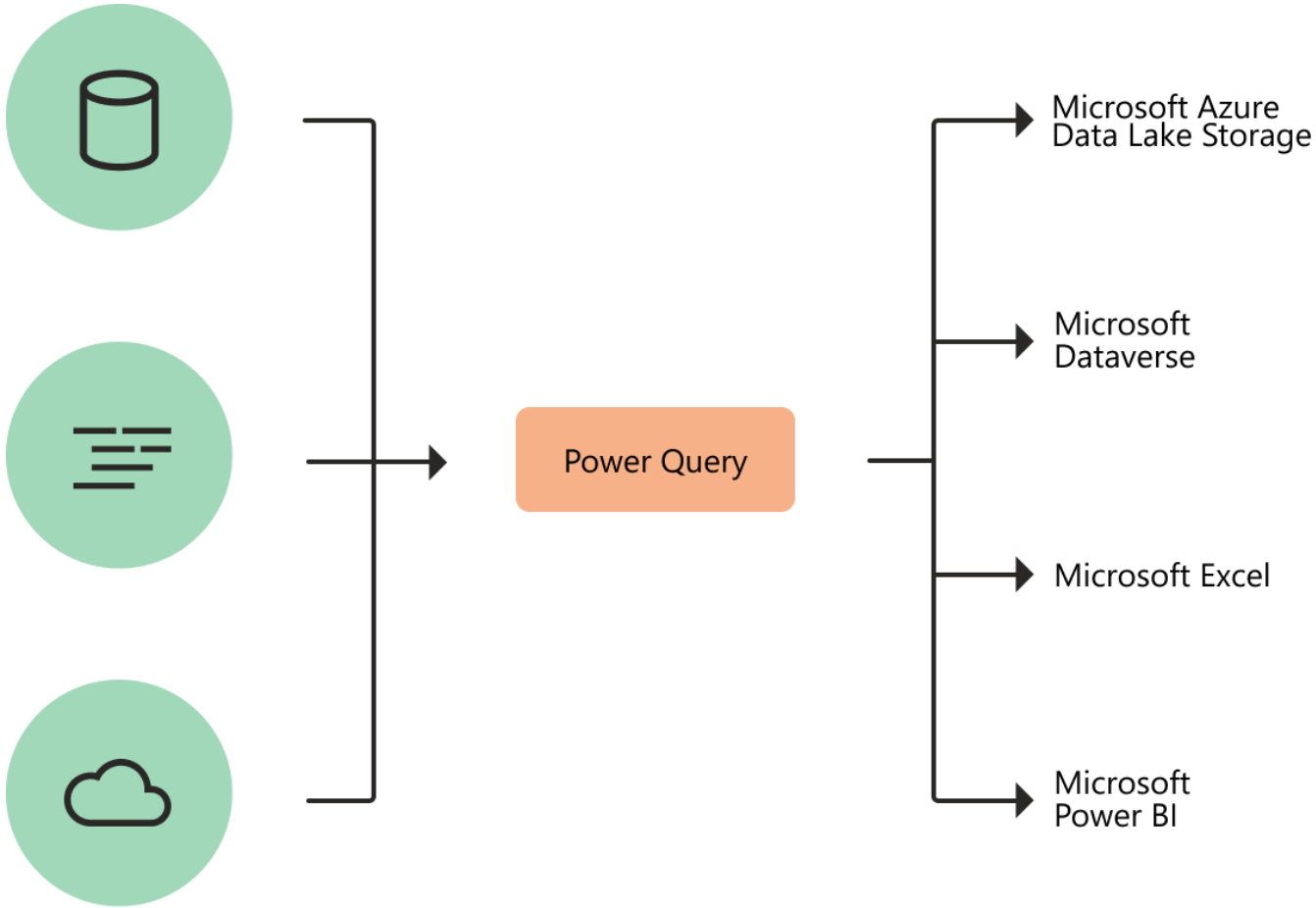
Power Query Fundamentals

By James Favour

What is Power Query?

Power Query is a data transformation and data preparation engine. Power Query comes with a graphical interface for getting data from sources and a Power Query Editor for applying transformations. Because the engine is available in many products and services, the destination where the data will be stored depends on where Power Query was used. Using Power Query, you can perform the extract, transform, and load (ETL) processing of data.



How Power Query helps with data acquisition

A significant portion of a data analyst's schedule is allocated to the task of data preparation, which delays the work of analysis and decision-making. This predicament is attributed to various challenges, and Power Query helps address many of them.

