



Power Query

Used in Automation

Power Query is a data transformation and data preparation engine

Power Query includes many prebuilt transformation functions that can be used through the graphical interface of the Power Query Editor

Power Query is Used for Data Transformation, Data Preparation

Data Transformation means, after acquisition, we need to do some process or some kind of changes to removing the unwanted data etc

Data is being collected from various sources

Consider an example of a sales manager

And a Business Analyst

Suppose if a company is getting money from different kind of sources,

For eg:

Paypal

Gpay

PhonePay

Instamojo

Date, Time, Order, MailId, Phone Number, Cost, Expense etc

Problem:

Each and every Saturday's we want to present certain week's data

Like what are the sales, loss, profit, expense etc

By using Power Query, Automating the tasks

Instead of doing it manually every time

By adding a new week, it will automatically generate the result

Usage of Power Query

Excel for Windows

Excel for Mac

Power BI

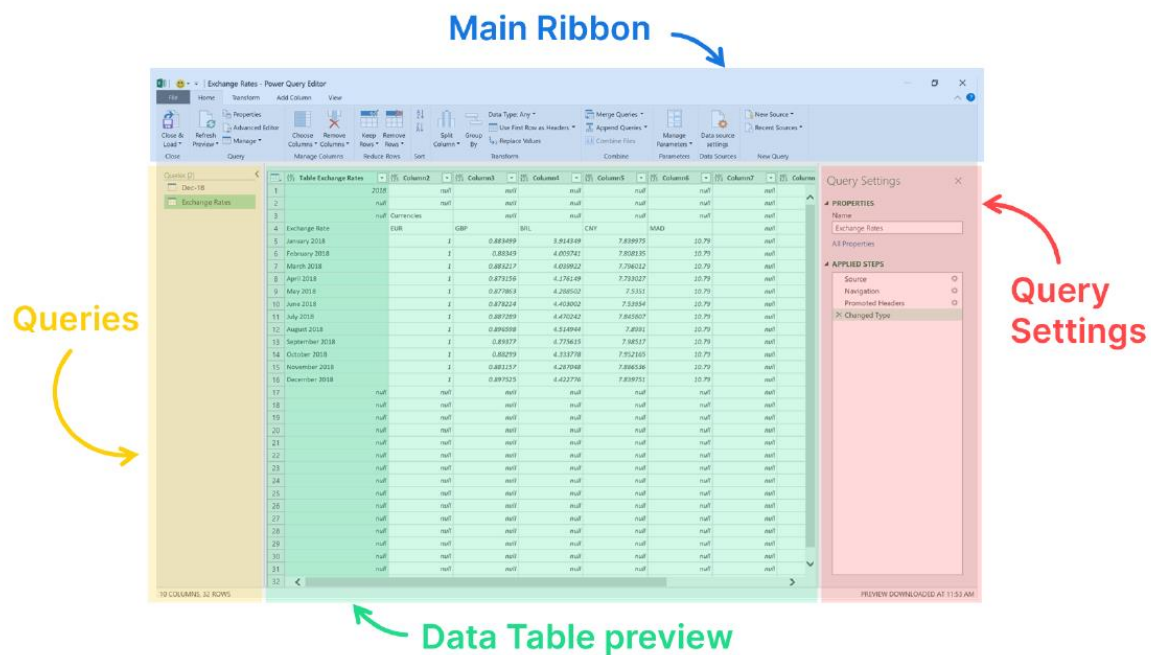
Power Apps

Power Automate

Azure Data Factory

SQL Server Integration Services

SQL Server Analysis Services



Elements:

Main ribbon - create queries from scratch

Queries - To keep track of all connections to data sources and streams

Data Table - preview To visualize your data result

dataset_sales_data - Power Query Editor

File Home Transform Add Column View

Close & Load Refresh Preview Advanced Editor Properties Manage Query

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 Manage Parameters Data source settings New Source Recent Sources

Queries [5]

