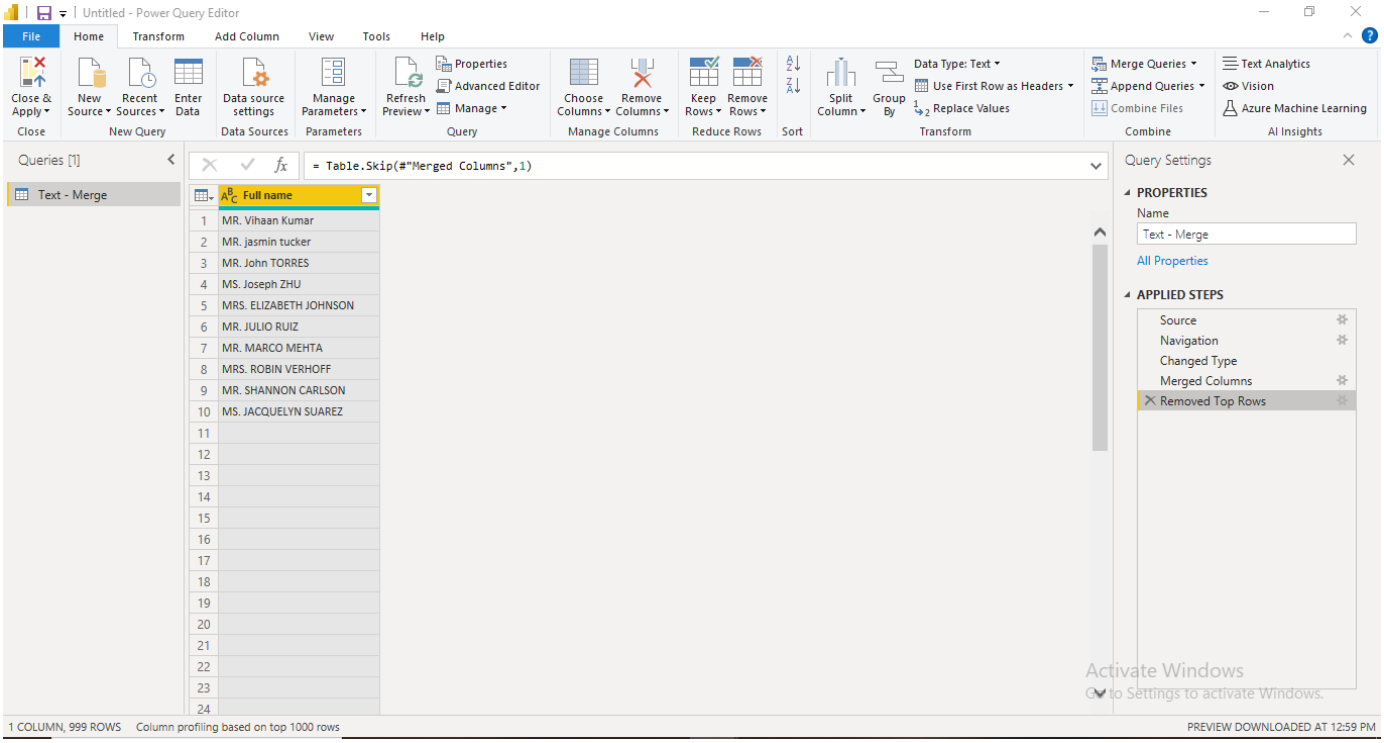
POWER QUERY WRAP UP

TEXT FUNCTIONS IN POWER BI (POWER QUERY)

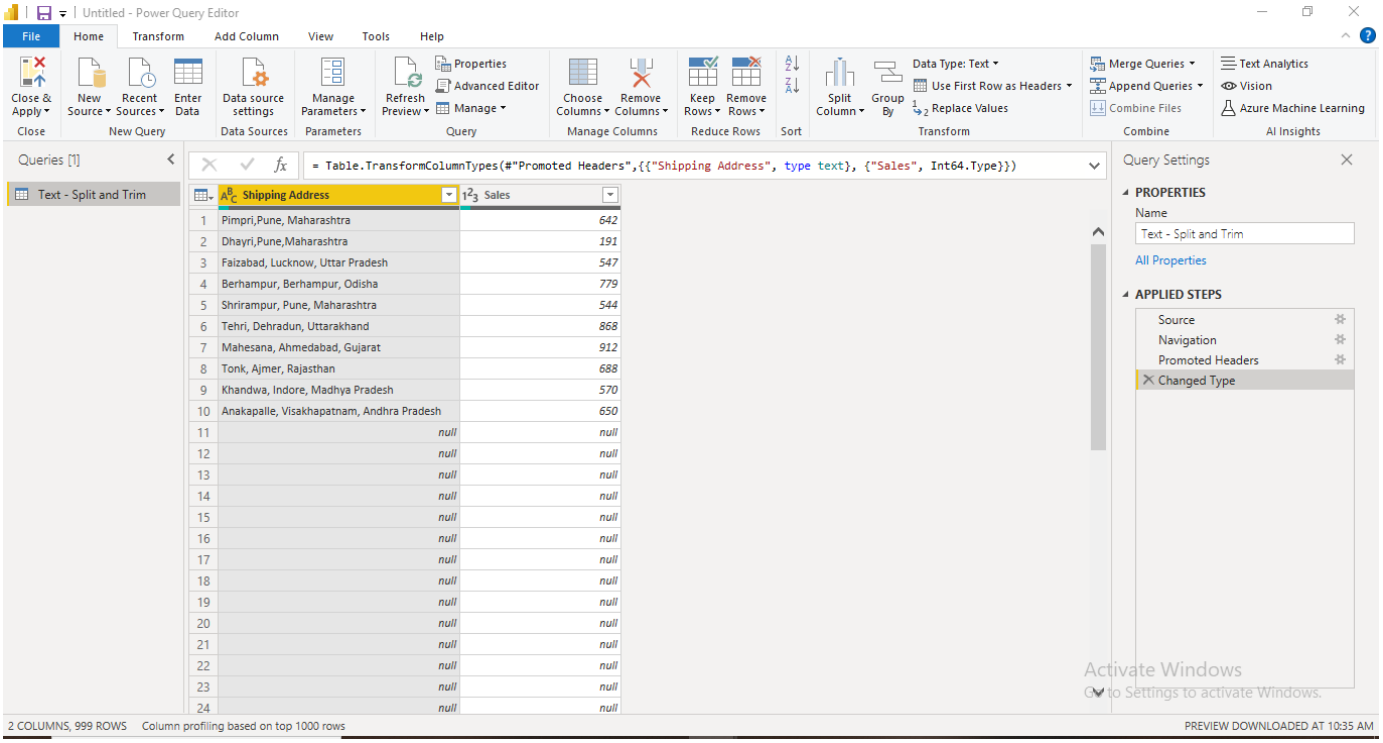
1. Merge columns

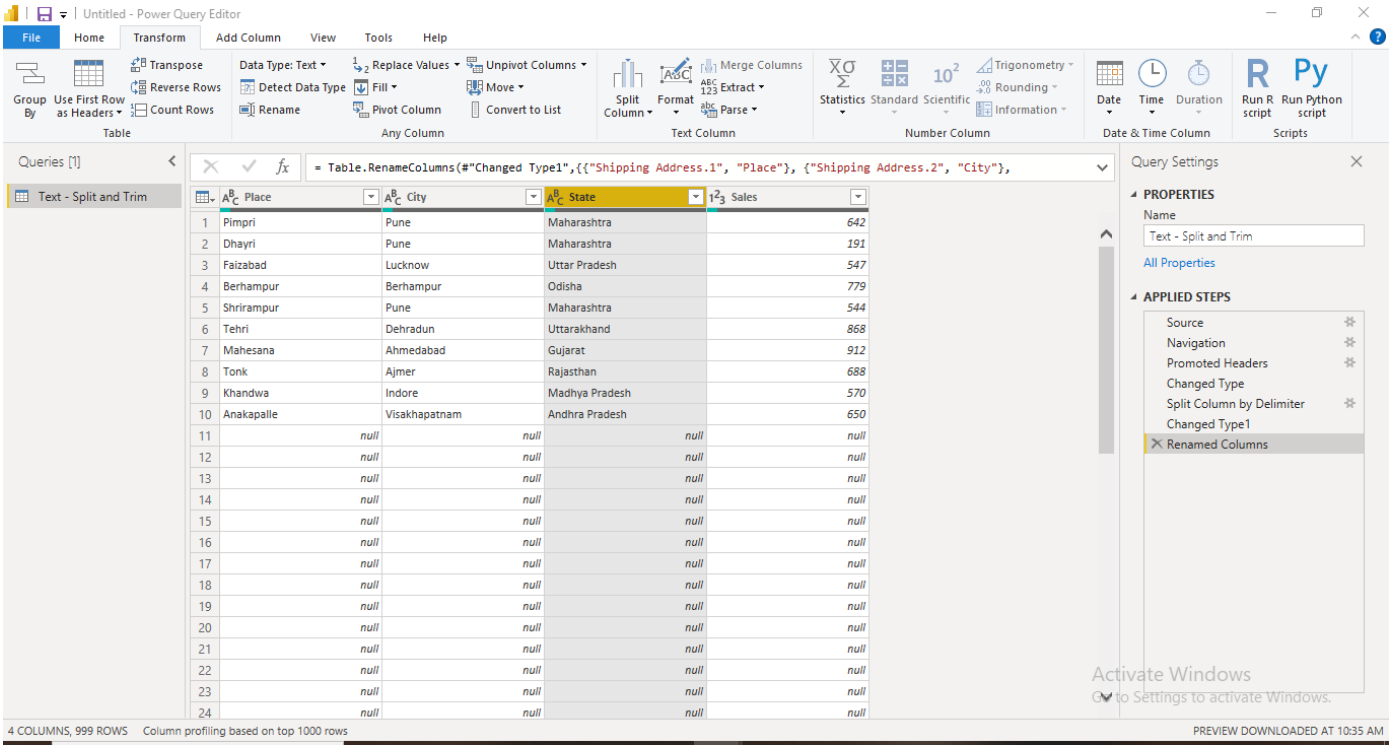
I extracted the data from excel file in Power Bi and chose to transform it before loading. Since there were three different columns: Prefix, First Name, and Last Name, I merged them all into one as Full name. I also removed the first row because it was the headers of the previous data i.e., it said Prefix FirstName LastName.



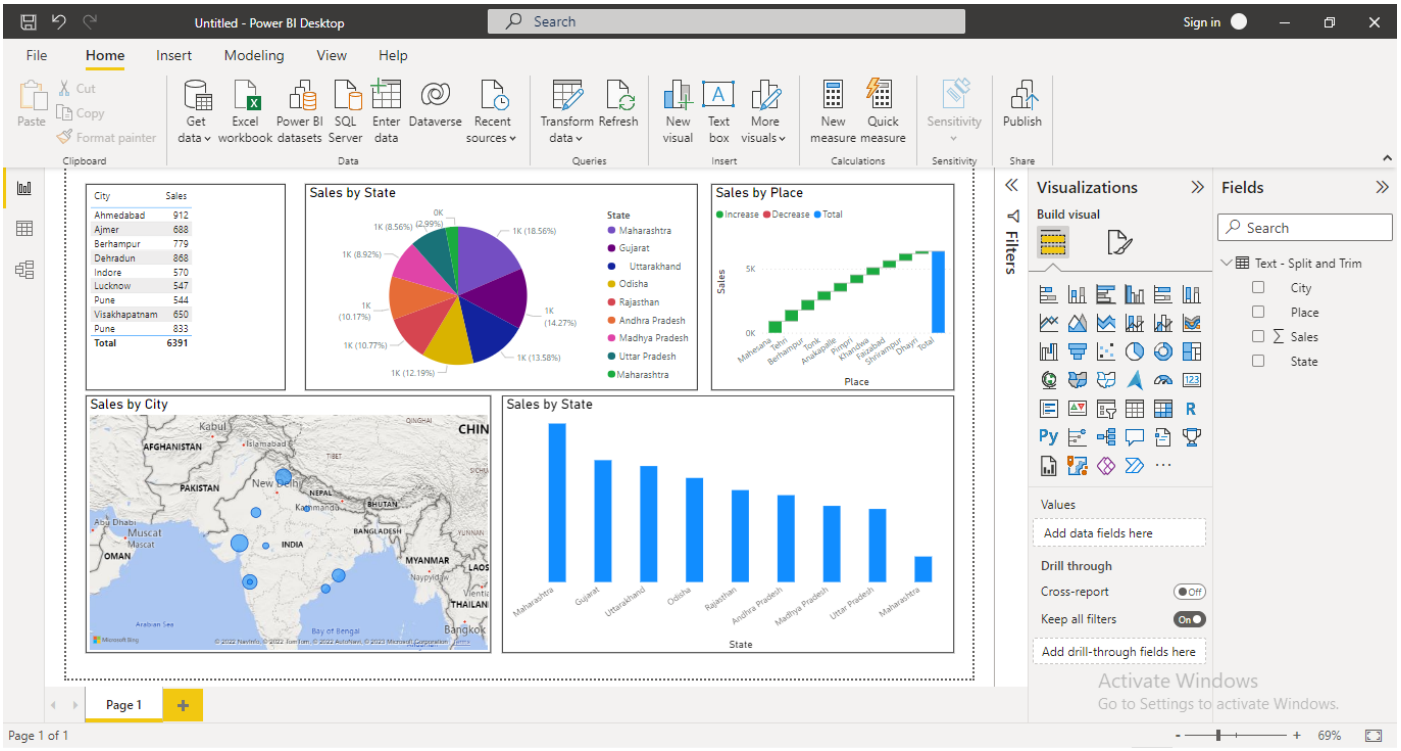
2. Split & Trim Text in Power BI

In our data, column A – Shipping address has messy data. For instance city, state, and place are all merged together but I want to split them all. Also, some rows even have emoty spaces or white spaces, so we need to transform our data.