Existing challenge	How does Power Query help?
Finding and connecting to data is too difficult	Power Query enables connectivity to a wide range of data sources, including data of all sizes and shapes.
Experiences for data connectivity are too fragmented	Consistency of experience, and parity of query capabilities over all data sources.
Data often needs to be reshaped before consumption	Highly interactive and intuitive experience for rapidly and iteratively building queries over any data source, of any size.
Any shaping is one-off and not repeatable	When using Power Query to access and transform data, you define a repeatable process (query) that can be easily refreshed in the future to get up-to-date data.
Volume (data sizes), velocity (rate of change), and variety (breadth of data sources and data shapes)	Power Query offers the ability to work against a subset of the entire dataset to define the required data transformations, allowing you to easily filter down and transform your data to a manageable size.

Class Objectives

Basic Transformations

Import a CSV file and automate basic transformations such as Pivot and Unpivot.

Extracting Data

Learn how to extract more information fields that combine two or more values.

Consolidating Data

Learn how to group or combine data from different tables, or from files within the same folder.

Dealing with Errors

Learn how to avoid, interpret and fix errors that you experience in Power Query.

Basic Transformation

Section Objectives

Tasks

01. **Import CSV files and familiarize with the Power Query editor.**

02. **Transform bad data into clean data and load it to a worksheet.**

Skills

Identify a CSV File

Load a CSV File

Apply Basic Filters

Delete Unwanted Data

Unpivot Values

Pivot Values

What Is a CSV File

A **comma separated values (CSV)** is a type of text file that shows each of the values in a row, separated by commas.

PQ Exercise 1a - Notepad

File Edit Format View Help

```
QueryName,MonthlySalesAndMarginSnapshot,,,,,,,,,,,,,,,,
SourceData,SalesView_Updated2020Jan,,,,,,,,,,,,,,,,
Server,CFI_Retail,,,,,,,,,,,,,,,,
IP,21.168.312.123,,,,,,,,,,,,,,,,
Config Mode,Admin,,,,,,,,,,,,,,,,
Query Date,January 1st 2020,,,,,,,,,,,,,,,,
Query Time,4:22 PM,,,,,,,,,,,,,,,,
Status,Complete,,,,,,,,,,,,,,,,
Reference,XXSYS-ENTERPRISEDATA-DOWNLOAD-20292382382,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,,,,,
Metric,Store,Cat,Ref1,01/01/2017,01/02/2017,01/03/2017,,01/04/2017,01/05/2017,01/06/2017,,
Sales,1,1,11XXSYS,24924.5,46039.49,41595.55,,19403.54,21827.9,21043.39,,22136.64,26229.21,
,1,2,12XXSYS,50605.27,44682.74,47928.89,,44292.87,48397.98,43751.94,,43615.49,41892.55,474
,1,3,13XXSYS,13740.12,10887.84,11523.47,,11135.17,12275.58,10123.45,,9001.37,10366.85,1115
,1,4,14XXSYS,39954.04,35351.21,36826.95,,34660.16,38086.19,32668.67,,34118.11,33872.07,378
,2,1,21XXSYS,35034.06,60483.7,58221.52,,25962.32,27372.05,28660.87,,28446.92,32213.99,8276
,2,2,22XXSYS,74661.16,65487.46,70853.58,,64963.9,68428.64,66622.03,,64307.01,59770.18,6828
,2,3,23XXSYS,16873.2,13821.01,14607.28,,15635.95,14895.96,13061.56,,10394.28,12406.44,1340
,2,4,24XXSYS,47681.96,44197.95,46131.14,,42126.71,46937.81,42489.21,,44622.56,41455.34,479
```

More efficient storage than an Excel file.