Transform File from... Helper Queries [3] Sample File Parameter1 (Sa... Transform File Transform Sampl... Other Queries [1] dataset_sales_data

Table.TransformColumnTypes(#"Expanded Table Column1",{{"Source.Name", type text}, {"slno", Int64.Type},

	Source.Name	slno	orderid	orderDate	deliveryDate	Mr./Mrs./Miss	name	value
1	2018.csv	1	10001	01-01-2018	09-01-2018	mr	a	Rs.100
2	2018.csv	2	10002	02-01-2018	10-01-2018	mrs	b	Rs.200
3	2018.csv	3	10003	03-01-2018	11-01-2018	mr	c	Rs.300
4	2018.csv	4	10004	04-01-2018	12-01-2018	mrs	d	Rs.400
5	2018.csv	5	10005	05-01-2018	13-01-2018	mr	e	Rs.500
6	2018.csv	6	10006	06-01-2018	14-01-2018	mrs	f	Rs.600
7	2018.csv	7	10007	07-01-2018	15-01-2018	mr	g	Rs.700
8	2018.csv	8	10008	08-01-2018	16-01-2018	mrs	h	Rs.800
9	2018.csv	9	10009	09-01-2018	17-01-2018	mr	i	Rs.900
10	2019.csv	1	10010	17-01-2019	25-01-2019	mr	j	Rs.900
11	2019.csv	2	10011	18-01-2019	26-01-2019	mrs	k	Rs.1000
12	2019.csv	3	10012	19-01-2019	27-01-2019	mr	l	Rs.1100
13	2019.csv	4	10013	20-01-2019	28-01-2019	mrs	m	Rs.1200
14	2019.csv	5	10014	21-01-2019	29-01-2019	mr	n	Rs.1300
15	2019.csv	6	10015	22-01-2019	30-01-2019	mrs	o	Rs.1400
16	2019.csv	7	10016	23-01-2019	31-01-2019	mr	p	Rs.1500
17	2019.csv	8	xxx	24-01-2019	01-02-2019	mrs	q	Rs.1600
18	2019.csv	9	10018	25-01-2019	02-02-2019	mr	r	Rs.1700

8 COLUMNS, 18 ROWS

Query Settings

PROPERTIES

Name

dataset_sales_data

APPLIED STEPS

Source

Filtered Hidden Files1

Invoke Custom Function1

Renamed Columns1

Removed Other Columns1

Expanded Table Column1

Changed Type

PREVIEW DOWNLOADED AT 10:10

dataset_sales_data - Power Query Editor

File Home Transform Add Column View

Close & Load Refresh Preview Advanced Editor Properties Manage Query

Choose Columns Remove Columns Keep Rows Remove Rows Split Column Group By Data Type: Currency Use First Row as Headers Replace Values Merge Queries Append Queries Combine Files Manage Parameters Data source settings New Source Recent Sources

Queries [5]

Transform File from... Helper Queries [3] Sample File Parameter1 (Sa... Transform File Transform Sampl... Other Queries [1] dataset_sales_data

Table.TransformColumnTypes(#"Renamed Columns",{{"Amount", Currency.Type}})

	orderDate	deliveryDate	FullName	Amount
1	01-01-2018	09-01-2018	mr.a	100.00
2	02-01-2018	10-01-2018	mrs.b	200.00
3	03-01-2018	11-01-2018	mr.c	300.00
4	04-01-2018	12-01-2018	mrs.d	400.00
5	05-01-2018	13-01-2018	mr.e	500.00
6	06-01-2018	14-01-2018	mrs.f	600.00
7	07-01-2018	15-01-2018	mr.g	700.00
8	08-01-2018	16-01-2018	mrs.h	800.00
9	09-01-2018	17-01-2018	mr.i	900.00
10	17-01-2019	25-01-2019	mr.j	900.00
11	18-01-2019	26-01-2019	mrs.k	1,000.00
12	19-01-2019	27-01-2019	mr.l	1,100.00
13	20-01-2019	28-01-2019	mrs.m	1,200.00
14	21-01-2019	29-01-2019	mr.n	1,300.00
15	22-01-2019	30-01-2019	mrs.o	1,400.00
16	23-01-2019	31-01-2019	mr.p	1,500.00
17	25-01-2019	02-02-2019	mr.r	1,700.00

