	45038	1	01/01/2002	13/01/2002	08/01/2002	5	
19	45780	1	01/04/2002	13/04/2002	08/04/2002	5	
20	46608	1	01/07/2002	13/07/2002	08/07/2002	5	
21	47662	1	01/10/2002	13/10/2002	08/10/2002	5	
22	48754	1	01/01/2003	13/01/2003	08/01/2003	5	
23	44124	1	01/09/2001	13/09/2001	08/09/2001	5	
24	44791	1	01/12/2001	13/12/2001	08/12/2001	5	
25	45568	1	01/03/2002	13/03/2002	08/03/2002	5	
26	46377	1	01/06/2002	13/06/2002	08/06/2002	5	
27	47439	1	01/09/2002	13/09/2002	08/09/2002	5	
28	48378	1	01/12/2002	13/12/2002	08/12/2002	5	

30 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

10. Hasilnya akan seperti gambar diatas.

Profiling Data in Power BI: Examining Data Structures

11. Klik tombol **Close & Apply** pada bagian kanan atas.

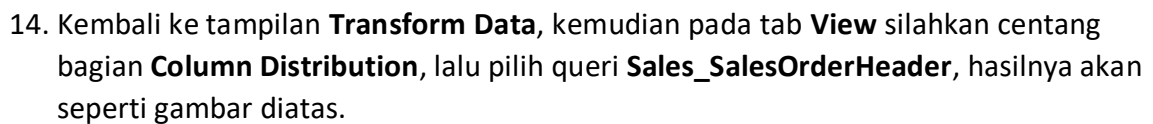


12. Pada bagian kiri, pilih **Model** maka akan ditampilkan relasi pada tiap-tiap sheets.

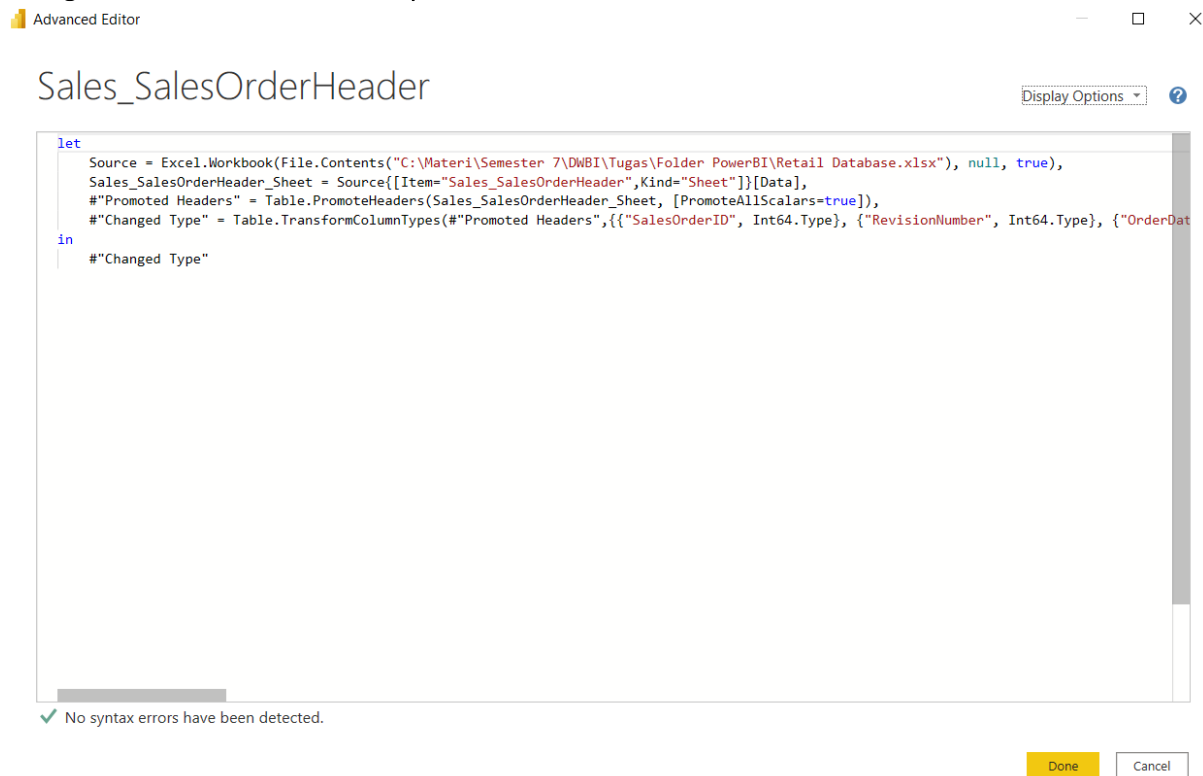
\wedge

Close

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



Using Advanced Editor to Modify M Code



15. Pada tab **View** buka **Advanced Editor**. Maka akan tampil seperti gambar diatas.