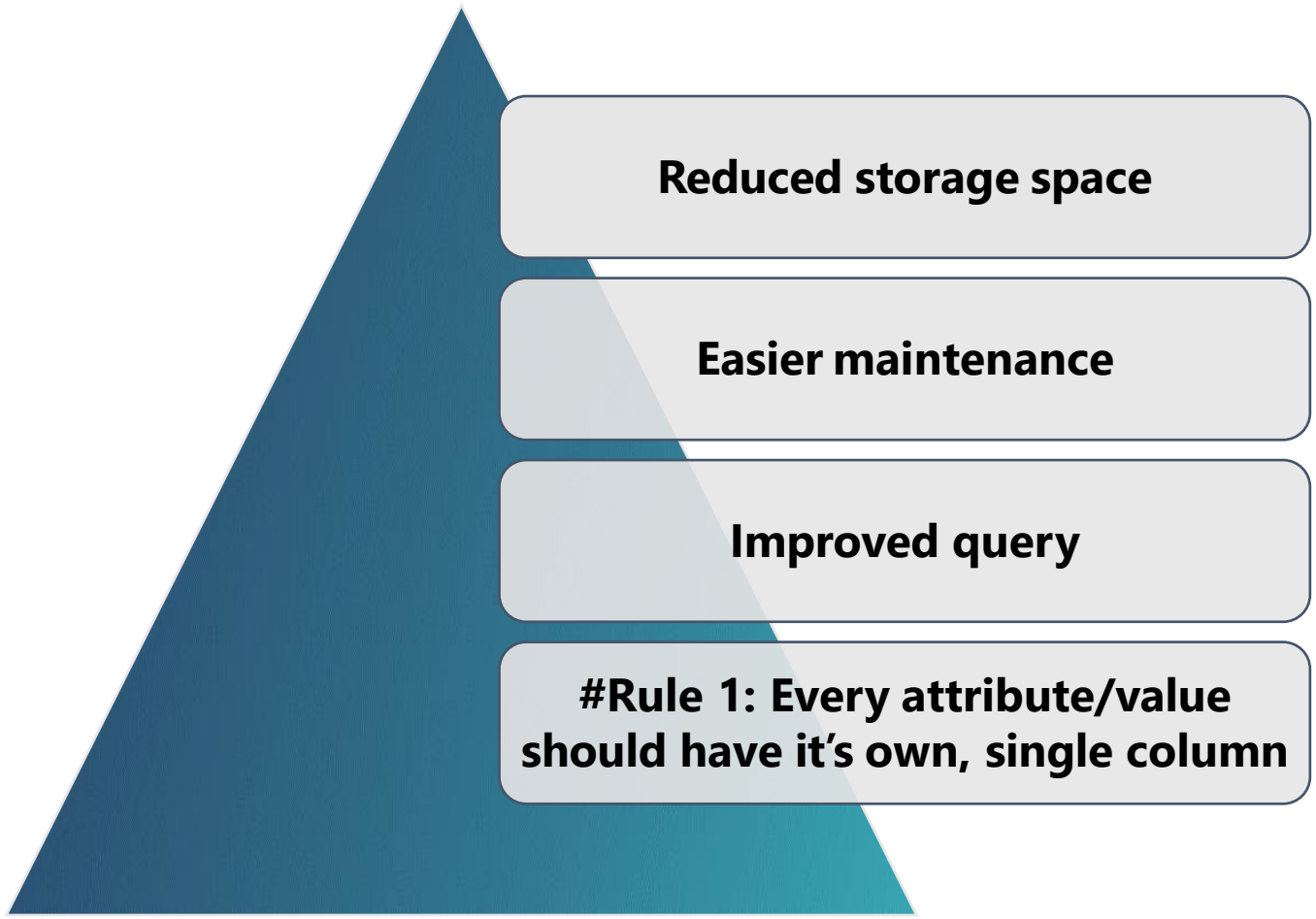
The comma is known as a delimiter, since it separates each value.

Excel is great at interpreting CSV files!

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	QueryNan	MonthlySalesAndMarginSnapshot													
2	SourceDat	SalesView_Updated2020Jan													
3	Server	CFI_Retail													
4	IP	21.168.312.123													
5	Config Mc	Admin													
6	Query Dat	January 1st 2020													
7	Query Tim	4:22 PM													
8	Status	Complete													
9	Reference	XXSYS-ENTERPRISEDATA-DOWNLOAD-20292382382													
10															
11	Metric	Store	Cat	Ref1	01/01/2017	01/02/2017	01/03/2017		01/04/2017	01/05/2017	01/06/2017		01/07/2017	01/08/2017	01/09/2017
12	Sales	1	1	11XXSYS	24924.5	46039.49	41595.55		19403.54	21827.9	21043.39		22136.64	26229.21	57258.43
13		1	2	12XXSYS	50605.27	44682.74	47928.89		44292.87	48397.98	43751.94		43615.49	41892.55	47450.5
14		1	3	13XXSYS	13740.12	10887.84	11523.47		11135.17	12275.58	10123.45		9001.37	10366.85	11157.08
15		1	4	14XXSYS	39954.04	35351.21	36826.95		34660.16	38086.19	32668.67		34118.11	33872.07	37809.49
16		2	1	21XXSYS	35034.06	60483.7	58221.52		25962.32	27372.05	28660.87		28446.92	32213.99	82766.07
17		2	2	22XXSYS	74661.16	65487.46	70853.58		64963.9	68428.64	66622.03		64307.01	59770.18	68286.2
18		2	3	23XXSYS	16873.2	13821.01	14607.28		15635.95	14895.96	13061.56		10394.28	12406.44	13404.23
19		2	4	24XXSYS	47681.96	44197.95	46131.14		42126.71	46937.81	42489.21		44622.56	41455.34	47951.76
20															
21															
22															