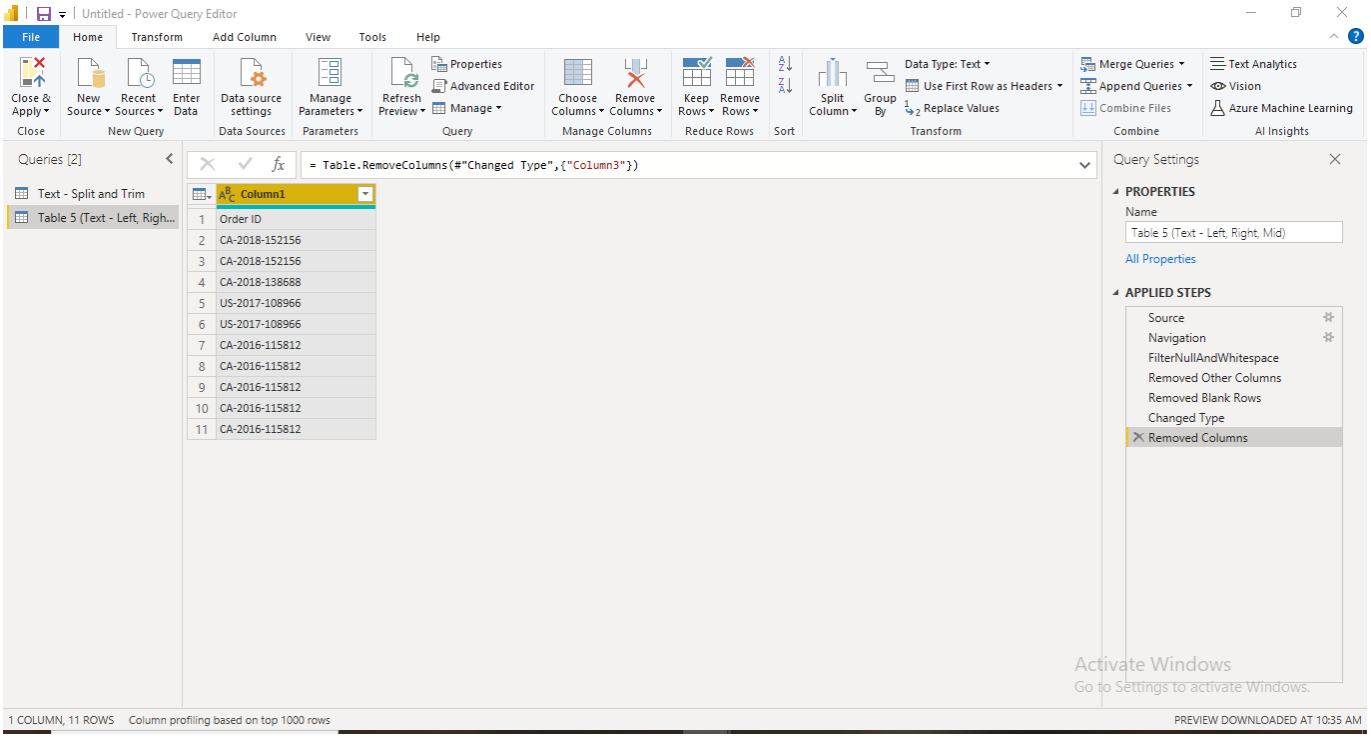


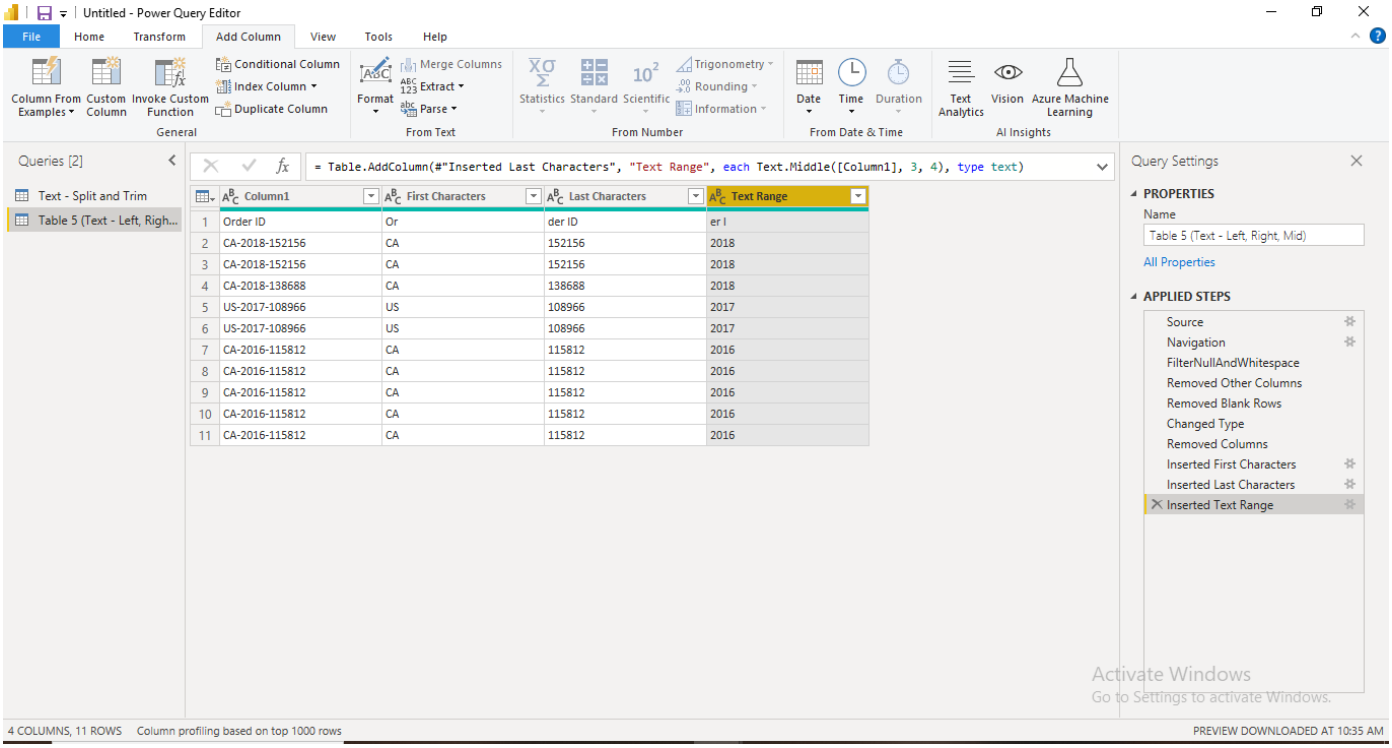
Below are some of the analysis we can make using our data:



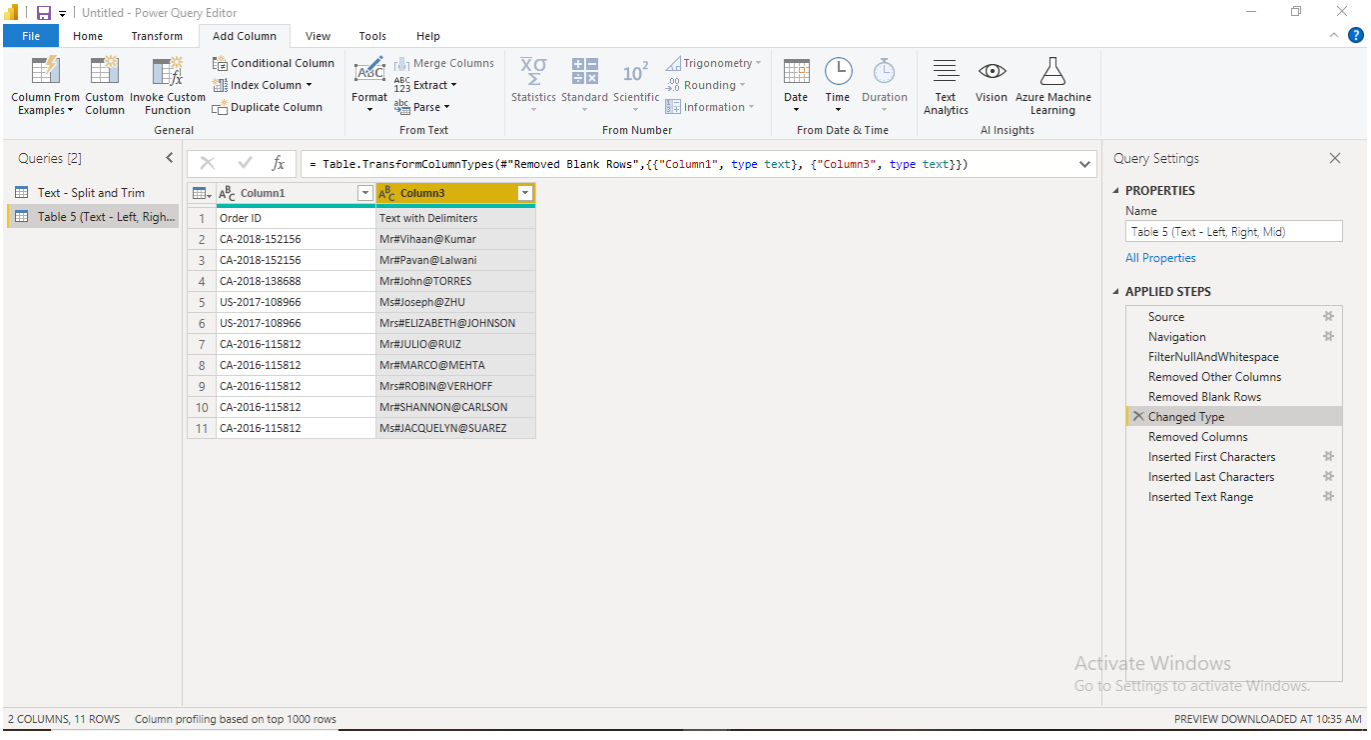
3. Left, Right, & Mid Function

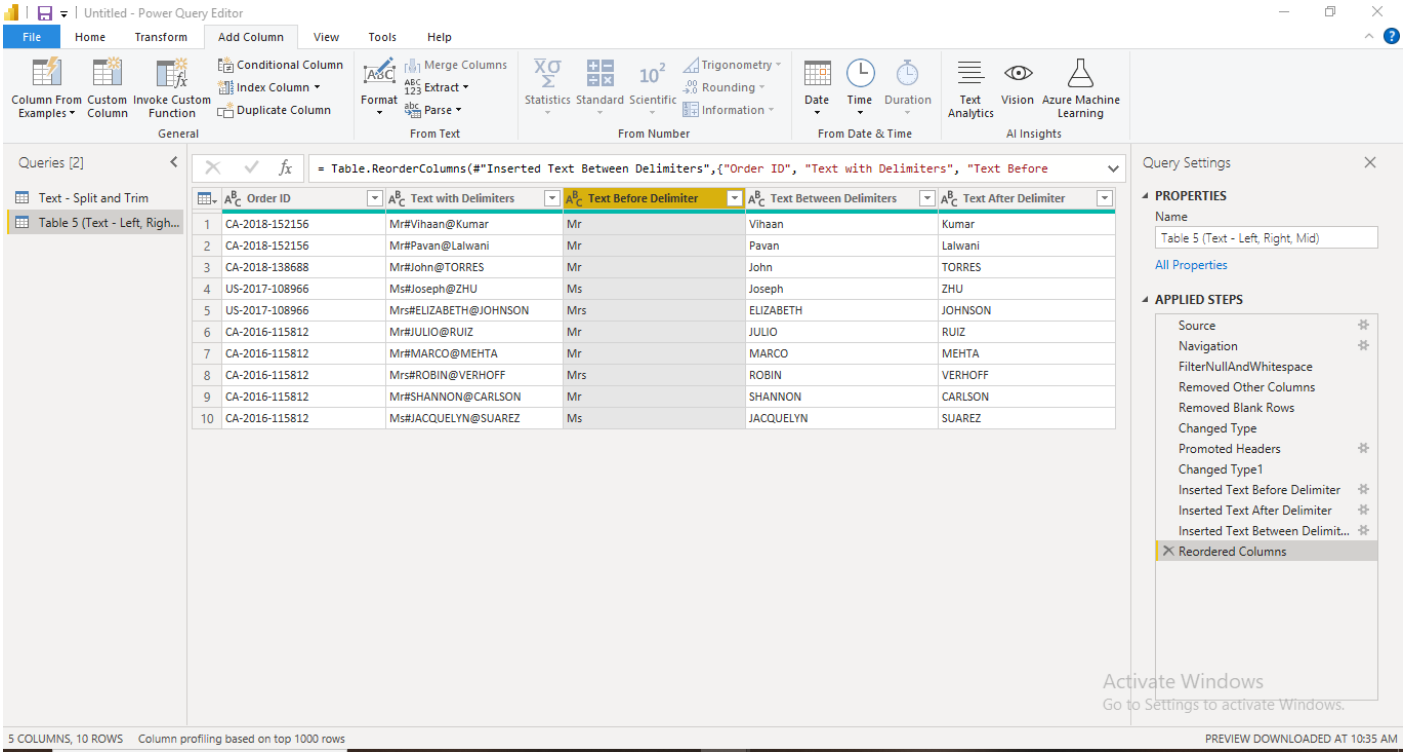
Here, in this exercise, we will explore how to extract right, left or middle characters. Below is our raw data:





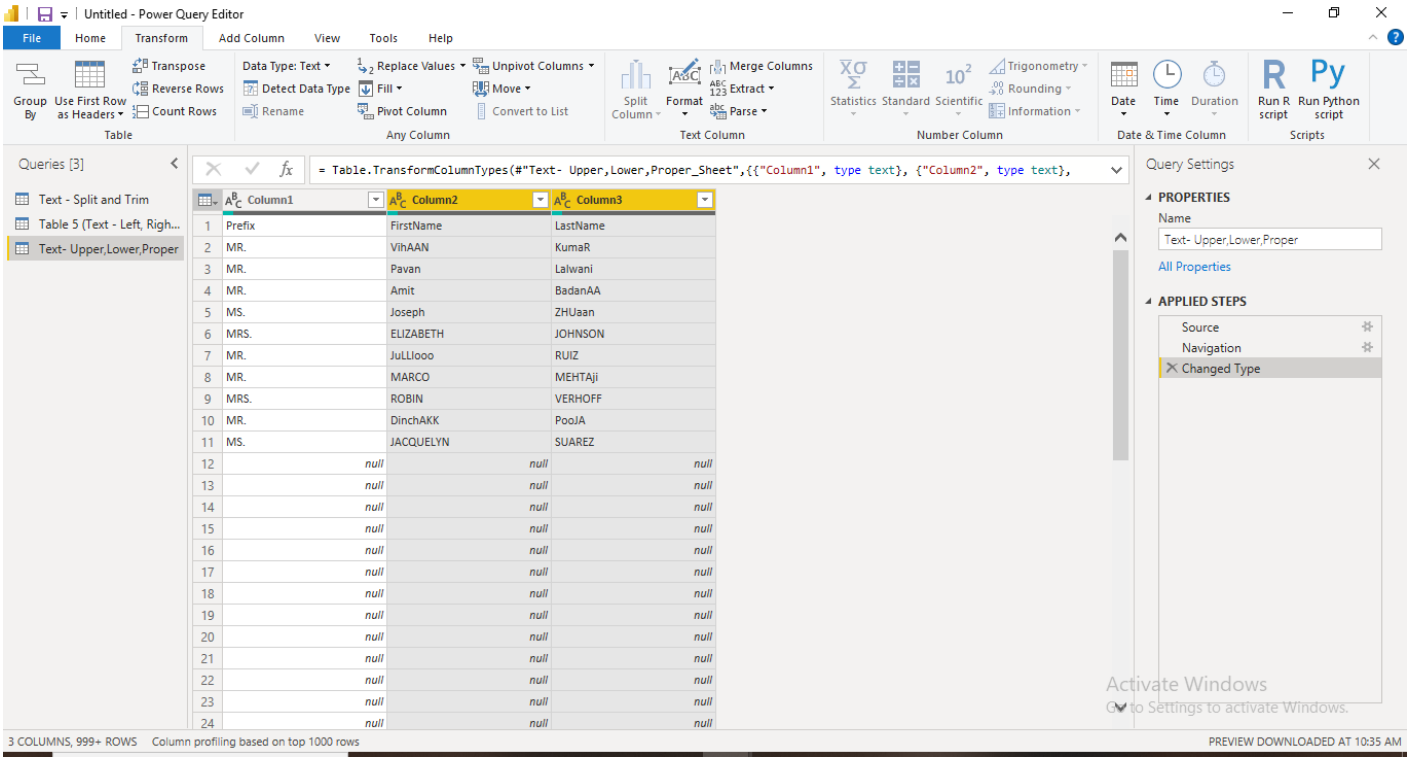
That was simple, but how do I extract the text when the dataset have delimiters like shown below?



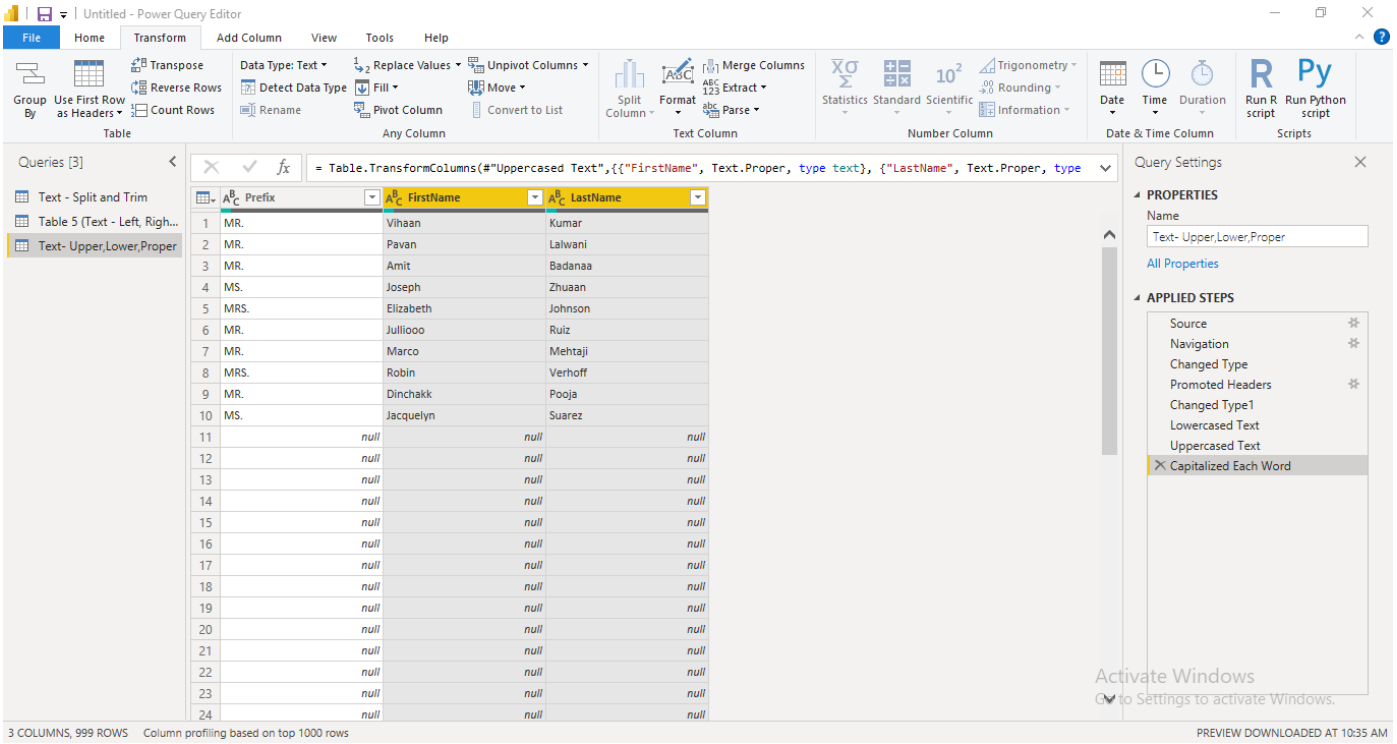


4. Upper, lower & Proper Case

I got a distorted data as shown below:

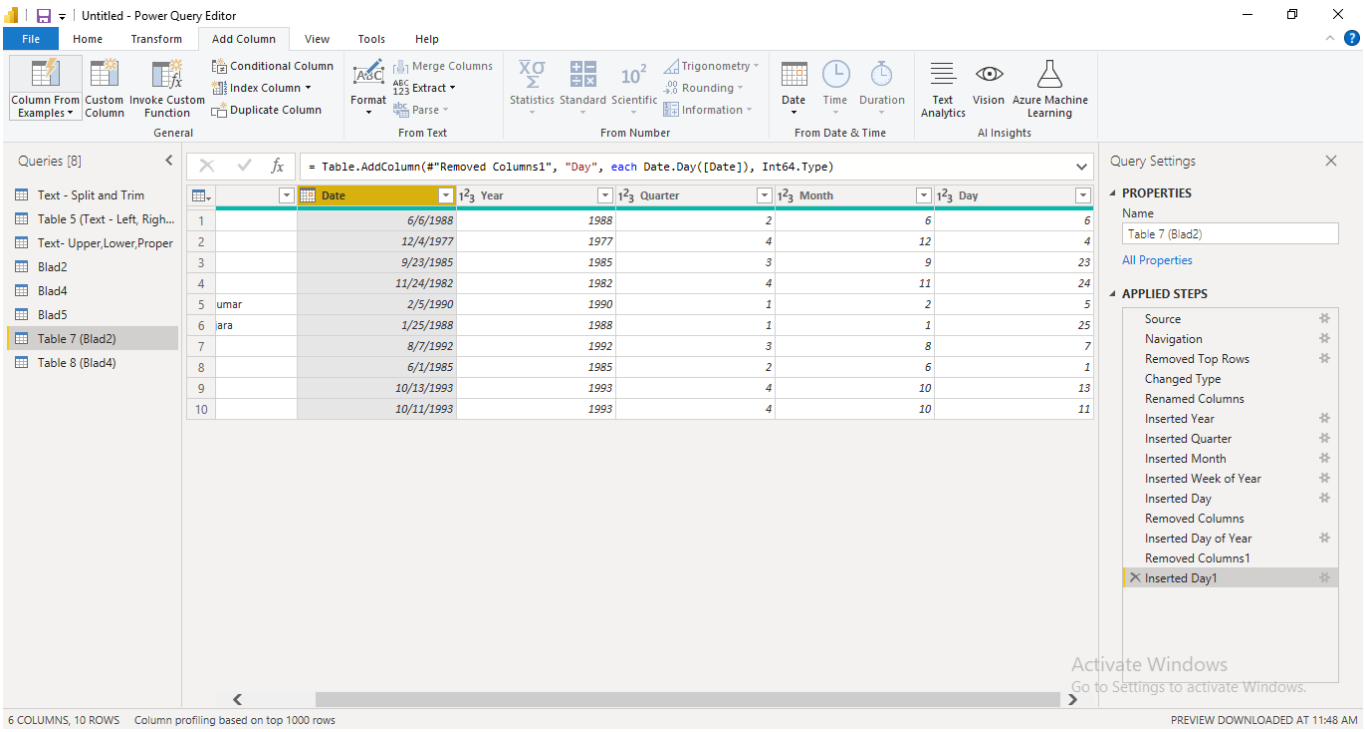


I can change the case of my text in column 2 and 3 but first I made the first rows as headers. Next, from transform tab, I played with different text cases.