4 COLUMNS, 17 ROWS

Query Settings

PROPERTIES

Name

dataset_sales_data

APPLIED STEPS

Source

Filtered Hidden Files1

Invoke Custom Function1

Renamed Columns1

Removed Other Columns1

Expanded Table Column1

Changed Type

Filtered Rows

Removed Columns

Merged Columns

Split Column by Delimiter

Changed Type1

Removed Columns1

Renamed Columns

Changed Type2

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dataset_sales_data - Power Query Editor

File Home Transform Add Column View

Column From Custom Invoke Custom Examples Column Function General

Conditional Column Index Column Duplicate Column

Format ABC 123 Extract Parse From Text

Statistics Standard Scientific Rounding Information From Number

Date Time Duration From Date & Time

Queries [5]

- Transform File from...
- Helper Queries [3]
 - Sample File
 - Parameter1 (Sa...
 - Transform File
 - Transform Sampl...
- Other Queries [1]
 - dataset_sales_data

Table.TransformColumnTypes(#"Added Custom",{{"Profit", Currency.Type}})

	orderDate	deliveryDate	FullName	Amount	Profit
1	01-01-2018	09-01-2018	mr.a	100.00	50.00
2	02-01-2018	10-01-2018	mrs.b	200.00	150.00
3	03-01-2018	11-01-2018	mr.c	300.00	250.00
4	04-01-2018	12-01-2018	mrs.d	400.00	350.00
5	05-01-2018	13-01-2018	mr.e	500.00	450.00
6	06-01-2018	14-01-2018	mrs.f	600.00	550.00
7	07-01-2018	15-01-2018	mr.g	700.00	650.00
8	08-01-2018	16-01-2018	mrs.h	800.00	750.00
9	09-01-2018	17-01-2018	mr.i	900.00	850.00
10	17-01-2019	25-01-2019	mr.j	900.00	850.00
11	18-01-2019	26-01-2019	mrs.k	1,000.00	950.00
12	19-01-2019	27-01-2019	mr.l	1,100.00	1,050.00
13	20-01-2019	28-01-2019	mrs.m	1,200.00	1,150.00
14	21-01-2019	29-01-2019	mr.n	1,300.00	1,250.00
15	22-01-2019	30-01-2019	mrs.o	1,400.00	1,350.00
16	23-01-2019	31-01-2019	mr.p	1,500.00	1,450.00
17	25-01-2019	02-02-2019	mr.r	1,700.00	1,650.00

5 COLUMNS, 17 ROWS

Query Settings

PROPERTIES

Name
dataset_sales_data

APPLIED STEPS

- Invoke Custom Function1
- Renamed Columns1
- Removed Other Columns1
- Expanded Table Column1
- Changed Type
- Filtered Rows
- Removed Columns
- Merged Columns
- Split Column by Delimiter
- Changed Type1
- Removed Columns1
- Renamed Columns
- Changed Type2
- Added Custom
- Changed Type3

PREVIEW DOWNLOADED AT 10:22

Profit Based on Year

dataset_sales_data - Power Query Editor

File Home Transform Add Column View

Column From Custom Invoke Custom Examples Column Function General

Conditional Column Index Column Duplicate Column

Format ABC 123 Extract Parse From Text

Statistics Standard Scientific Rounding Information From Number

Date Time Duration From Date & Time

Queries [5]

- Transform File from...
- Helper Queries [3]
 - Sample File
 - Parameter1 (Sa...
 - Transform File
 - Transform Sampl...
- Other Queries [1]
 - dataset_sales_data

Table.RemoveColumns(#"Inserted Year",{"orderDate", "deliveryDate", "Amount"})