Database Normalization

Data Normalization is a process of transforming data into a robust form for storage and analysis. The benefits include:



Database Normalization

Example Sales Table

Sales Value USD		Year	2019	2019	2019	2019
Product #	**Product Group**	**Product Color**	**01/31/2019**	**05/14/2019**	**05/21/2019**	**07/13/2019**
80725	Tools	Chrome	192	0	0	0
80726	Electric Doors	White	0	1,400	0	0
80727	Storage Boxes	Grey	0	0	1,300	0
90724	Radios	Black	0	0	0	57

There should be 4 values (not 16).

There should only be 1 column for sales.

Example Sales Table

Product #	Product Group	Product Color	Date	Sales USD
80725	Tools	Chrome	01/31/2019	192
80726	Electric Doors	White	05/14/2019	1,400
80727	Storage Boxes	Grey	05/21/2019	1300
90724	Radios	Black	07/13/2019	57

Power Query Exercise 1A: Basic CSV Unpivot

Transform a CSV file into a clean list of sales.

PQ Exercise 1a - Notepad

File Edit Format View Help

```
QueryName,MonthlySalesAndMarginSnapshot,,,,,,,,,,,,,,,,,,
SourceData,SalesView_Updated2020Jan,,,,,,,,,,,,,,,,,,
Server,CFI_Retail,,,,,,,,,,,,,,,,,,
IP,21.168.312.123,,,,,,,,,,,,,,,,,,
Config Mode,Admin,,,,,,,,,,,,,,,,,,
Query Date,January 1st 2020,,,,,,,,,,,,,,,,,,
Query Time,4:22 PM,,,,,,,,,,,,,,,,,,
Status,Complete,,,,,,,,,,,,,,,,,,
Reference,XXSYS-ENTERPRISEDATA-DOWNLOAD-20292382382,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,,,,,,,
Metric,Store,Cat,Ref1,01/01/2017,01/02/2017,01/03/2017,,01/04/2017,01/05/2017,01/06/2017,,
Sales,1,1,11XXSYS,24924.5,46039.49,41595.55,,19403.54,21827.9,21043.39,,22136.64,26229.21,
,1,2,12XXSYS,50605.27,44682.74,47928.89,,44292.87,48397.98,43751.94,,43615.49,41892.55,474
,1,3,13XXSYS,13740.12,10887.84,11523.47,,11135.17,12275.58,10123.45,,9001.37,10366.85,1115
,1,4,14XXSYS,39954.04,35351.21,36826.95,,34660.16,38086.19,32668.67,,34118.11,33872.07,378
,2,1,21XXSYS,35034.06,60483.7,58221.52,,25962.32,27372.05,28660.87,,28446.92,32213.99,827
,2,2,22XXSYS,74661.16,65487.46,70853.58,,64963.9,68428.64,66622.03,,64307.01,59770.18,6828
,2,3,23XXSYS,16873.2,13821.01,14607.28,,15635.95,14895.96,13061.56,,10394.28,12406.44,1348
,2,4,24XXSYS,47681.96,44197.95,46131.14,,42126.71,46937.81,42489.21,,44622.56,41455.34,479
```

	A	B	C	D
1	Store	Cat	Date	Sales
2	1	1	01/01/2017	24924.5
3	1	1	02/01/2017	46039.49
4	1	1	03/01/2017	41595.55
5	1	1	04/01/2017	19403.54
6	1	1	05/01/2017	21827.9
7	1	1	06/01/2017	21043.39
8	1	1	07/01/2017	22136.64
9	1	1	08/01/2017	26229.21
10	1	1	09/01/2017	57258.43
11	1	1	10/01/2017	42960.91
12	1	1	11/01/2017	17596.96
13	1	1	12/01/2017	16145.35
14	1	2	01/01/2017	50605.27
15	1	2	02/01/2017	44682.74
16	1	2	03/01/2017	47928.89
17	1	2	04/01/2017	44292.87
18	1	2	05/01/2017	48397.98
19	1	2	06/01/2017	43751.94
20	1	2	07/01/2017	43615.49
21	1	2	08/01/2017	41892.55
22	1	2	09/01/2017	47450.5
23	1	2	10/01/2017	46549.73
24	1	2	11/01/2017	45025.02
25	1	2	12/01/2017	44418.11
26	1	3	01/01/2017	13740.12
27	1	3	02/01/2017	10887.84
28	1	3	03/01/2017	11523.47