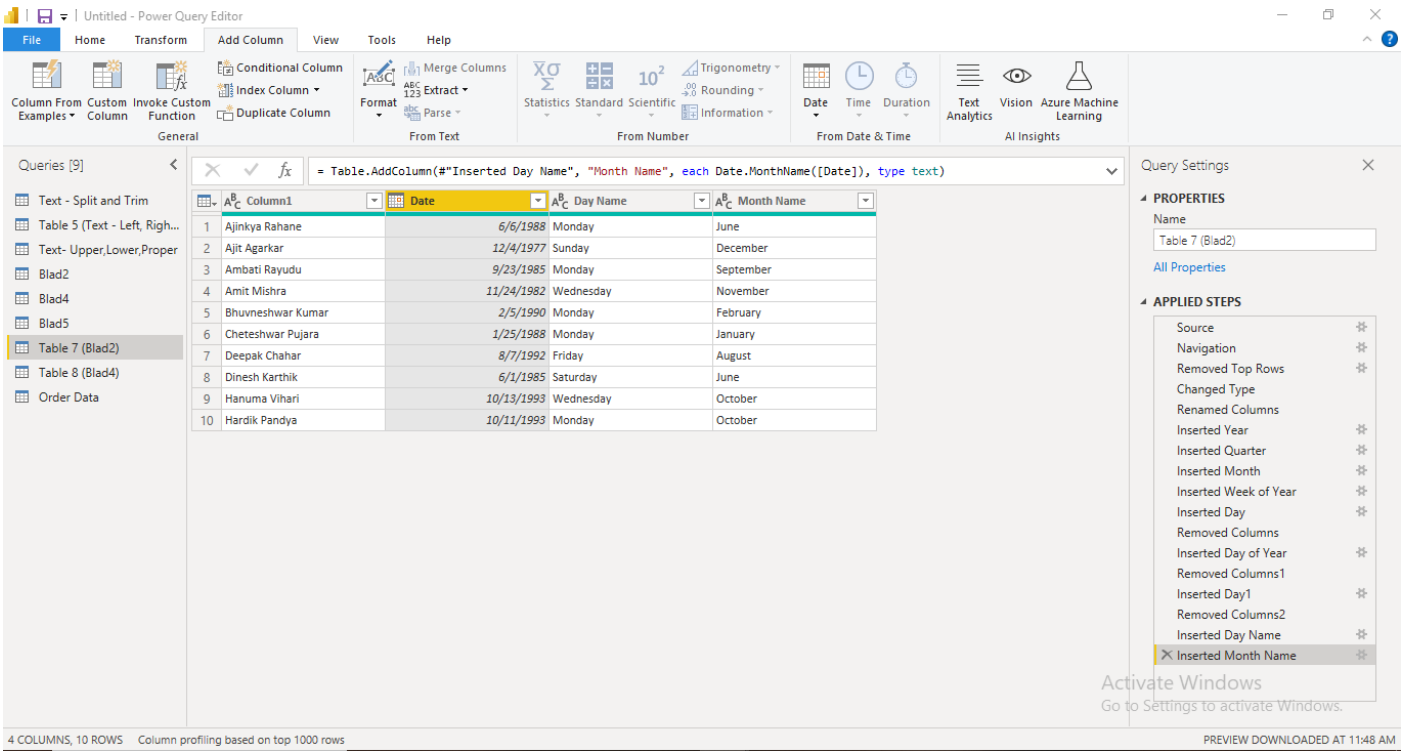


DATE FUNCTIONS IN POWER BI (POWER QUERY)

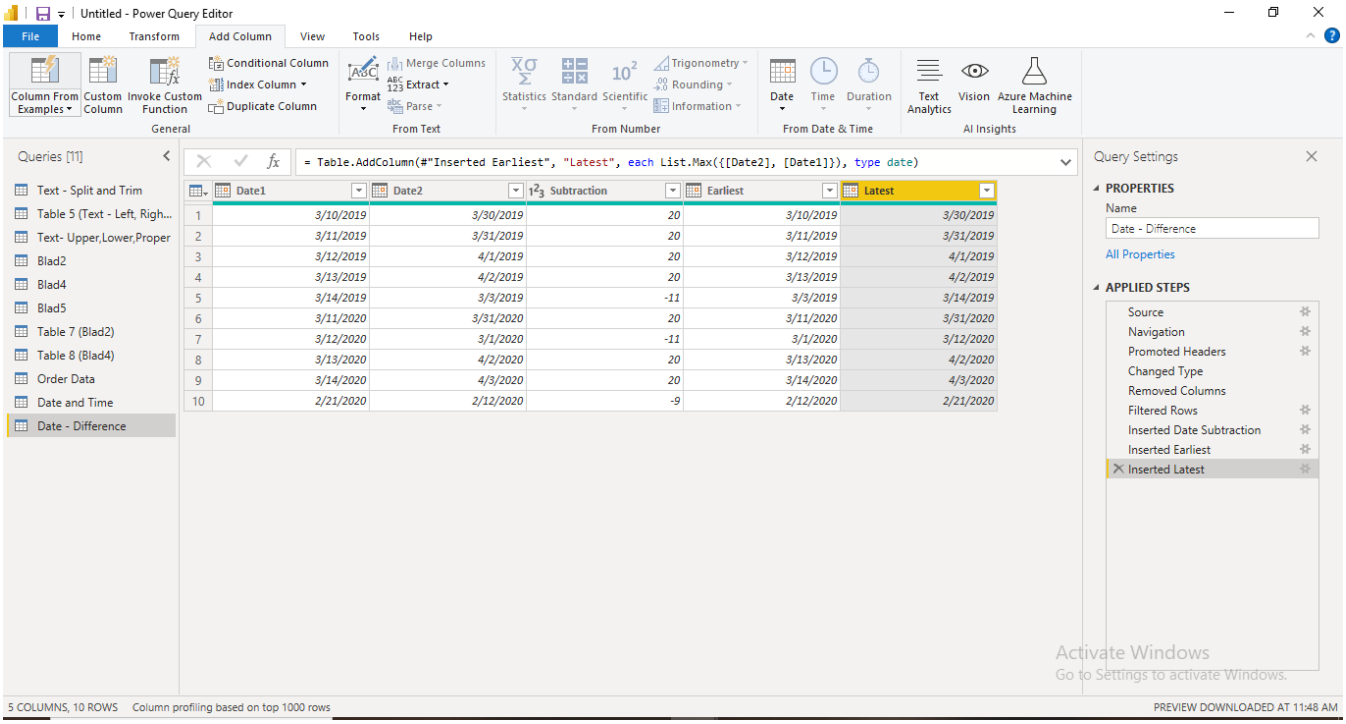
We can find out Year, Quarter, Month & Day from our date column:



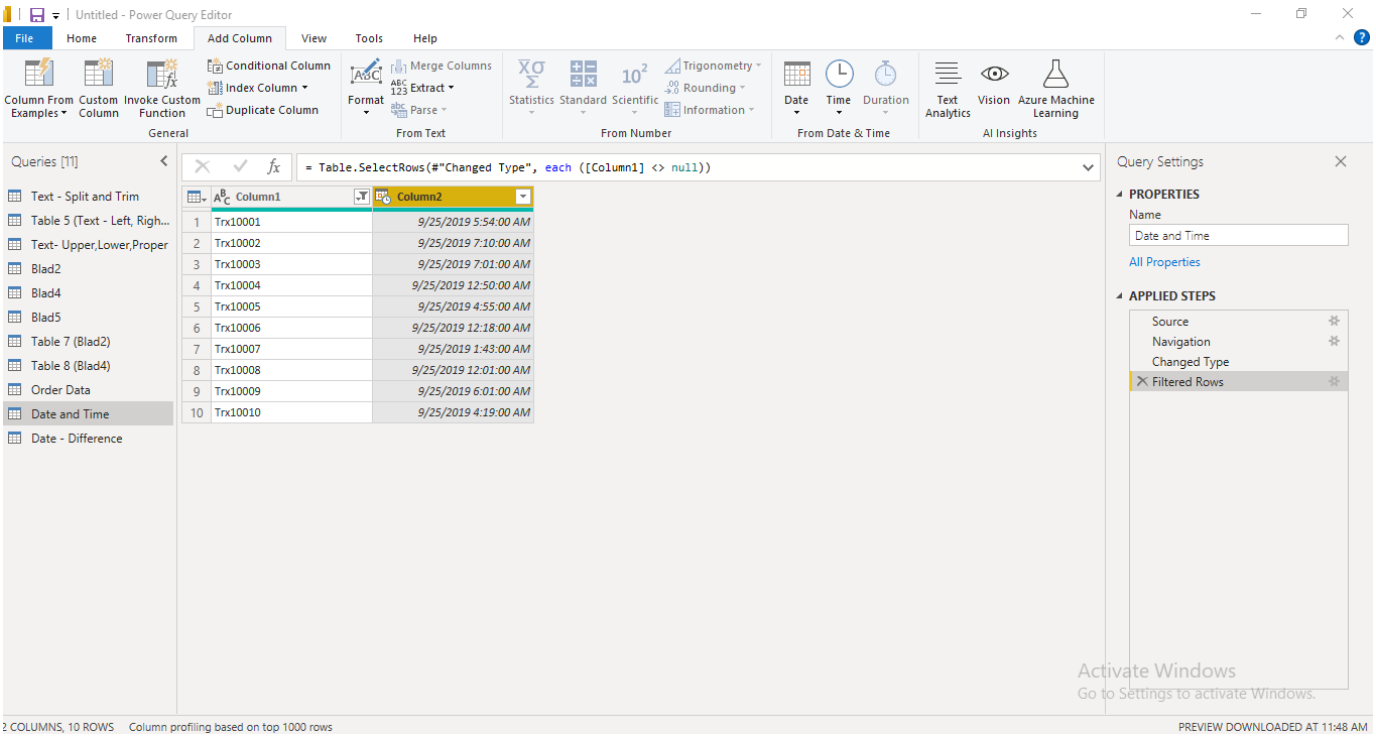
We can also find out the Month and Day Name just by a few clicks:

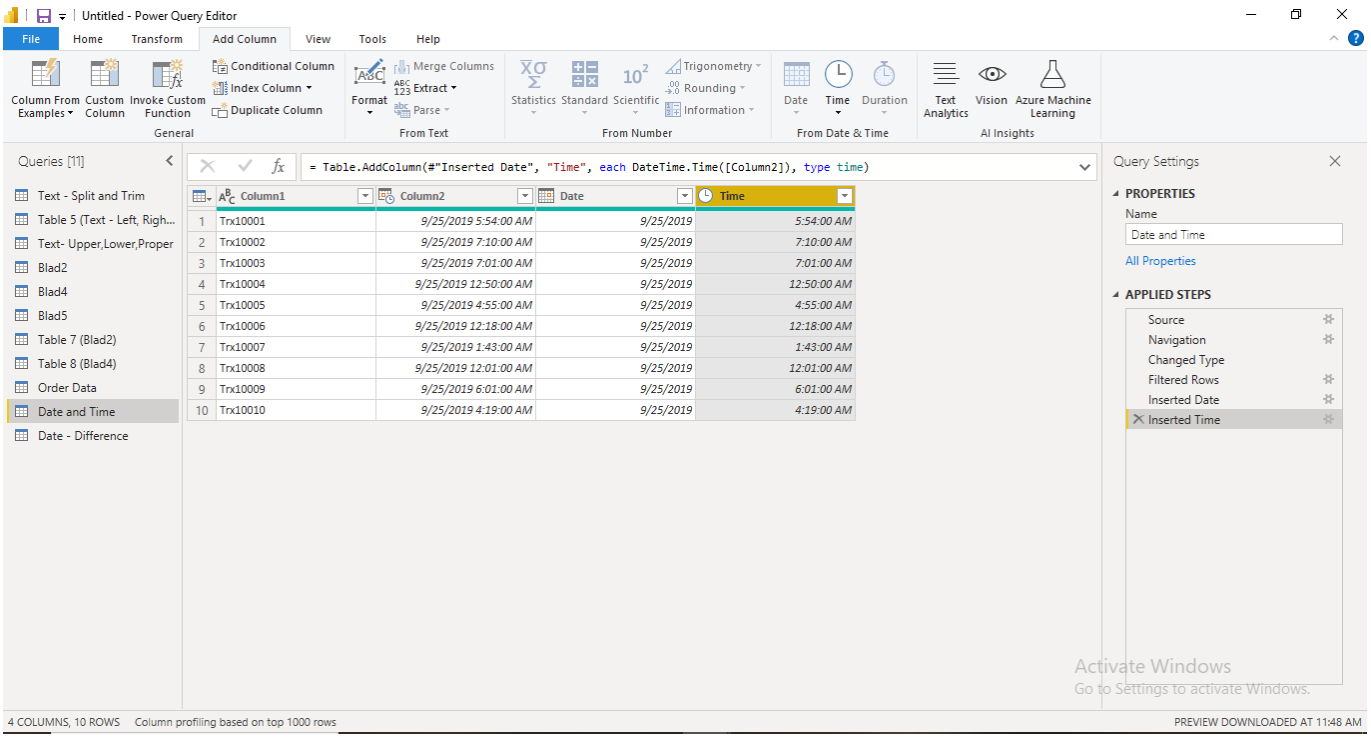


If we have two date columns, we can subtract them, find the earliest and latest dates in each rows, too:

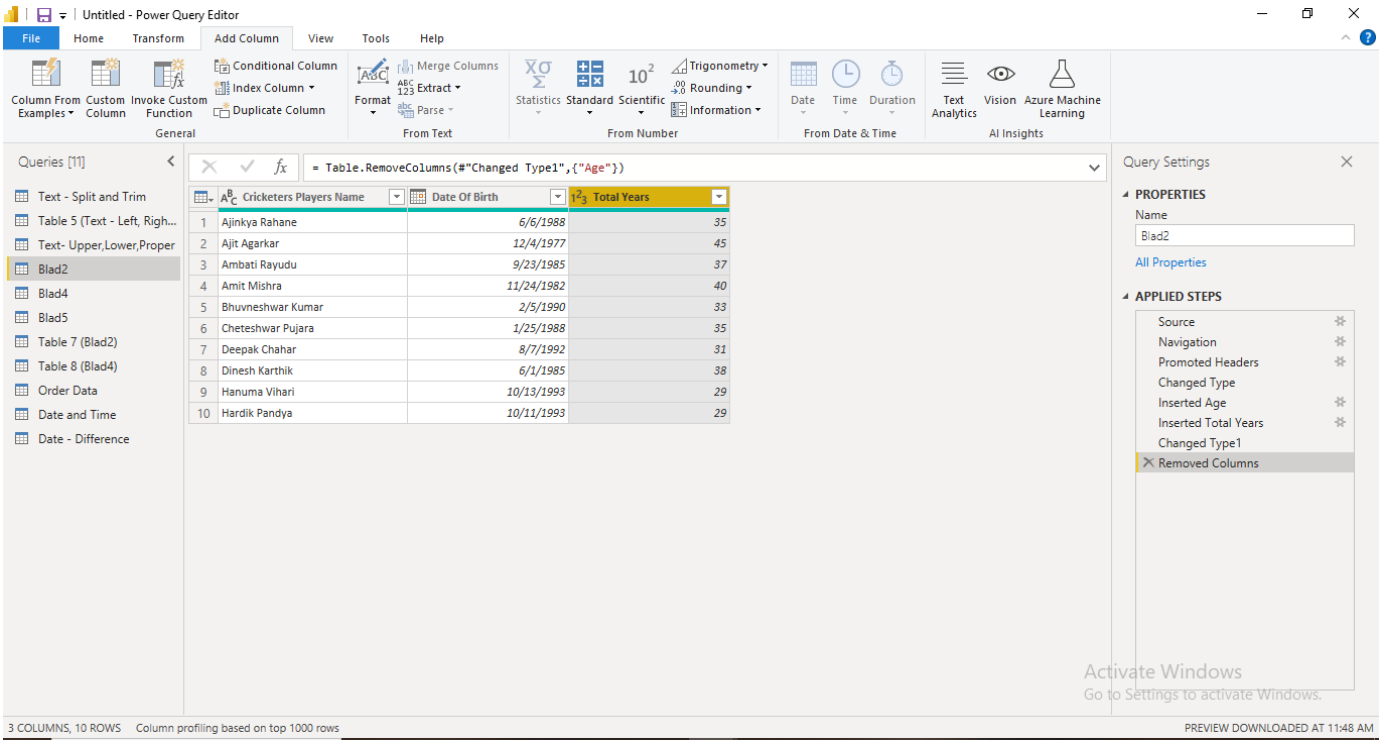


Suppose we have a column with both dates and time as shown below, but we want them in separate columns. We can also extract Date and Time in Power BI (Power Query).