	FullName	Profit	Year
1	mr.a	50.00	2018
2	mrs.b	150.00	2018
3	mr.c	250.00	2018
4	mrs.d	350.00	2018
5	mr.e	450.00	2018
6	mrs.f	550.00	2018
7	mr.g	650.00	2018
8	mrs.h	750.00	2018
9	mr.i	850.00	2018
10	mr.j	850.00	2019
11	mrs.k	950.00	2019
12	mr.l	1,050.00	2019
13	mrs.m	1,150.00	2019
14	mr.n	1,250.00	2019
15	mrs.o	1,350.00	2019
16	mr.p	1,450.00	2019
17	mr.r	1,650.00	2019

3 COLUMNS, 17 ROWS

Query Settings

PROPERTIES

Name
dataset_sales_data

APPLIED STEPS

- Removed Other Columns1
- Expanded Table Column1
- Changed Type
- Filtered Rows
- Removed Columns
- Merged Columns
- Split Column by Delimiter
- Changed Type1
- Removed Columns1
- Renamed Columns
- Changed Type2
- Added Custom
- Changed Type3
- Inserted Year
- Removed Columns2

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Now, Home -> Close and Load

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do Share

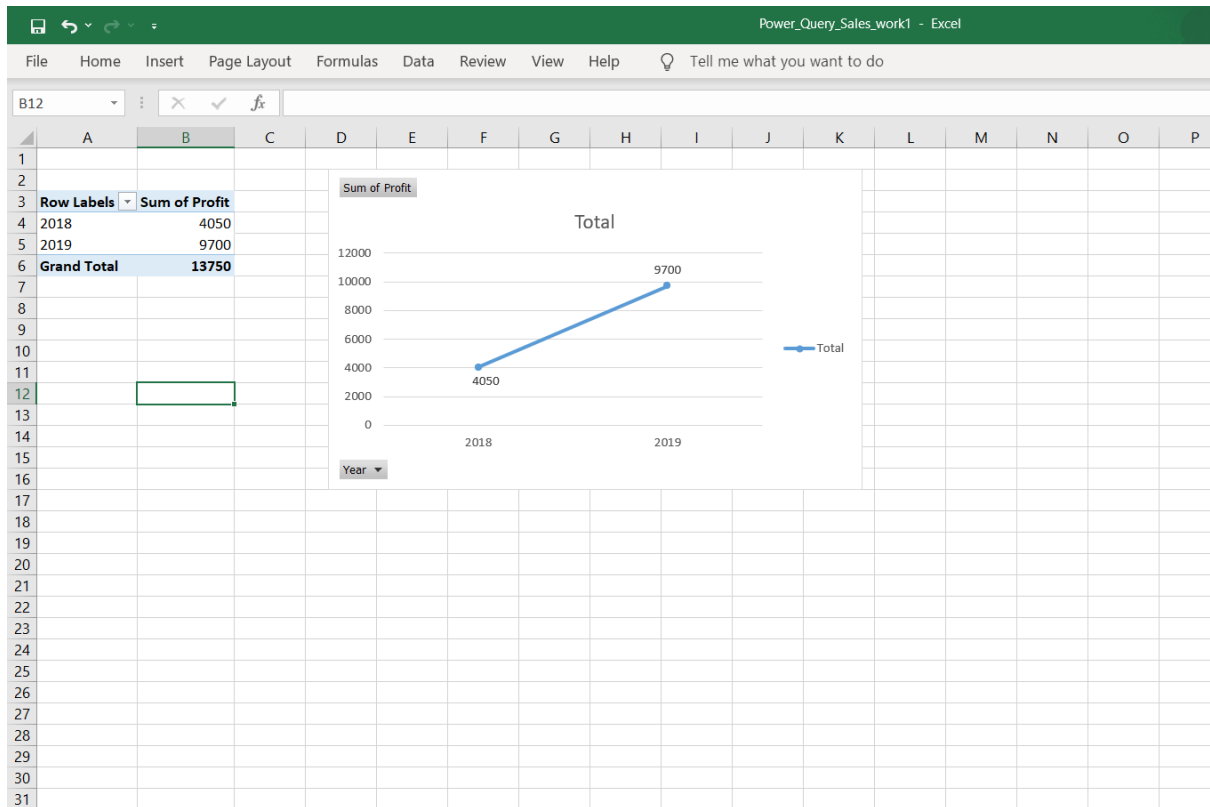
D2

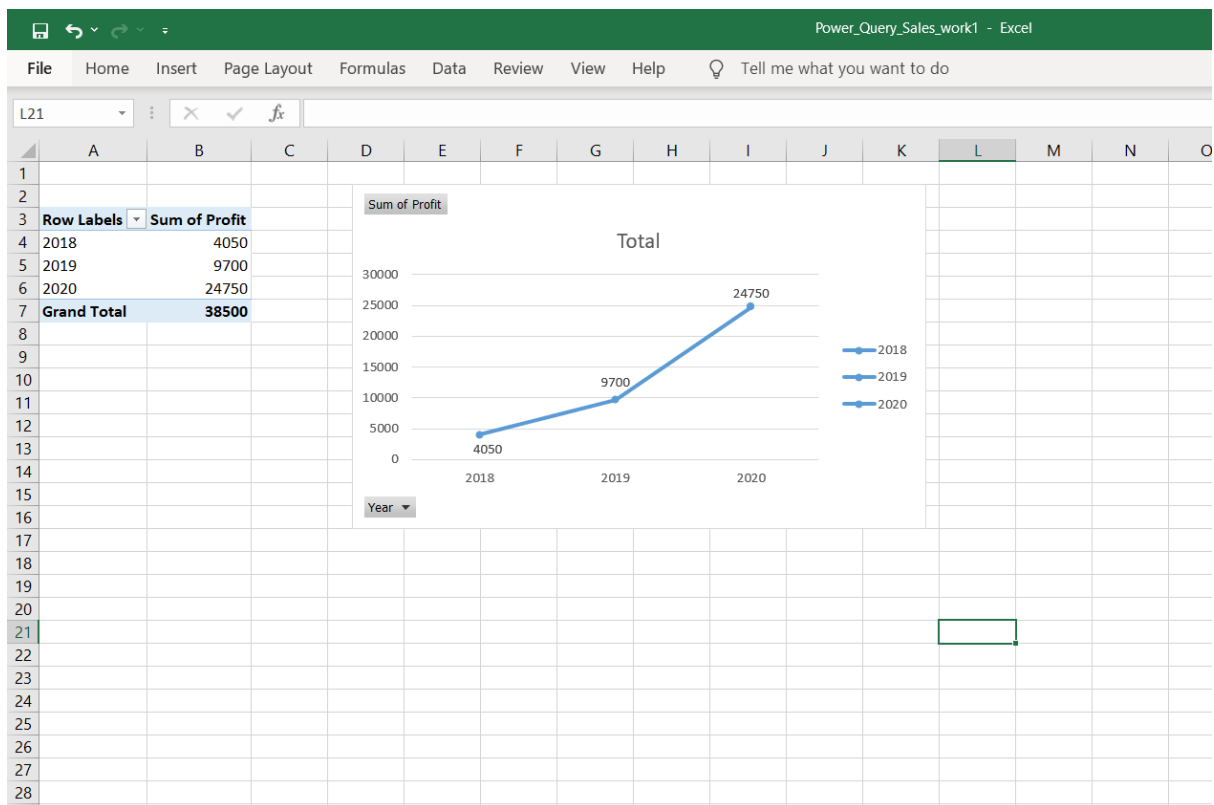
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	FullName	Profit	Year															
2	mr.a	50	2018															
3	mrs.b	150	2018															
4	mr.c	250	2018															
5	mrs.d	350	2018															
6	mr.e	450	2018															
7	mrs.f	550	2018															
8	mr.g	650	2018															
9	mrs.h	750	2018															
10	mr.i	850	2018															
11	mr.j	850	2019															
12	mrs.k	950	2019															
13	mr.l	1050	2019															
14	mrs.m	1150	2019															
15	mr.n	1250	2019															
16	mrs.o	1350	2019															
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Workbook Queries

5 queries

- Transform File from dataset_sales_d... [2]
- Helper Queries [3]
 - Sample File
 - Connection only.
 - Parameter1 (Sample File)
 - Connection only.
 - Transform File
 - Connection only.
 - Transform Sample File
 - Connection only.
- Other Queries [1]
 - dataset_sales_data
 - 17 rows loaded.