Power Query Exercise 1A: Basic CSV Unpivot

Query Steps

	Steps	Directions
1	Open **Blank Excel File** and import data.	Data > Get Data > From File > From Text/CSV
2	Ensure the file is using a comma delimiter, and press **Transform** to load the Power Query editor.	
3	**Look around the Power Query Editor including: Data Area, List of Queries (left), Query Steps (right), Ribbon (top).**	
4	Delete 10 unwanted header rows from CSV data.	Home > Remove Rows > Remove Top Rows
5	Identify correct headers from the data.	Home > Transform > Use First Row as Headers
6	Get familiar with the query steps pane, identifying one step per transformation.	View > Query Settings
7	Delete unwanted Ref1 and Metric columns.	Click column header > Home > Remove Columns
8	Highlight Store & Cat columns, and unpivot the rest.	Transform > Unpivot Columns > Unpivot Other Columns
9	Filter Blank rows from the Value column.	Use the column header dropdown as in Excel
10	Rename Attribute and Value columns to Date and Sales, respectively.	Double click on column headers to rename
11	Change Date and Sales column types to Date and Decimal Number, respectively.	Home > Data Type: Date or Decimal Number
12	Rename query. Close and load query to worksheet.	Home > Close & Load > Close & Load To

Power Query Exercise 1B: CSV Import N Columns

We now have a query that transforms our data into a clean list of sales.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	QueryNan	MonthlySalesAndMarginSnapshot																					
2	SourceDat	SalesView_Updated2020Jan																					
3	Server	CFI_Retail																					
4	IP	21.168.312.123																					
5	Config Mc	Admin																					
6	Query Dat	January 1st 2020																					
7	Query Tim	4:22 PM																					
8	Status	Complete																					
9	Reference	XXSYS-ENTERPRISEDATA-DOWNLOAD-20292382382																					
10																							
11	Metric	Store	Cat	Ref1	01/01/2017	01/02/2017	01/03/2017		01/04/2017	01/05/2017	01/06/2017		01/07/2017	01/08/2017	01/09/2017		01/10/2017	01/11/2017	01/12/2017		01/01/2018	01/02/2018	01/03
12	Sales	1	1	11XXSYS	24924.5	46039.49	41595.55		19403.54	21827.9	21043.39		22136.64	26229.21	57258.43		42960.91	17596.96	16145.35		24924.5	46039.49	415
13		1	2	12XXSYS	50605.27	44682.74	47928.89		44292.87	48397.98	43751.94		43615.49	41892.55	47450.5		46549.73	45025.02	44418.11		50605.27	44682.74	479
14		1	3	13XXSYS	13740.12	10887.84	11523.47		11135.17	12275.58	10123.45		9001.37	10366.85	11157.08		10179.29	9226.8	8868.93		13740.12	10887.84	115
15		1	4	14XXSYS	39954.04	35351.21	36826.95		34660.16	38086.19	32668.67		34118.11	33872.07	37809.49		36174.43	34740.19	33806.71		39954.04	35351.21	368
16		2	1	21XXSYS	35034.06	60483.7	58221.52		25962.32	27372.05	28660.87		28446.92	32213.99	82766.07		66560	21308.59	22163.12		35034.06	60483.7	582
17		2	2	22XXSYS	74661.16	65487.46	70853.58		64963.9	68428.64	66622.03		64307.01	59770.18	68286.2		64295.22	65172.2	66471.86		74661.16	65487.46	708
18		2	3	23XXSYS	16873.2	13821.01	14607.28		15635.95	14895.96	13061.56		10394.28	12406.44	13404.23		12873.09	11547.5	11862.26		16873.2	13821.01	146
19		2	4	24XXSYS	47681.96	44197.95	46131.14		42126.71	46937.81	42489.21		44622.56	41455.34	47951.76		45280.89	43463.55	43703.76		47681.96	44197.95	461
20																							

But what happens if the source file is updated with more data than before?

Power Query Exercise 1B: CSV Import N Columns

Query Steps

	Steps	Directions
1	Duplicate the first query.	Right click on desired query > Duplicate
2	Click on the duplicate and modify the source to **File 1B.**	Use the formula bar to change the referenced source file
3	**Click on the final step to see the what the result looks like. Great, but we don't see the data for 2018 months?**	
4	Change the Source step so that it doesn't specify number of columns.	Delete **Columns=19** from the formula bar
5	**Click on the final query step. The query now returns all the data.**	
6	**But let's consider what would happen if we had less columns than we'd started with.** • Let's click on the Changed Type step. • Each step is named by date, so if dates are different, it wont work. These Changed Type steps were auto-created.	
7	Remove both Changed Type steps that were auto-created.	Delete both **Changed Type** and **Changed Type1** steps
8	Change the settings so that auto-steps are not created.	File > Options > Query Options > Data Load > Type Detection
9	Change data type of Store and Cat to whole number.	Home > Data Type: Whole Number
10	Rename the query to this slide's title.	