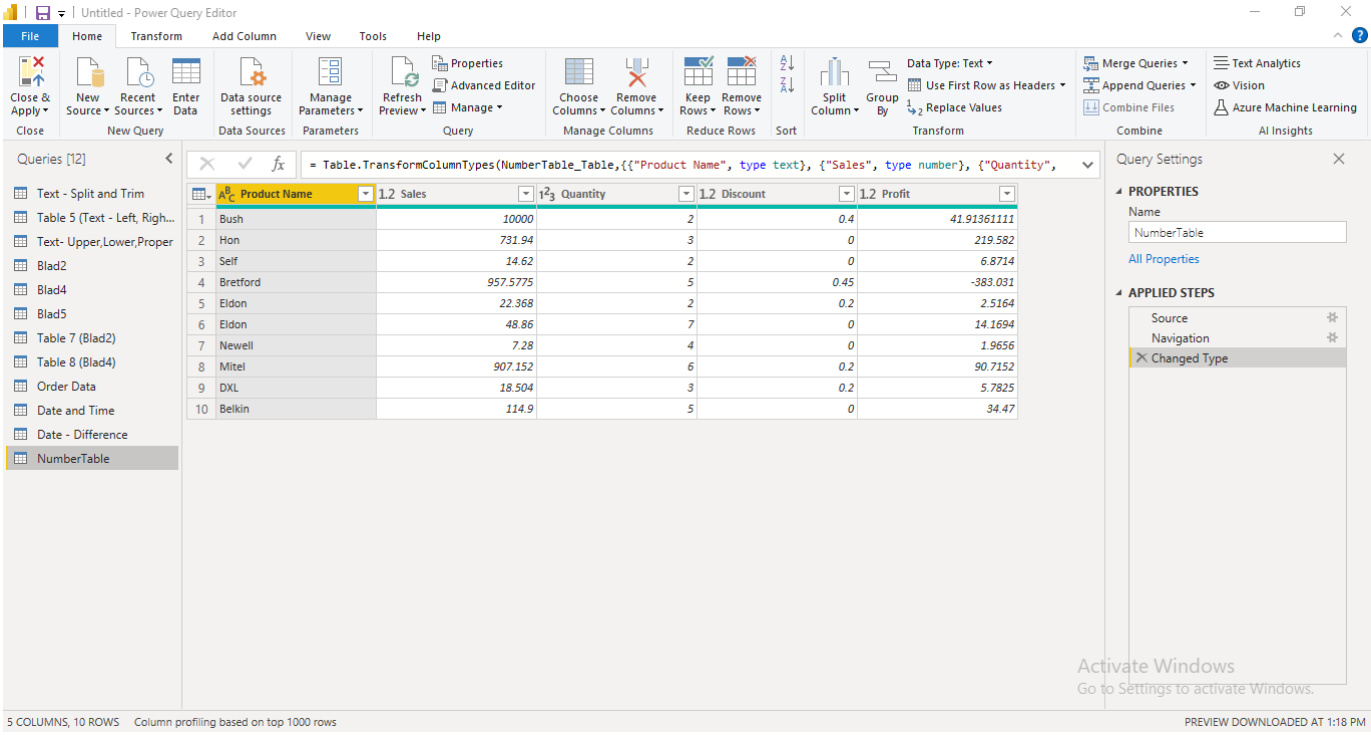


Lastly, from date of birth, we can calculate age of a person:

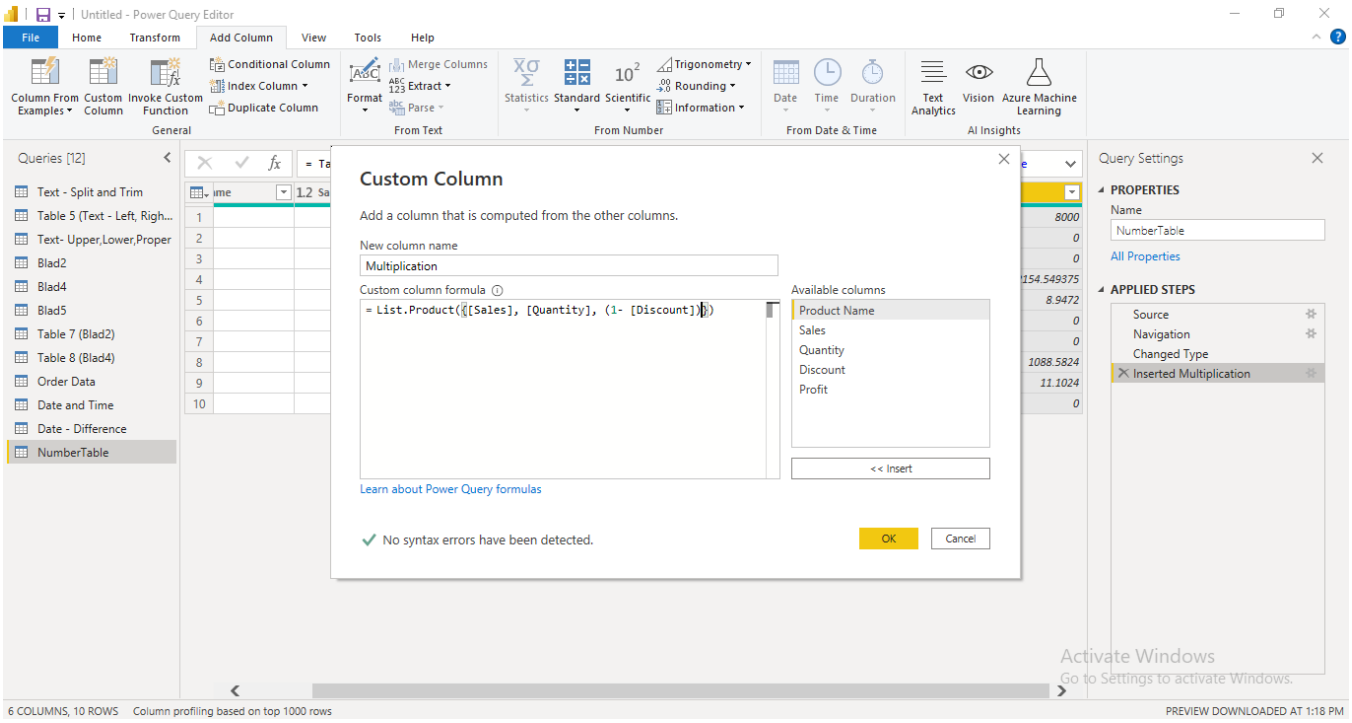


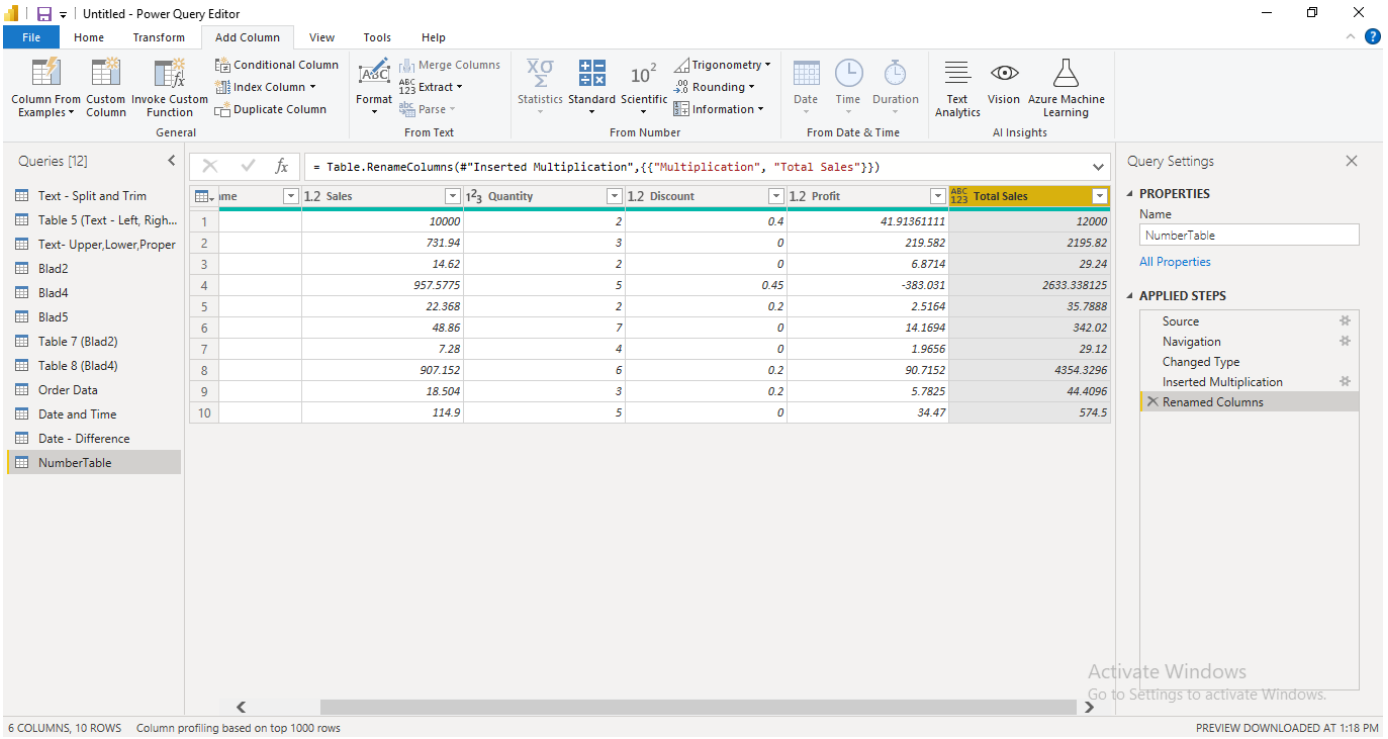
NUMBER FUNCTIONS IN POWER BI (POWER QUERY)

Here is the raw data:

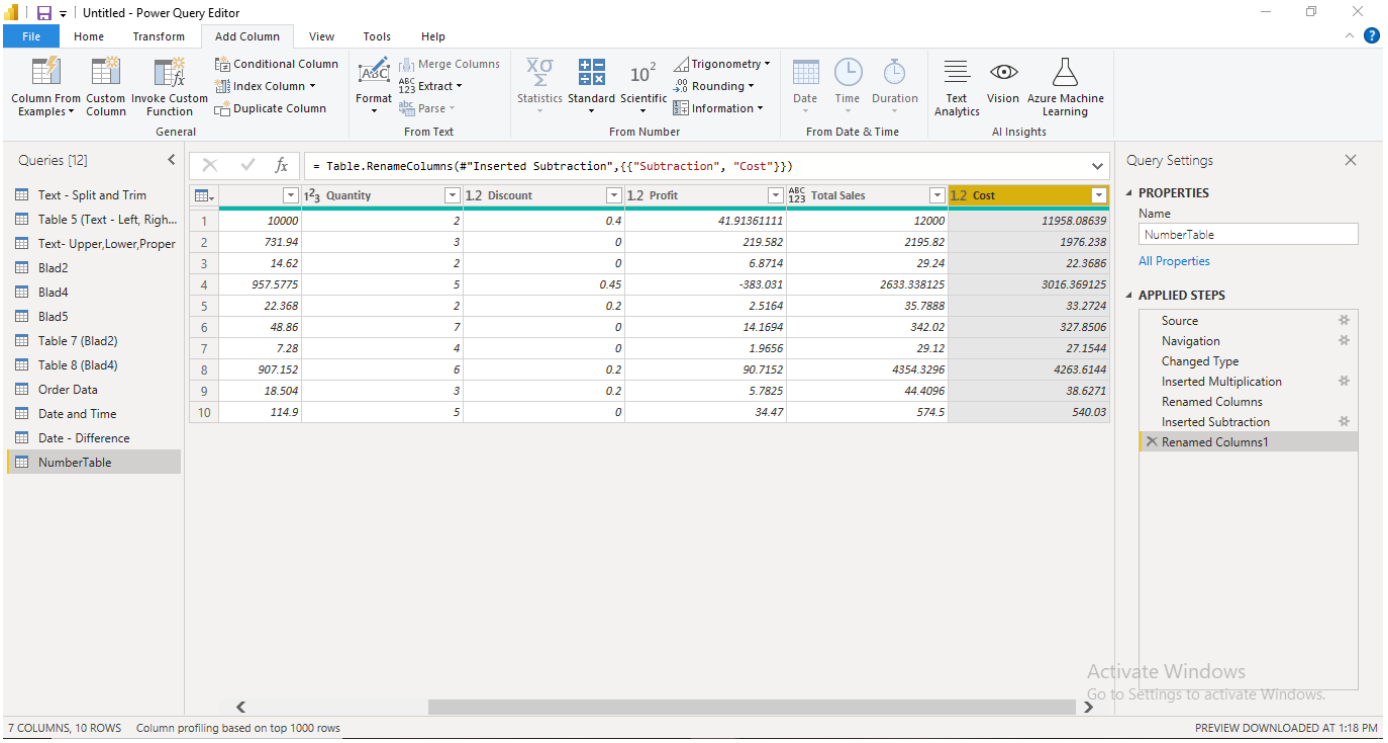


I want to calculate total sales, so I can utilize multiplication operation under numbers function. I chosed sales, quantity, and discount columns and multiplied them. But since some of the rows in discount table had data = 0, we got the final multiplication answer also zero. So we changed a formula a bit and here is the result:

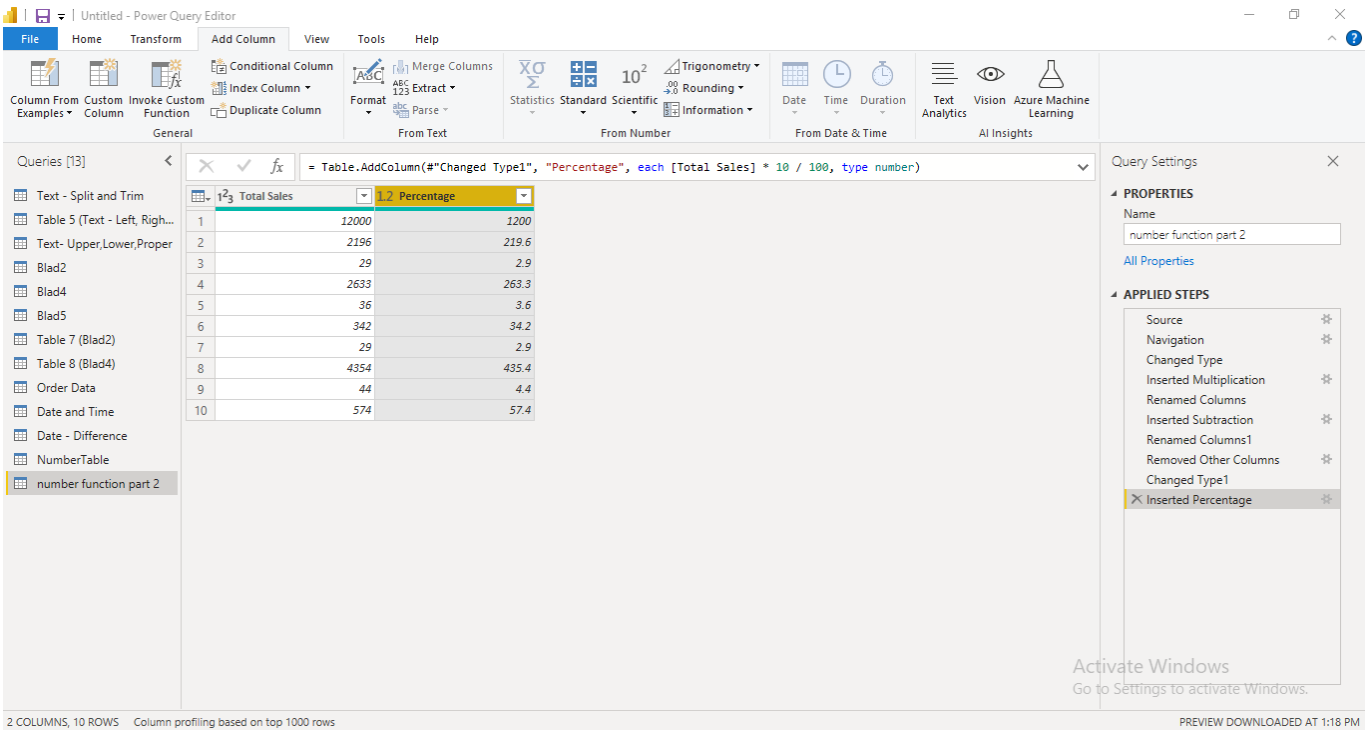




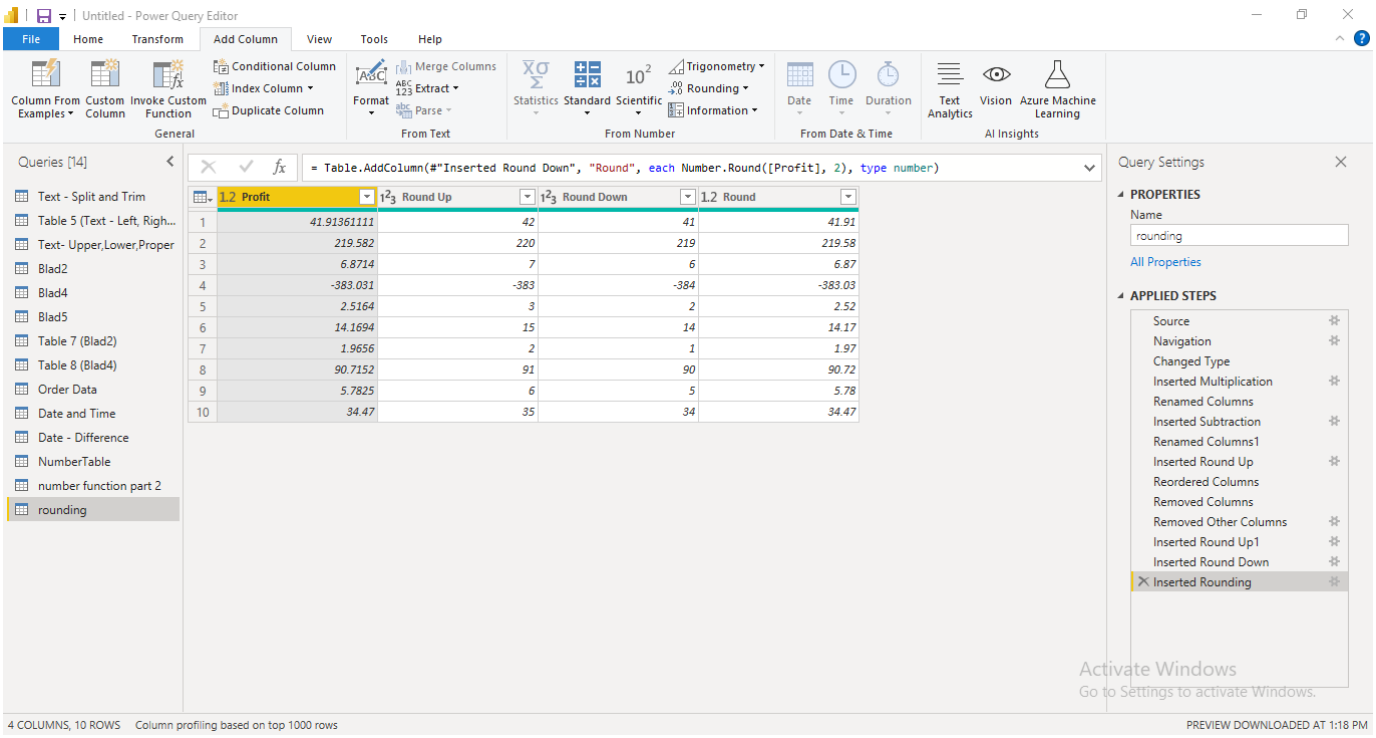
If I want to calculate cost, I will subtract total sales and profit:



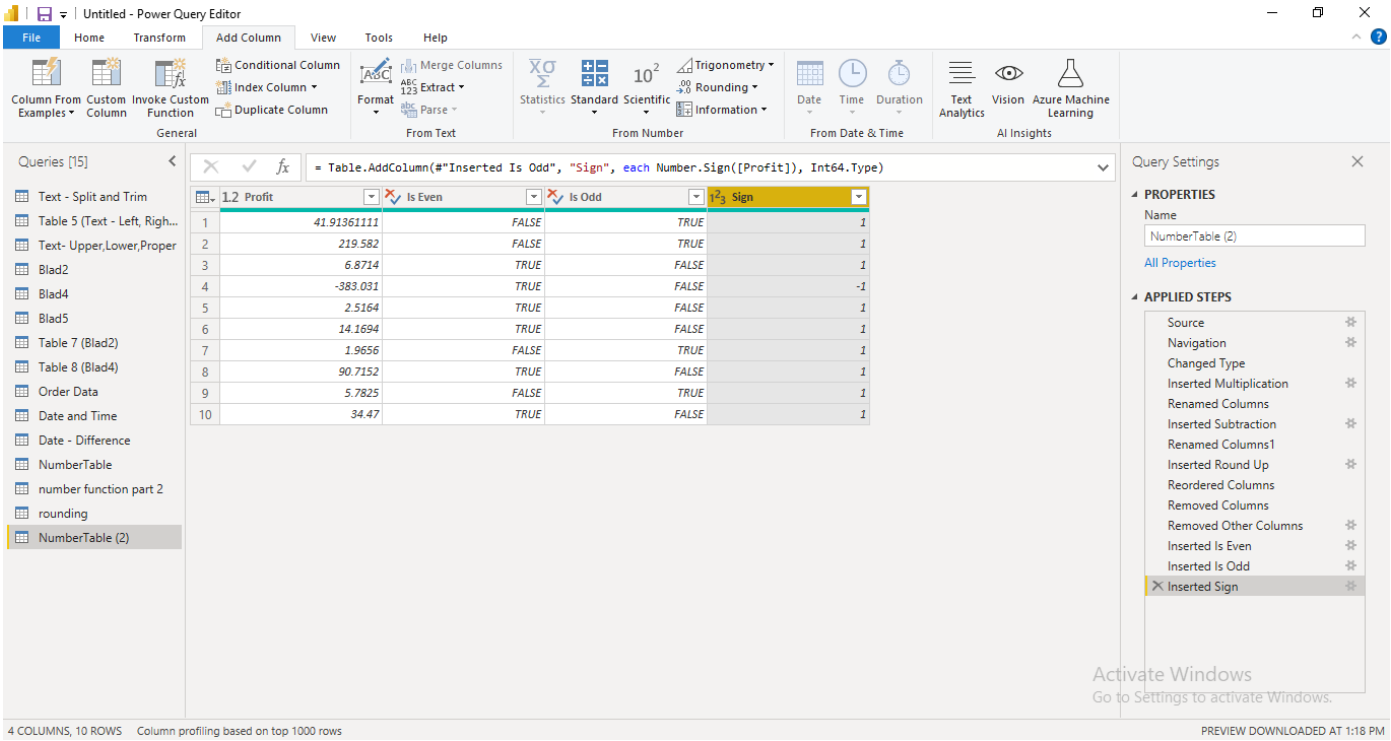
Now, we can also find Percentage. For example, we calculated 10 percent of total sales:



We can also roun our values, for example in the below picture, we rounded up, down and simply rounded values for the profits column:



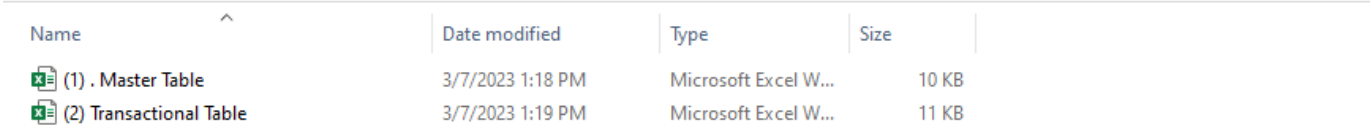
Lastly, we can also determine whether our values are even or odd and what is the sign (positive or negative).



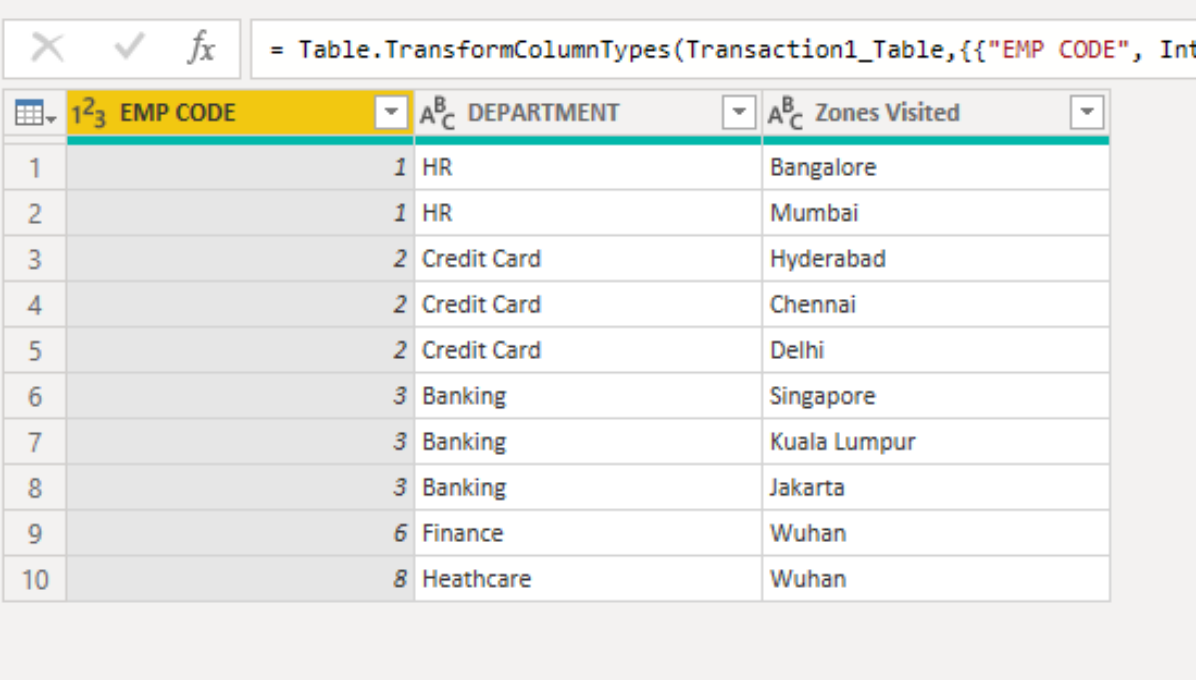
By selecting only positive +1, we will get the values that are profits. And upon selecting negative -1, we will get the loss values.

Merge Files and Tables in Power BI

We can merge data from different excel workbooks. For example, here we have two different excel files that we wish to merge in Power BI.



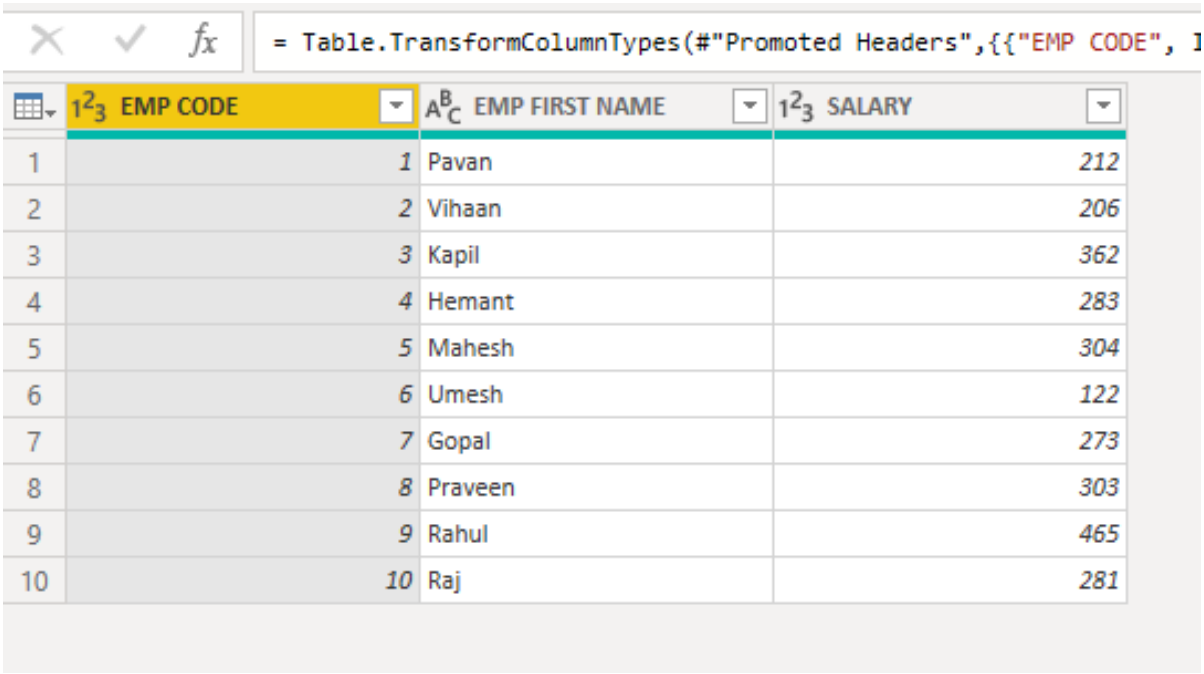
This is our Transaction table that we uploaded in Power Query:



```
= Table.TransformColumnTypes(Transaction1_Table,{{"EMP CODE", Int
```

	EMP CODE	DEPARTMENT	Zones Visited
1	1	HR	Bangalore
2	1	HR	Mumbai
3	2	Credit Card	Hyderabad
4	2	Credit Card	Chennai
5	2	Credit Card	Delhi
6	3	Banking	Singapore
7	3	Banking	Kuala Lumpur
8	3	Banking	Jakarta
9	6	Finance	Wuhan
10	8	Heathcare	Wuhan

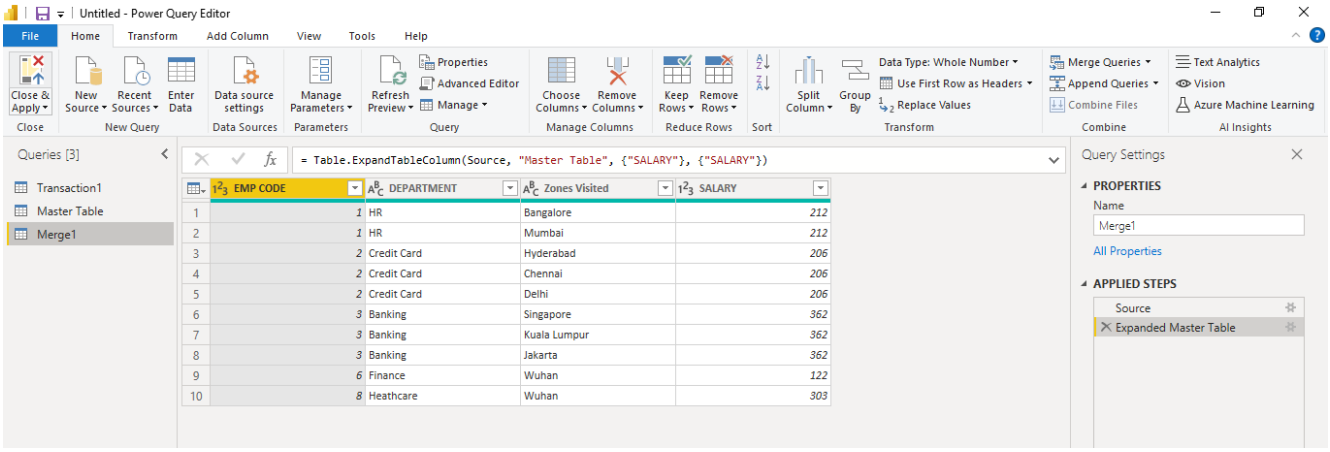
And this is Master table



```
= Table.TransformColumnTypes(#"Promoted Headers",{{"EMP CODE", I
```

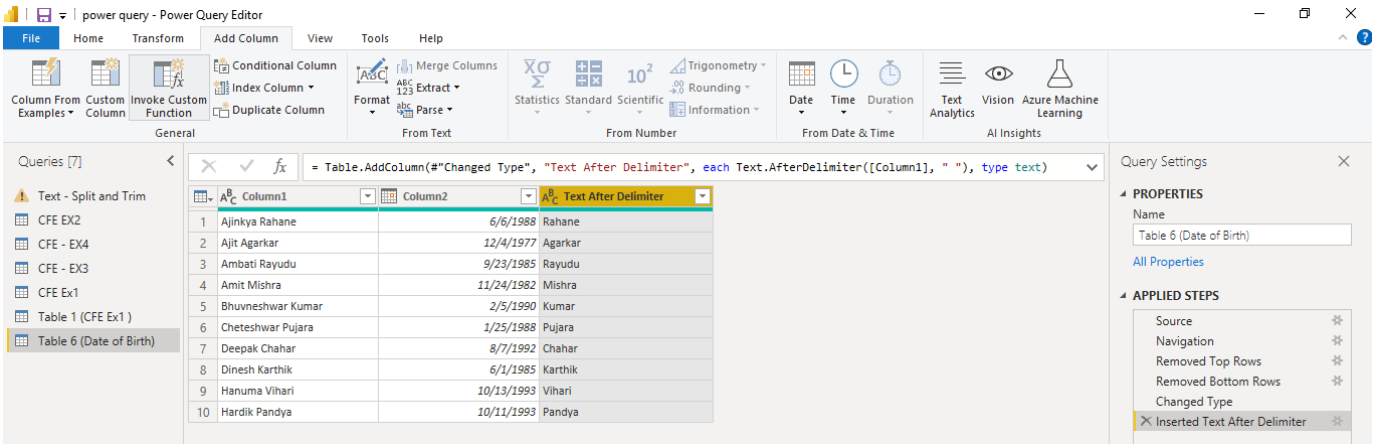
	EMP CODE	EMP FIRST NAME	SALARY
1	1	Pavan	212
2	2	Vihaan	206
3	3	Kapil	362
4	4	Hemant	283
5	5	Mahesh	304
6	6	Umesh	122
7	7	Gopal	273
8	8	Praveen	303
9	9	Rahul	465
10	10	Raj	281

We want to merge these two in a new query. So we build a relationship since both have EMP CODE column. Also, since we only needed SALARY column from Master Table in our Transaction Table, we selected that.