Time Management. It is important to Automate some tasks

Steps that I took

Open Power Query
 For Excel >2016
 For Excel 2010 & 2013

Load File Choose option from Ribbon, based on the File format

Transform/Edit Data Click Edit, to do transformation in data using Power query Editor

Once Finished Transformation, click Home > Close & Load

Remove Rows
Based on Number
Remove empty rows

Remove Columns Empty Columns

Split Columns
Based on Delimiter
Based on Character count

Renaming Header

Unpivot Columns

Filter

Combine New source from folder all sheet name should be same

Replace

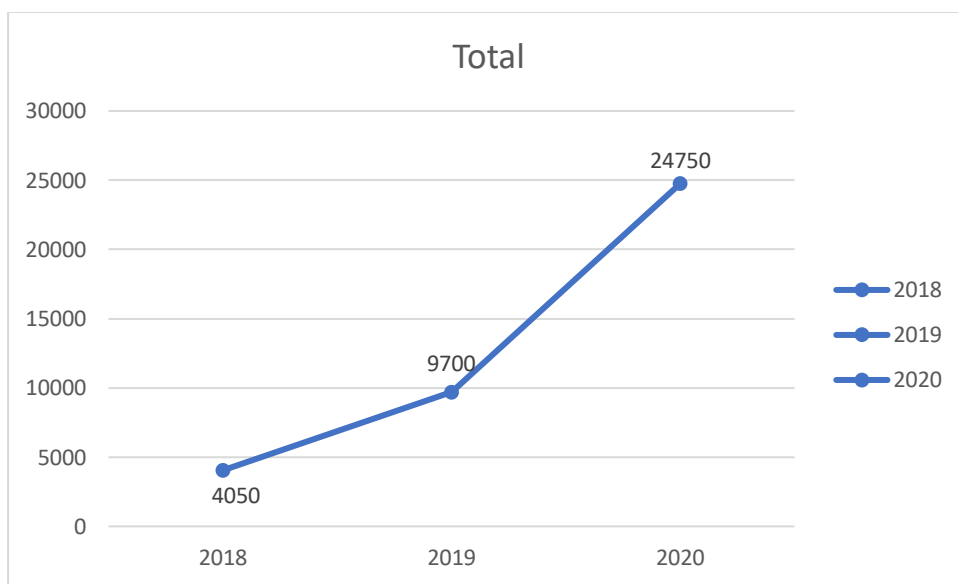
Merge Queries Forget about VLOOKUP

Create Columns Concatenate Right click 2 Columns and merge

Change Type

When You give new year report, and refresh, the result will be,

Row Labels	Sum of Profit
2018	4050
2019	9700
2020	24750
Grand Total	38500



FullName	Profit	Year
mr.a	50	2018
mrs.b	150	2018
mr.c	250	2018
mrs.d	350	2018
mr.e	450	2018
mrs.f	550	2018
mr.g	650	2018
mrs.h	750	2018
mr.i	850	2018
mr.j	850	2019
mrs.k	950	2019
mr.l	1050	2019
mrs.m	1150	2019
mr.n	1250	2019
mrs.o	1350	2019
mr.p	1450	2019
mr.r	1650	2019
mr.s	1950	2020
mrs.t	2150	2020
mr.u	2350	2020
mrs.s	2550	2020
mr.t	2750	2020
mrs.u	2950	2020
mr.s	3150	2020
mrs.t	3350	2020
mr.u	3550	2020

Hence You can Automate like this.