Power Query Exercise 1C: Filter Non-dates

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	QueryNan	MonthlySalesAndMarginSnapshot												
2	SourceDat	SalesView_Updated2020Jan												
3	Server	CFI_Retail												
4	IP	21.168.312.123												
5	Metric	Store	Cat	Ref1	Ref2	01/01/2017	01/02/2017	01/03/2017	Q1 2017	01/04/2017	01/05/2017	01/06/2017	Q2 2017	01/07/
6	Sales	1	1	11XXSYS	Sales11	24924.5	46039.49	41595.55	112559.5	19403.54	21827.9	21043.39	62274.83	221
7	Sales	1	2	12XXSYS	Sales12	50605.27	44682.74	47928.89	143216.9	44292.87	48397.98	43751.94	136442.8	436
8	Sales	1	3	13XXSYS	Sales13	13740.12	10887.84	11523.47	36151.43	11135.17	12275.58	10123.45	33534.2	90
9	Sales	1	4	14XXSYS	Sales14	39954.04	35351.21	36826.95	112132.2	34660.16	38086.19	32668.67	105415	341
10	Sales	2	1	21XXSYS	Sales21	35034.06	60483.7	58221.52	153739.3	25962.32	27372.05	28660.87	81995.24	284
11	Sales	2	2	22XXSYS	Sales22	74661.16	65487.46	70853.58	211002.2	64963.9	68428.64	66622.03	200014.6	643
12	Sales	2	3	23XXSYS	Sales23	16873.2	13821.01	14607.28	45301.49	15635.95	14895.96	13061.56	43593.47	103
13	Sales	2	4	24XXSYS	Sales24	47681.96	44197.95	46131.14	138011.1	42126.71	46937.81	42489.21	131553.7	446
14														

Remove unwanted data by filtering non-dates.

	A	B	C	D
1	Store	Cat	Date	Sales
2	1	1	01/01/2017	24924.5
3	1	1	02/01/2017	46039.49
4	1	1	03/01/2017	41595.55
5	1	1	04/01/2017	19403.54
6	1	1	05/01/2017	21827.9
7	1	1	06/01/2017	21043.39
8	1	1	07/01/2017	22136.64
9	1	1	08/01/2017	26229.21
10	1	1	09/01/2017	57258.43
11	1	1	10/01/2017	42960.91
12	1	1	11/01/2017	17596.96
13	1	1	12/01/2017	16145.35
14	1	1	01/01/2018	24924.5
15	1	1	02/01/2018	46039.49
16	1	1	03/01/2018	41595.55
17	1	1	04/01/2018	19403.54
18	1	1	05/01/2018	21827.9
19	1	1	06/01/2018	21043.39
20	1	1	07/01/2018	22136.64
21	1	1	08/01/2018	26229.21
22	1	1	09/01/2018	57258.43
23	1	1	10/01/2018	42960.91
24	1	1	11/01/2018	17596.96
25	1	1	12/01/2018	16145.35
26	1	2	01/01/2017	50605.27
27	1	2	02/01/2017	44682.74
28	1	2	03/01/2017	47928.89
29	1	2	04/01/2017	44292.87
30	1	2	05/01/2017	48397.98
31	1	2	06/01/2017	43751.94

Power Query Exercise 1C: Filter Non-dates

Query Steps

	Steps	Directions
1	Create a new query and reference CSV **File 1C**.	Home > New Source > File > Text/CSV
2	Change the Source step so that it doesn't specify number of columns.	Delete **Columns=19,** from the formula bar
3	Delete 4 unwanted header rows from CSV data.	Home > Remove Rows > Remove Top Rows
4	Identify correct headers from the data.	Home > Transform > Use First Row as Headers
5	Delete **Ref1, Ref2** and **Metric** columns.	Click column header > Home > Remove Columns
6	Highlight Store & Cat columns, and unpivot the rest.	Transform > Unpivot Columns > Unpivot Other Columns
7	Rename Attribute & Value columns as Date and Sales, respectively.	Double click on column headers to rename them
8	**Before we start working with dates, check your date region settings.**	File Options -> Query Options -> This File -> Regional Settings -> English Canada
9	**Change Date column to Date type by clicking the ABC datatype icon next to it's name. Notice that in line 17, the 2017 TOTAL value is interpreted as a date. We don't want this. Delete this step.**	
10	Instead, let's use the Parse function to interpret dates.	Transform > Date > Parse
11	Filter out the error rows and change the data types of Store and Cat to Whole Number.	
12	Rename the query to this slide's title.	