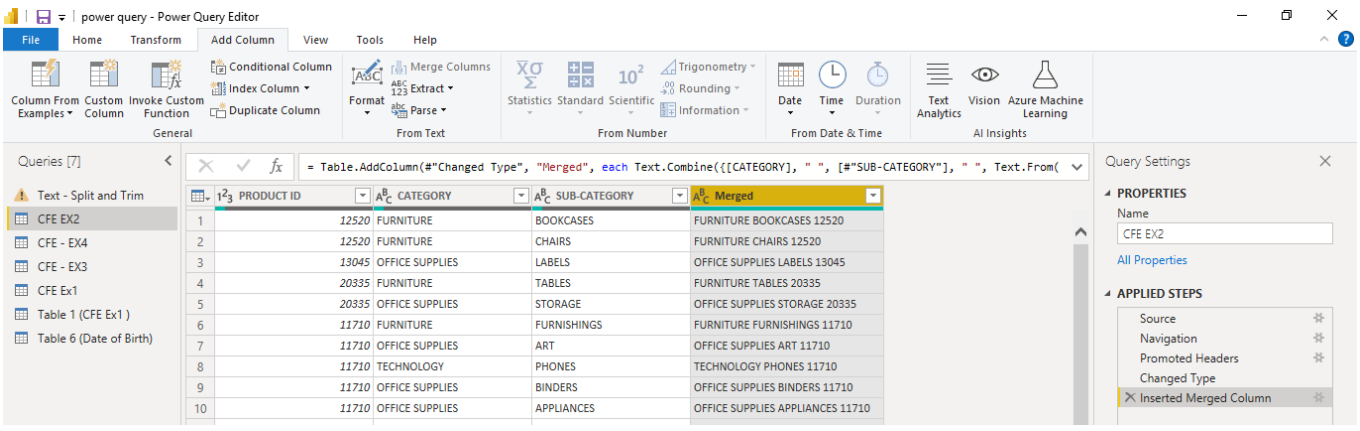


Column from Examples

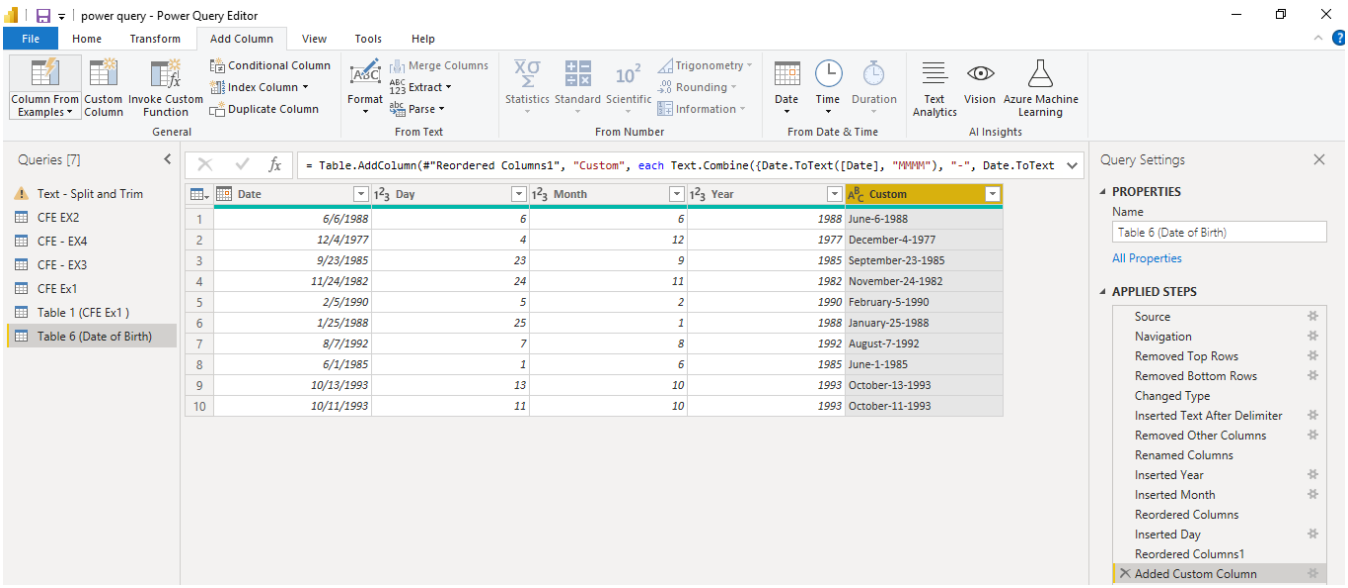
Like flash fill feature in excel, we can use column from examples in power BI. Here are a few examples:



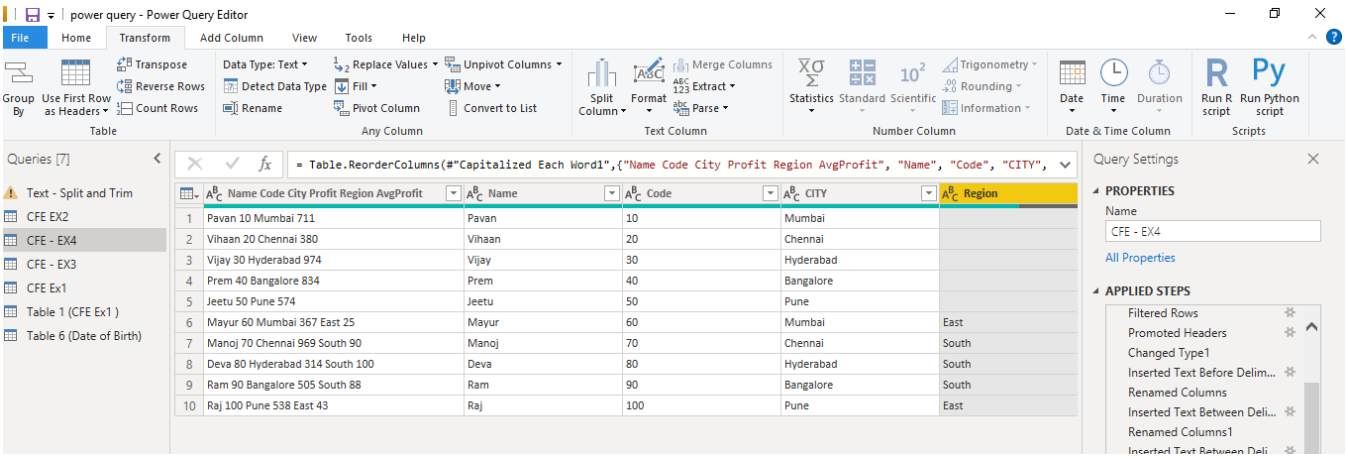
In another example, our dataset had 3 columns: category, sub-category, and product ID. So we used column from examples > from all columns so the final result is a merged column:



Again, using column from example features, we extracted day, month, year, and even a custom column from our date column:

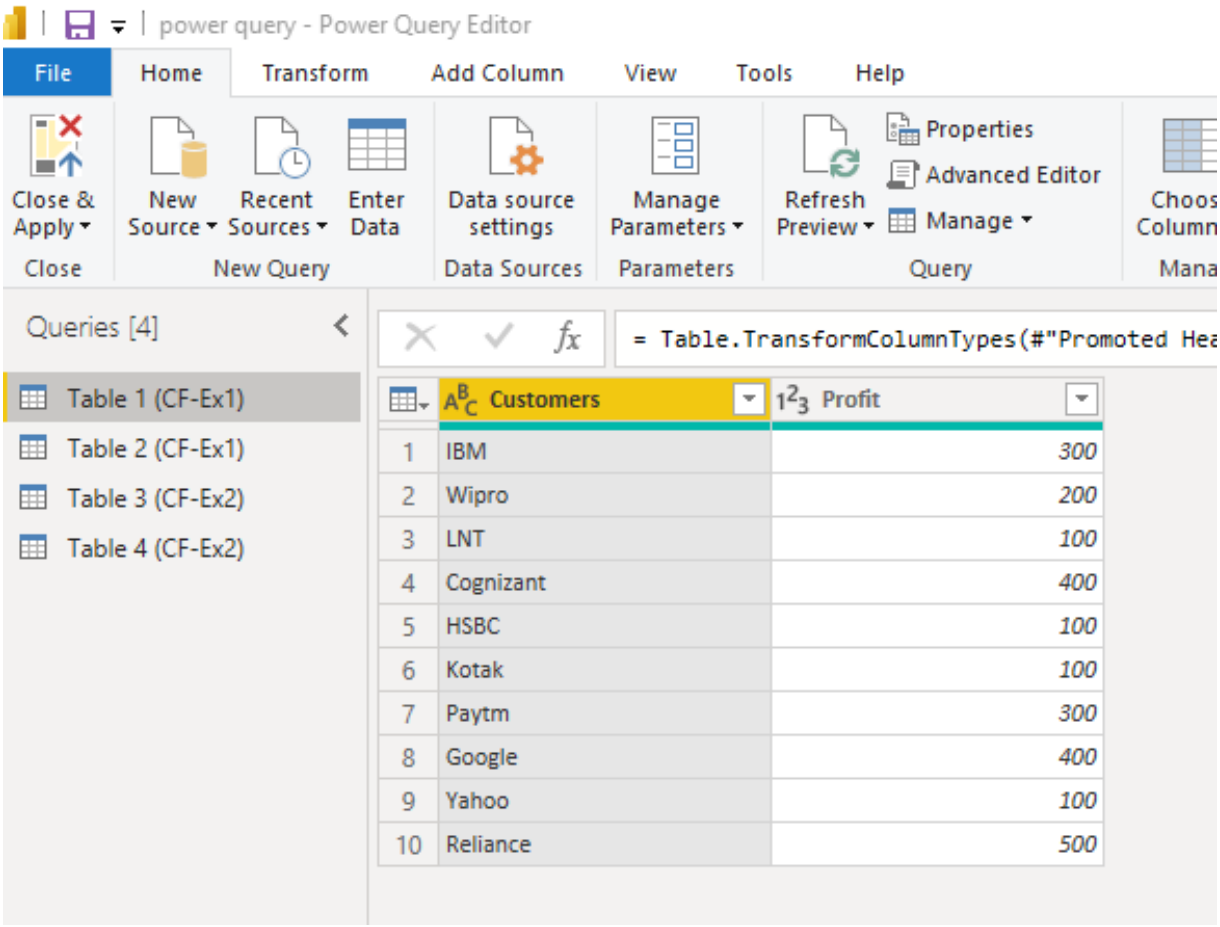


In last example, we have both alphabets and numeric values in a single column, so again using column from examples, we extracted each values in a separate column. And that's how our clean data looks now:

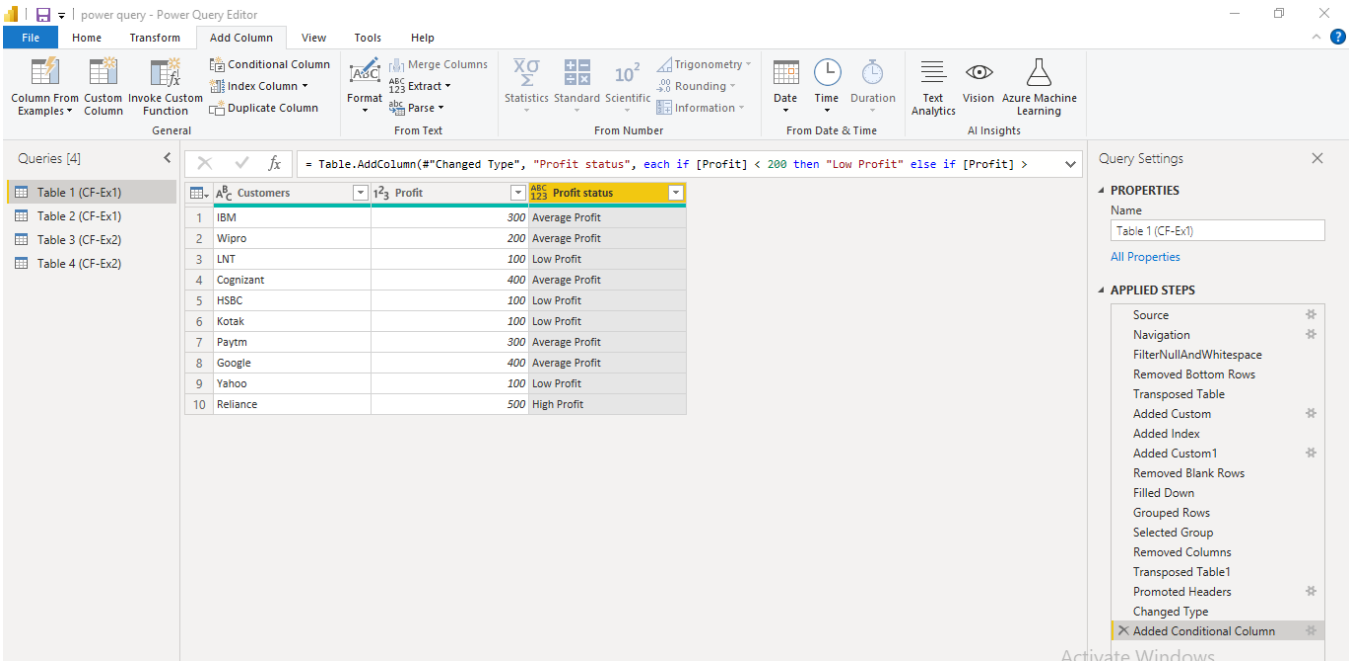


Conditional Column in Power BI

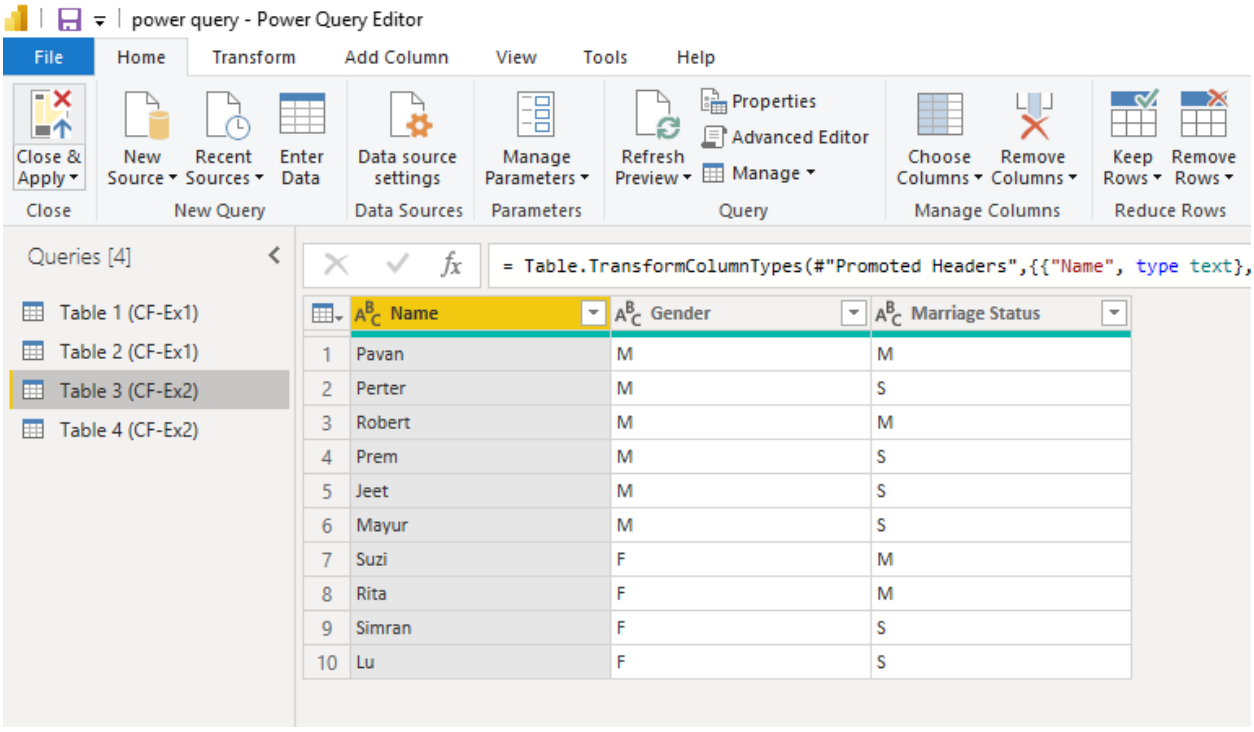
We have this dataset:



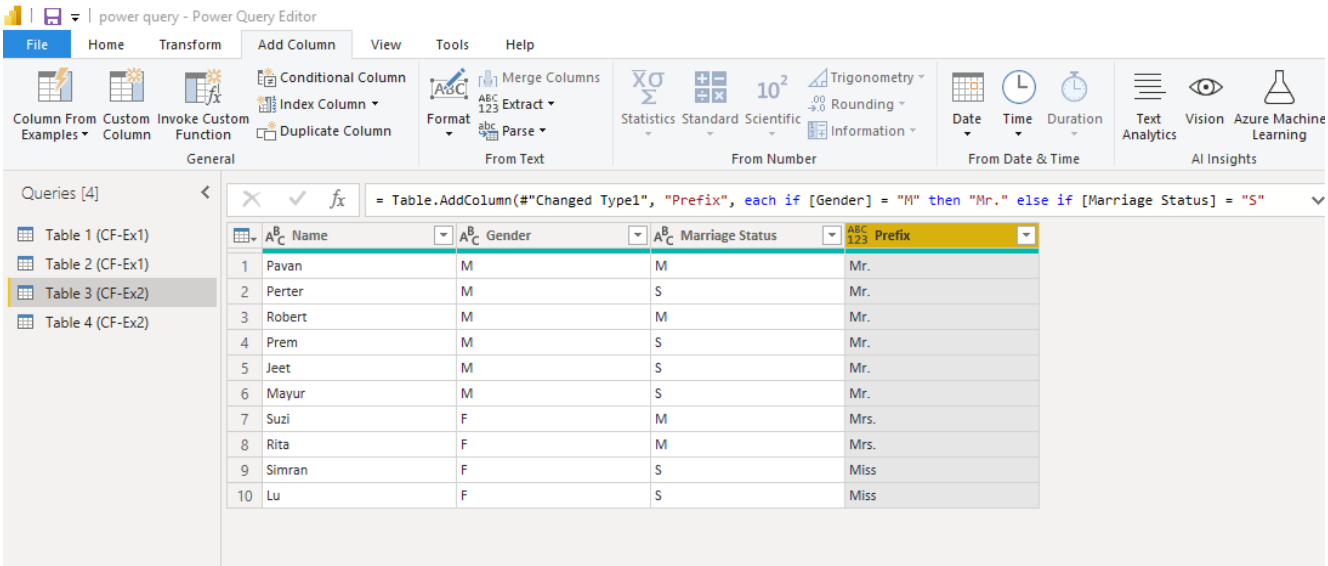
We want to apply condition in profit column. 3 conditions: <200 is low profit, >400 is high profit, and the range 200-400 represents average profit.