Power Query Exercise 1D: Grouped Row Headers

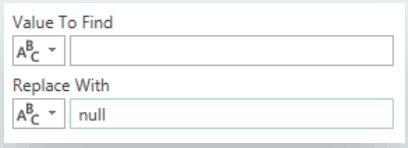
	A	B	C	D	E	F	G	H	I	J	K
1	Metric	Store	Cat	01/01/2017	01/02/2017	01/03/2017	Q1 2017	01/04/2017	01/05/2017	01/06/2017	Q2 2017
2	Sales	1	1					19403.54	21827.9	21043.39	62274.83
3		1	2	50605.27	44682.74	47928.89	143216.9	44292.87	48397.98	43751.94	136442.8
4		1	3	13740.12	10887.84	11523.47	36151.43	11135.17	12275.58	10123.45	33534.2
5		1	4	39954.04	35351.21	36826.95	112132.2	34660.16	38086.19	32668.67	105415
6		2	1	35034.06	60483.7	58221.52	153739.3	25962.32	27372.05	28660.87	81995.24
7		2	2	74661.16	65487.46	70853.58	211002.2	64963.9	68428.64	66622.03	200014.6
8		2	3	16873.2	13821.01	14607.28	45301.49	15635.95	14895.96	13061.56	43593.47
9		2	4	47681.96	44197.95	46131.14	138011.1	42126.71	46937.81	42489.21	131553.7
10	Margin	1	1					0.5432	0.5432	0.5432	0.5432
11		1	2	0.5542	0.5542	0.5542	0.5542	0.5542	0.5542	0.5542	0.5542
12		1	3	0.5212	0.5212	0.5212	0.5212	0.5212	0.5212	0.5212	0.5212
13		1	4	0.5462	0.5462	0.5462	0.5462	0.5462	0.5462	0.5462	0.5462
14		2	1	0.5432	0.5432	0.5432	0.5432	0.5432	0.5432	0.5432	0.5432
15		2	2	0.5542	0.5542	0.5542	0.5542	0.5542	0.5542	0.5542	0.5542
16		2	3	0.5212	0.5212	0.5212	0.5212	0.5212	0.5212	0.5212	0.5212
17		2	4	0.5462	0.5462	0.5462	0.5462	0.5462	0.5462	0.5462	0.5462

- Fix grouped row headers and pivot them to have a column each.
- Create an extra column to extract the year from the date.

	A	B	C	D	E	F
1	Store	Cat	Date	Sales	Margin	Year
2	1	1	01/01/2017			2017
3	1	1	02/01/2017			2017
4	1	1	03/01/2017			2017
5	1	1	04/01/2017	19403.54	0.5432	2017
6	1	1	05/01/2017	21827.9	0.5432	2017
7	1	1	06/01/2017	21043.39	0.5432	2017
8	1	1	07/01/2017	22136.64	0.5432	2017
9	1	1	08/01/2017	26229.21	0.5432	2017
10	1	1	09/01/2017	57258.43	0.5432	2017
11	1	1	10/01/2017	42960.91	0.5432	2017
12	1	1	11/01/2017	17596.96	0.5432	2017
13	1	1	12/01/2017	16145.35	0.5432	2017
14	1	1	01/01/2018	24924.5	0.5432	2018
15	1	1	02/01/2018	46039.49	0.5432	2018
16	1	1	03/01/2018	41595.55	0.5432	2018
17	1	1	04/01/2018	19403.54	0.5432	2018
18	1	1	05/01/2018	21827.9	0.5432	2018
19	1	1	06/01/2018	21043.39	0.5432	2018
20	1	1	07/01/2018	22136.64	0.5432	2018
21	1	1	08/01/2018	26229.21	0.5432	2018
22	1	1	09/01/2018	57258.43	0.5432	2018
23	1	1	10/01/2018	42960.91	0.5432	2018
24	1	1	11/01/2018	17596.96	0.5432	2018
25	1	1	12/01/2018	16145.35	0.5432	2018

Power Query Exercise 1D: Fix Grouped Row Headers

Query Steps

	Steps	Directions
1	Create a new query for **File 1D**. Remove the column number reference as in Exercise 1C.	Remove header rows > Promote headers
2	**Now that we have both sales and margin data, we need to identify each row as such by filling down the grouped row headers.** -Try to fill down. -Nothing happens. This is because blank cells in a text column are not considered empty. -We need the cells to be truly empty, which in Power Query is known as a null value. -We need to replace blanks with null values, but this needs to happen before the Filled Down step. -Ensure that we modify the data before the Filled Down step. -Replace blanks with null values . 	Click Metric Column > Transform > Fill > Down Click on the Promoted Headers Step Select Metric column > Transform > Replace Values
3	Rename the Attribute col to Date. **We can't rename the value column as it has both sales and margin.**	
4	Parse the date column and filter out the errors.	Transform > Date > Parse
5	Pivot the values from the metric column into their own column headers.	Select Metric Column > Transform > Pivot Column > Values Column: Value > Advanced: Don't Aggregate
6	Change data types for all columns to whole numbers/dates/decimals/percentages if appropriate. Notice that when we change the sales column from text to a decimal, it changes from blank to null. **Empty numbers are interpreted as null by default.**	
7	Add a custom column called **Year** that is equal to the date column.	Add Column > Custom Column > = [Date]
8	Extract the year from the new Year column.	Select Year Col > Transform > Date > Year

Assessment

Power Query Exercise 1Z: Basic Transformations Review

Submission Date: 4th Dec. 2023

1. Create another CSV query to fetch data for 1Z.
2. Perform transformations to reach this layout.
3. Notice that we have only kept the quarters.
4. Use the clues or the query steps if you need them.

	A	B	C	D	E
1	Store	Cat	Sales	Margin	Quarter
2	1	1	112559.54	0.5432	Q1 2017
3	1	1	112559.54	0.5432	Q1 2018
4	1	1	62274.83	0.5432	Q2 2017
5	1	1	62274.83	0.5432	Q2 2018
6	1	1	105624.28	0.5432	Q3 2017
7	1	1	105624.28	0.5432	Q3 2018
8	1	1	76703.22	0.5432	Q4 2017
9	1	1	76703.22	0.5432	Q4 2018
10	1	2	143216.9	0.5542	Q1 2017
11	1	2	143216.9	0.5542	Q1 2018
12	1	2	136442.79	0.5542	Q2 2017
13	1	2	136442.79	0.5542	Q2 2018
14	1	2	132958.54	0.5542	Q3 2017

	A	B	C	D	E	F	G	H	I
1	QueryNan	MonthlySalesAndMarginSnapshot							
2									
3	Server	CFI_Retail							
4									
5	Config Mc	Admin							
6									
7	Query Tim	4:22 PM							
8									
9	Store	Cat	Metric	Ref1	Ref2	01/01/2017	01/02/2017	01/03/2017	Q1 2017
10	1	1	Sales	11XXSYS	Sales11	24924.5	46039.49	41595.55	112559.5
11	1	2		12XXSYS	Sales12	50605.27	44682.74	47928.89	143216.9
12	1	3		13XXSYS	Sales13	13740.12	10887.84	11523.47	36151.43
13	1	4		14XXSYS	Sales14	39954.04	35351.21	36826.95	112132.2
14	1	1	Margin	11XXSYS	Margin11	0.5432	0.5432	0.5432	0.5432
15	1	2		12XXSYS	Margin12	0.5542	0.5542	0.5542	0.5542
16	1	3		13XXSYS	Margin13	0.5212	0.5212	0.5212	0.5212
17	1	4		14XXSYS	Margin14	0.5462	0.5462	0.5462	0.5462
18	2	1	Sales	21XXSYS	Sales21	35034.06	60483.7	58221.52	153739.3
19	2	2		22XXSYS	Sales22	74661.16	65487.46	70853.58	211002.2
20	2	3		23XXSYS	Sales23	16873.2	13821.01	14607.28	45301.49
21	2	4		24XXSYS	Sales24	47681.96	44197.95	46131.14	138011.1
22	2	1	Margin	21XXSYS	Margin21	0.5432	0.5432	0.5432	0.5432
23	2	2		22XXSYS	Margin22	0.5542	0.5542	0.5542	0.5542
24	2	3		23XXSYS	Margin23	0.5212	0.5212	0.5212	0.5212
25	2	4		24XXSYS	Margin24	0.5462	0.5462	0.5462	0.5462
26	XX	Report Code 1							
27	XY	Report Code 2							
28	XZ	Report Code 3							

Power Query Exercise 1Z: Basic Transformations Review

Clues

Clue

You may need to keep errors instead of removing them.

Clue

You will need to add an extra column as we did in the previous exercise.

Clue

You may need to manually filter a column, or two.


Thank You