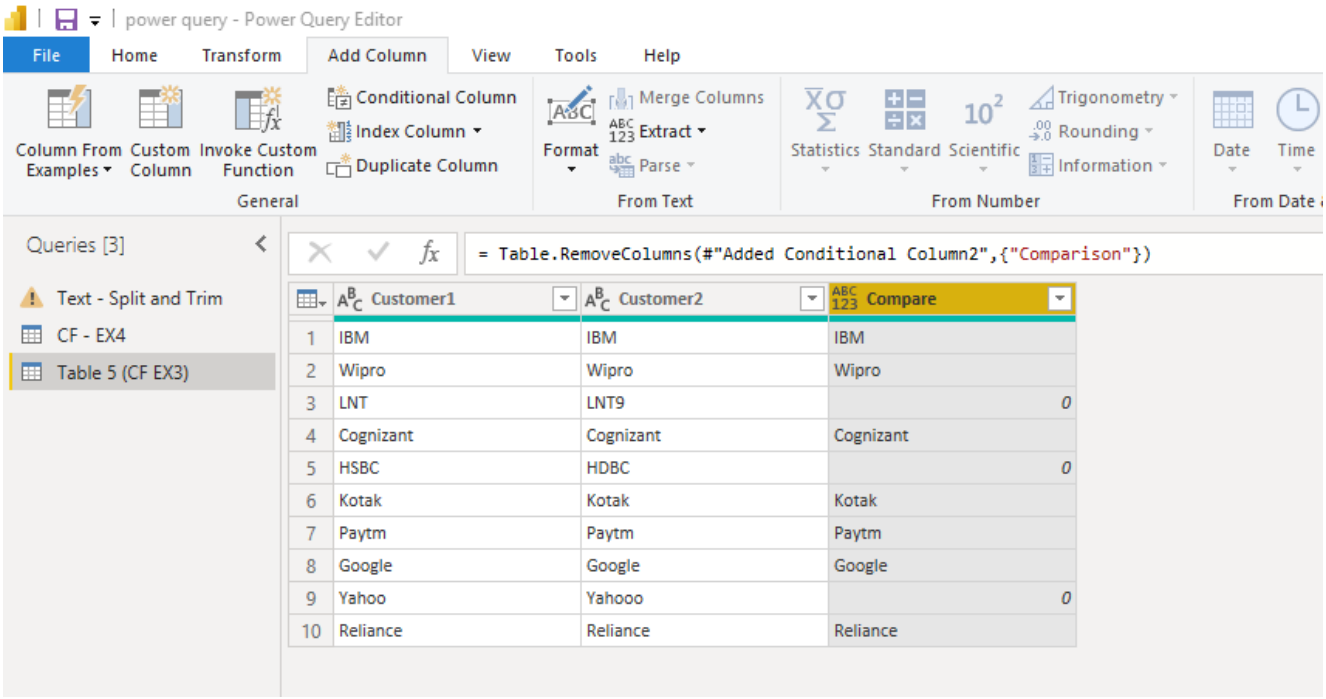
But what if we want to apply condition to two different columns like the below data?



Here, based on gender and marital status, we will give the anmes a prefix i.e., Mr.,Mrs., or Miss.

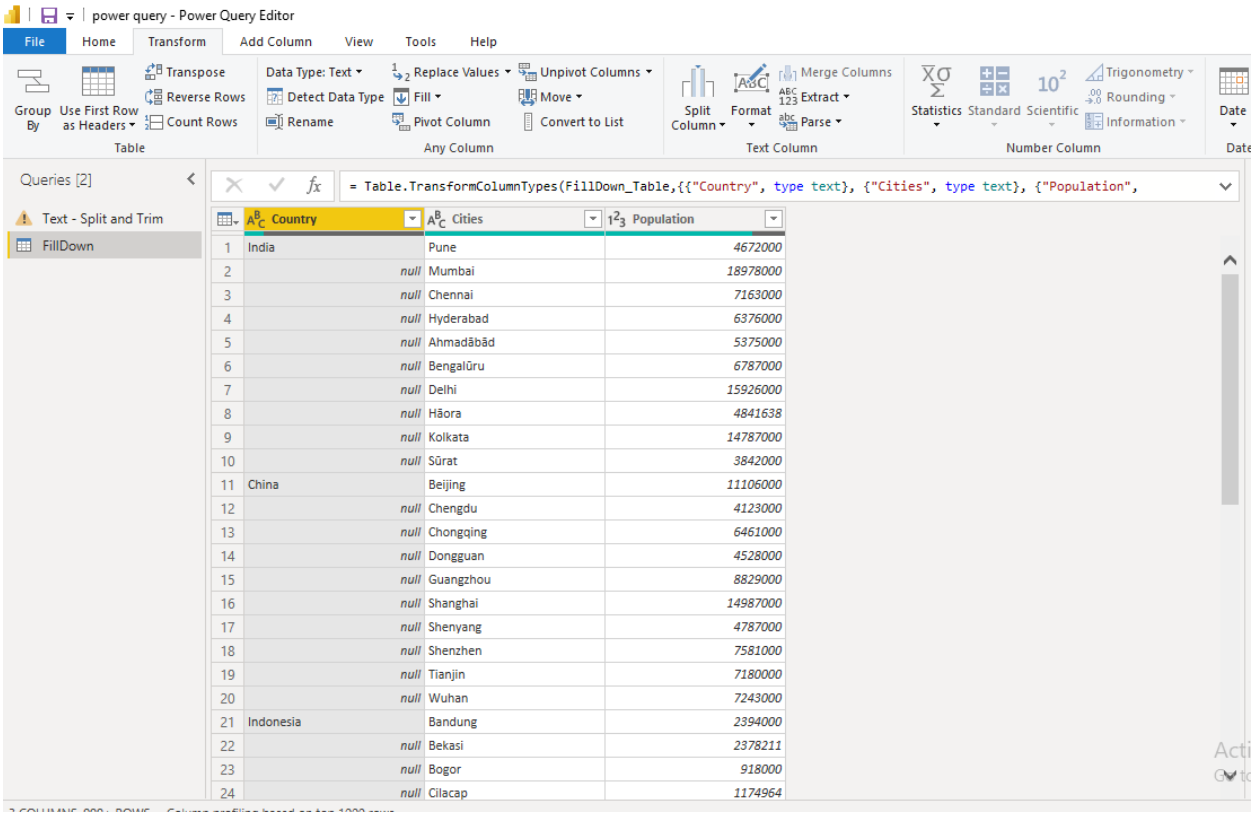


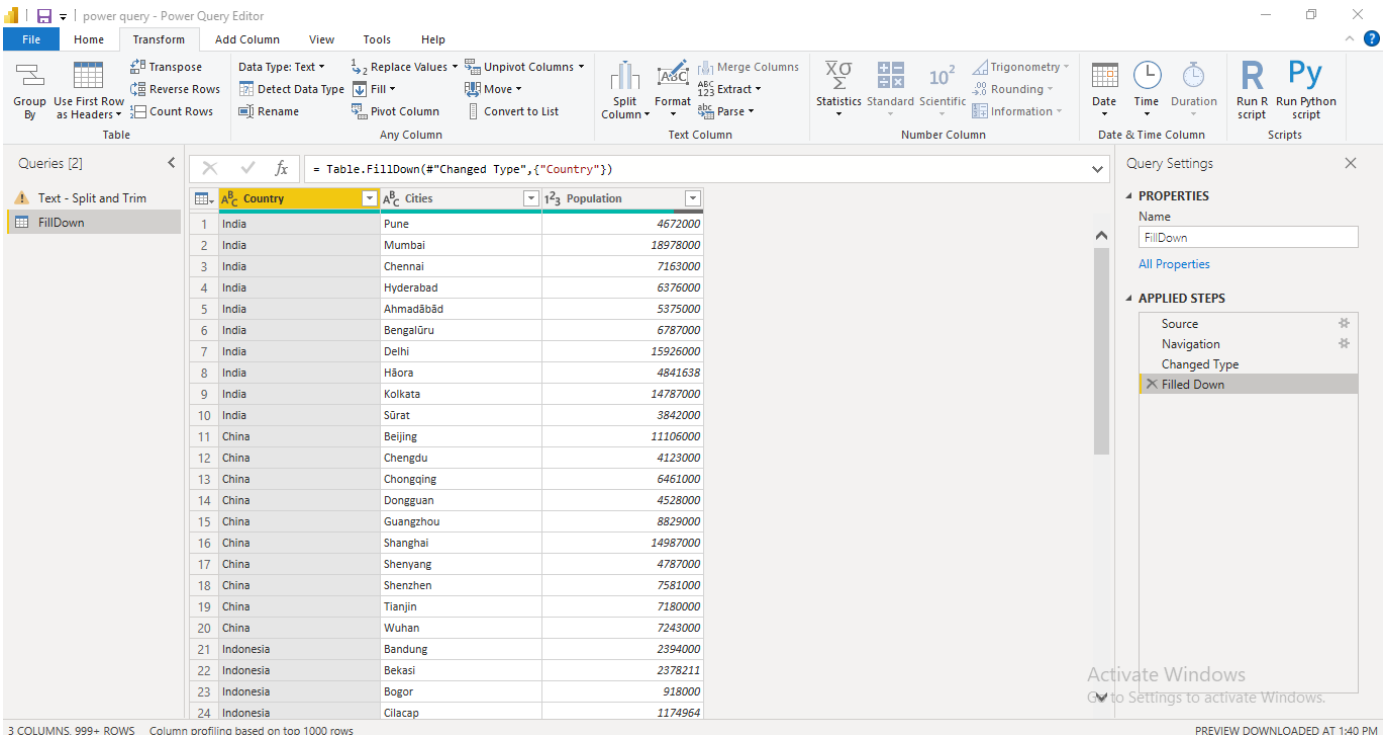
Now, comparing two columns:



Exploring other features in Power BI

- We can fill down a value in Power Query:

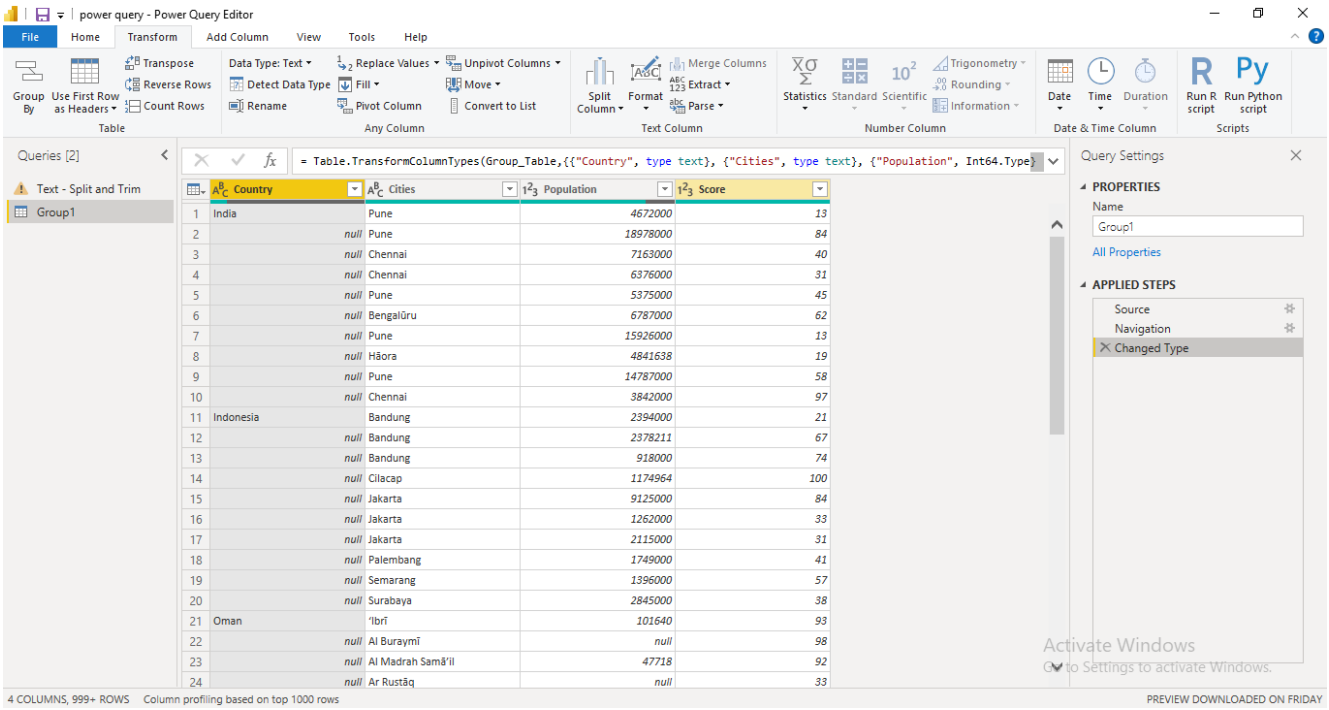




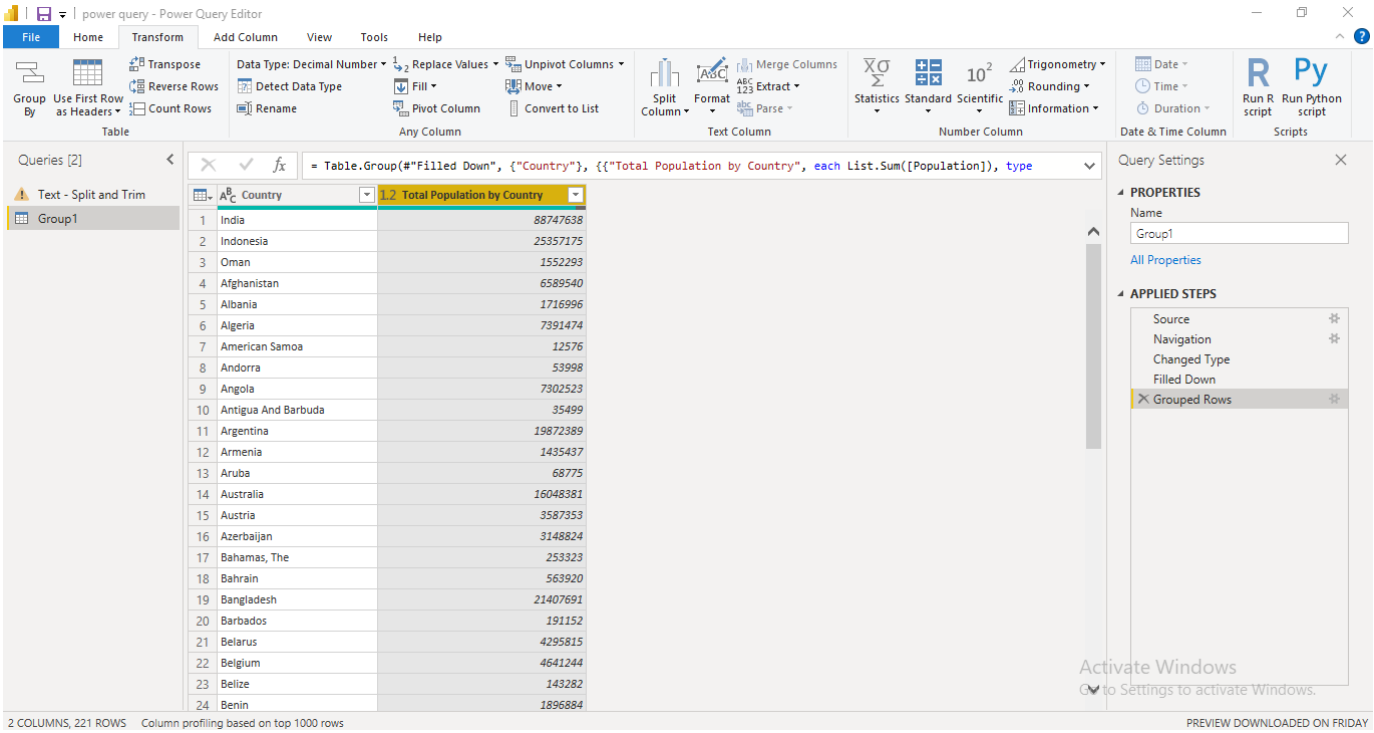
	Country	Cities	Population
1	India	Pune	4672000
2	India	Mumbai	18978000
3	India	Chennai	7163000
4	India	Hyderabad	6376000
5	India	Ahmadābād	5375000
6	India	Bengalūru	6787000
7	India	Delhi	15926000
8	India	Hāora	4841638
9	India	Kolkata	14787000
10	India	Sūrat	3842000
11	China	Beijing	11106000
12	China	Chengdu	4123000
13	China	Chongqing	6461000
14	China	Dongguan	4528000
15	China	Guangzhou	8829000
16	China	Shanghai	14987000
17	China	Shenyang	4787000
18	China	Shenzhen	7581000
19	China	Tianjin	7180000
20	China	Wuhan	7243000
21	Indonesia	Bandung	2394000
22	Indonesia	Bekasi	2378211
23	Indonesia	Bogor	918000
24	Indonesia	Cilacap	1174964

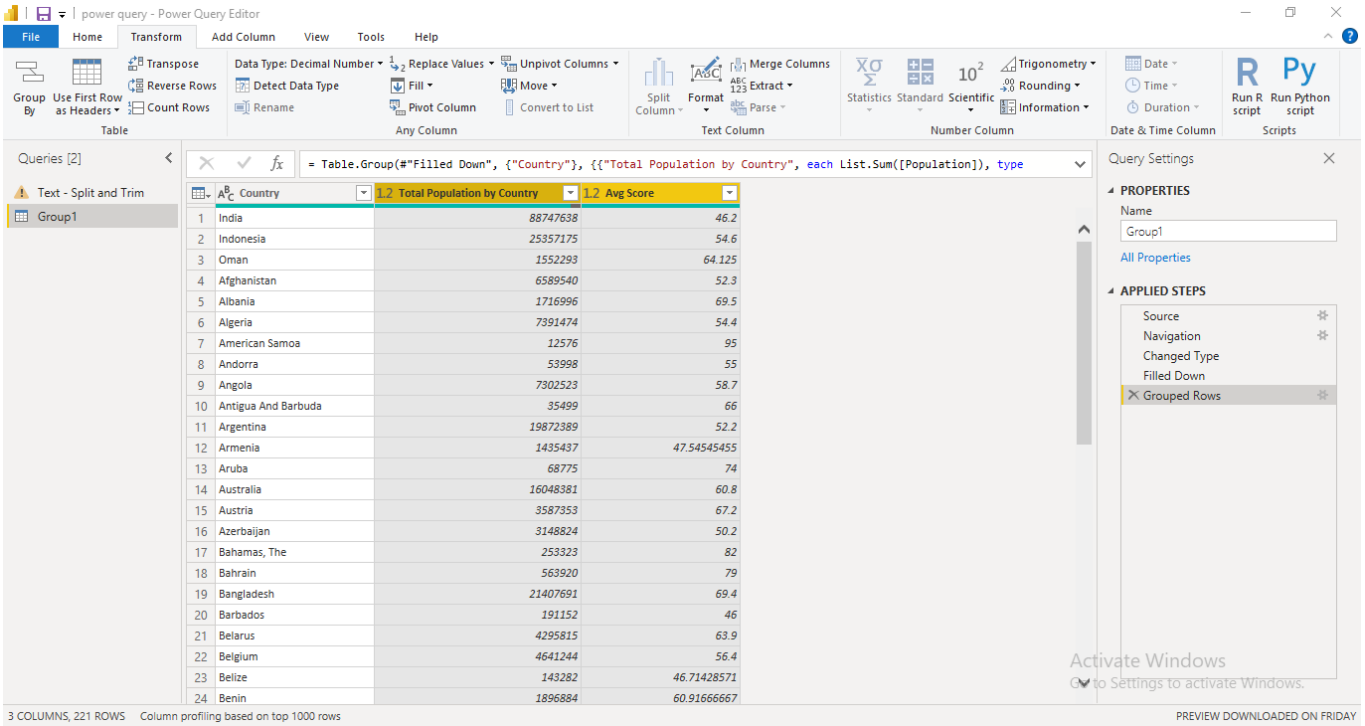
- **Grouping**

In the dataset below, I want them to group by country so I can see what is the average score and total population by country:



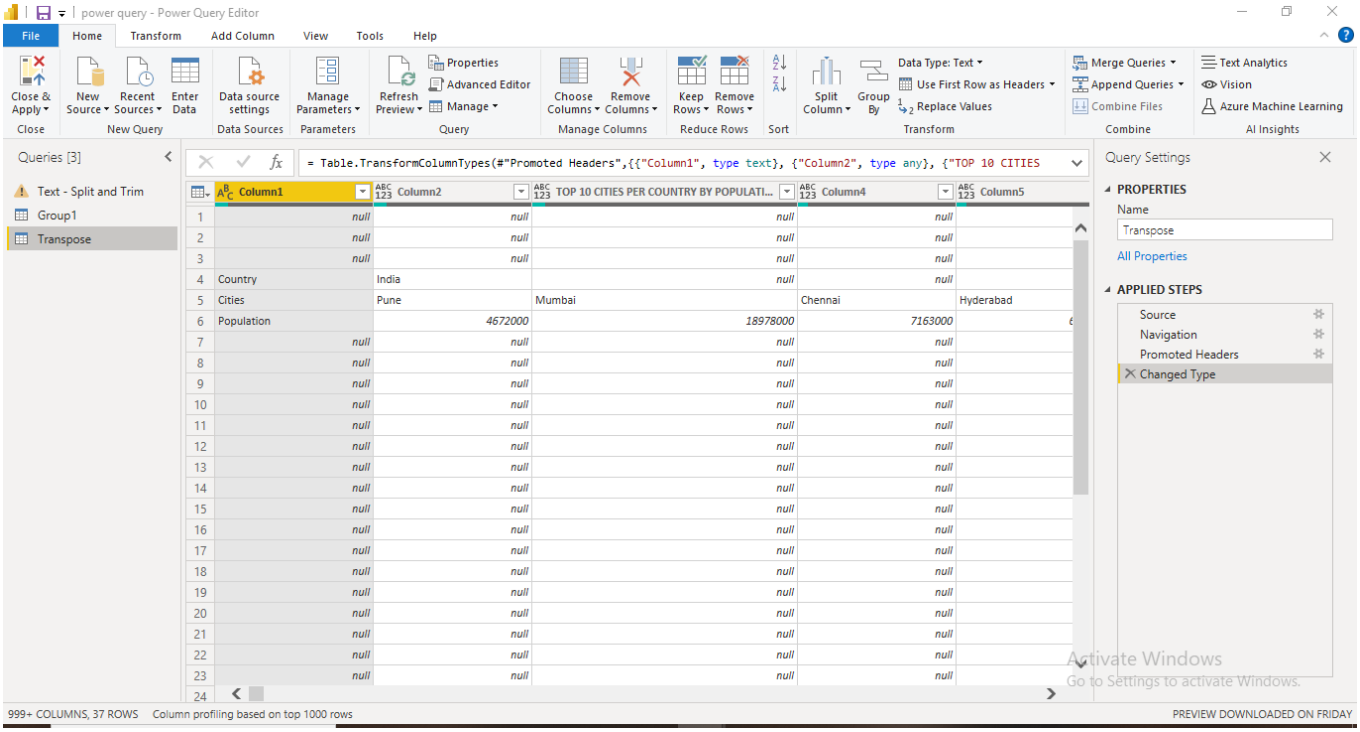
	Country	Cities	Population	Score
1	India	Pune	4672000	13
2	null	Pune	18978000	84
3	null	Chennai	7163000	40
4	null	Chennai	6376000	31
5	null	Pune	5375000	45
6	null	Bengalūru	6787000	62
7	null	Pune	15926000	13
8	null	Hāora	4841638	19
9	null	Pune	14787000	58
10	null	Chennai	3842000	97
11	Indonesia	Bandung	2394000	21
12	null	Bandung	2378211	67
13	null	Bandung	918000	74
14	null	Cilacap	1174964	100
15	null	Jakarta	9125000	84
16	null	Jakarta	1262000	33
17	null	Jakarta	2115000	31
18	null	Palembang	1749000	41
19	null	Semarang	1396000	57
20	null	Surabaya	2845000	38
21	Oman	ʻIbrī	101640	93
22	null	Al Buraymī	null	98
23	null	Al Madrah Samāʼil	47718	92
24	null	Ar Rustāq	null	33

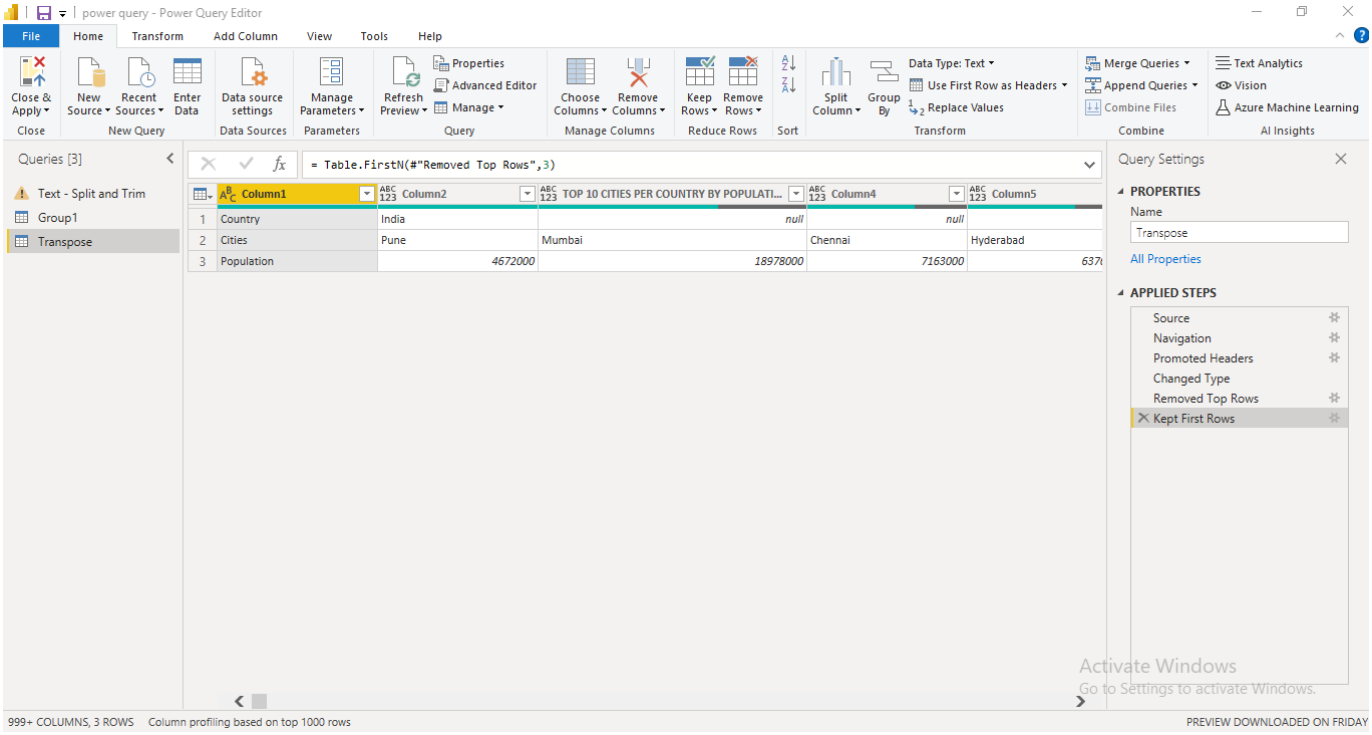




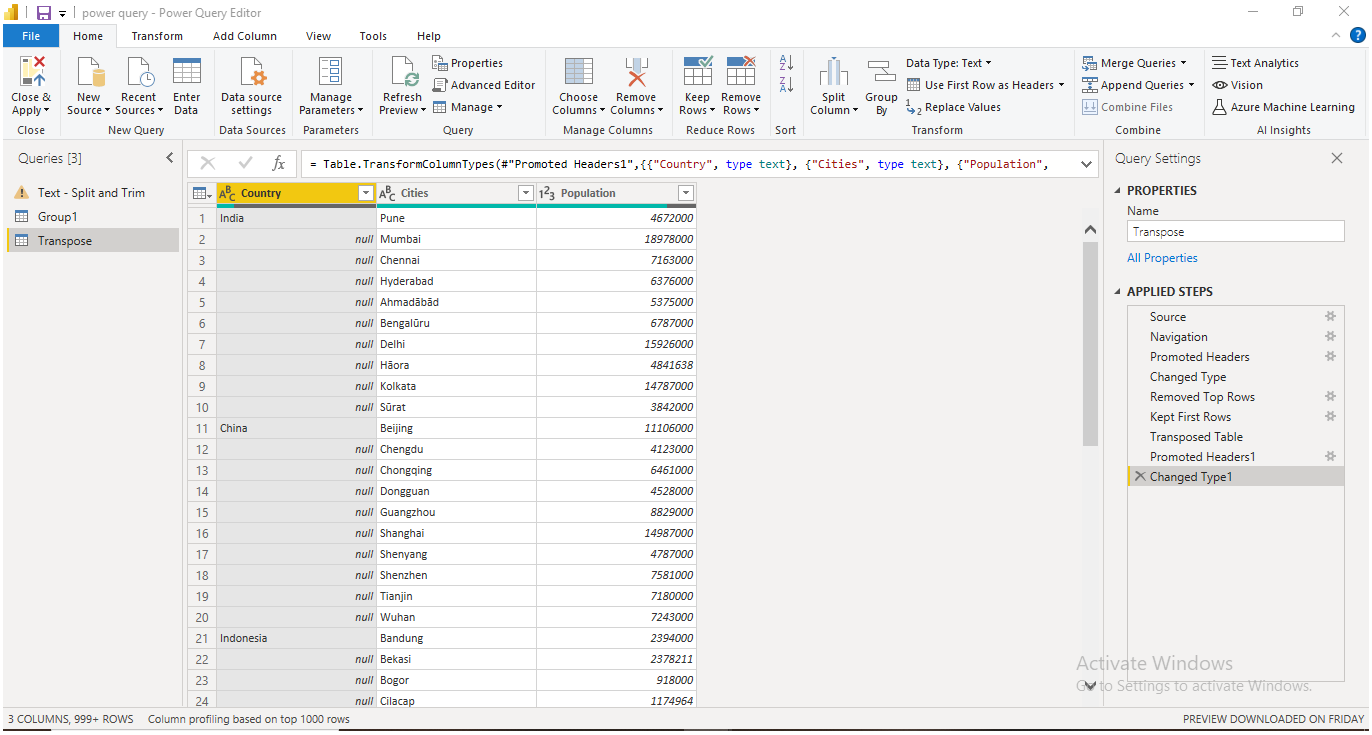
- **Transpose**

In below dataset, we have so many null values. We can see only3 rows have the values, so Ill just remove other rows first.





Next, I will transpose these rows:


power query - Power Query Editor
File
Home
Transform
Add Column
View
Tools
Help
Close & Apply
New Source
Recent Sources
Enter Data
Data source settings
Manage Parameters
Refresh Preview
Properties
Advanced Editor
Manage
Choose Columns
Remove Columns
Keep Rows
Remove Rows
Split Column
Group By
Data Type: Text
Use First Row as Headers
Replace Values
Merge Queries
Append Queries
Combine Files
Text Analytics
Vision
Azure Machine Learning
Close
New Query
Data Sources
Parameters
Query
Manage Columns
Reduce Rows
Sort
Transform
Combine
AI Insights
Queries [3]
Text - Split and Trim
Group1
Transpose
= Table.TransformColumnTypes(#"Promoted Headers1",{{"Country", type text}, {"Cities", type text}, {"Population",
Country
Cities
Population
1 India Pune 4672000
2 null Mumbai 18978000
3 null Chennai 7163000
4 null Hyderabad 6376000
5 null Ahmadābād 5375000
6 null Bengalūru 6787000
7 null Delhi 15926000
8 null Hāora 4841638
9 null Kolkata 14787000
10 null Sūrat 3842000
11 China Beijing 11106000
12 null Chengdu 4123000
13 null Chongqing 6461000
14 null Dongguan 4528000
15 null Guangzhou 8829000
16 null Shanghai 14987000
17 null Shenyang 4787000
18 null Shenzhen 7581000
19 null Tianjin 7180000
20 null Wuhan 7243000
21 Indonesia Bandung 2394000
22 null Bekasi 2378211
23 null Bogor 918000
24 null Cilacap 1174964
Query Settings
PROPERTIES
Name
Transpose
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Changed Type
Removed Top Rows
Kept First Rows
Transposed Table
Promoted Headers1
Changed Type1
Activate Windows
Go to Settings to activate Windows.
3 COLUMNS, 999+ ROWS
Column profiling based on top 1000 rows
PREVIEW DOWNLOADED ON FRIDAY