

Practical Power Query for Quick Data Massaging Training Outline



WHYEXCEL PLT

V1.2

TITLE

Practical Power Query for Quick Data Massaging

OVERVIEW

Before a set of data is used for analysis, often additional effort is required to transform the data. Prior the introduction of Power Query, Macro/ VBA is often the answer. Now Power Query able to transform the data without involving the complexity of Macro/ VBA.

WHO

Managers, supervisors, analysts and many other professionals that required to massage data regularly.

OUTCOME

At the end of this course you will be able to:

- import data from various sources
- managing multiple queries
- adjusting applied steps
- future proofing with file path dynamic
- retrieving referenced data

DURATION

2 Days (9am – 5pm)

PREREQUISITES

To ensure your success, we recommend the delegates equip with the following or equivalent knowledge:

- A working knowledge of Microsoft Windows
- A working knowledge of handling computer keyboard and mouse
- Able understand simple mathematic formula

Please Note: If a delegate attends this course and does not meet the prerequisites the respective delegate may be asked to switch to different course.

METHODOLOGY

Instructor led learning with demonstrations and practical hands-on.

OUTLINE

1. Jump Start Power Query

Power Query entails different user interface, and it runs on to of Microsoft Excel. This topic shows quick way to jump start in Power Query.

- Locating Power Query in Excel 2016
- Launching Power Query Editor (PQE)
- Identifying Various Visual Elements in PQE
- Exploring Query Options Available
- Switching Between PQE and Excel Screen
- Importing Data from same Excel Workbook
- Performing Simple Operations on Columns
- Filtering and Sorting Data
- Viewing Applied Steps in Query Settings pane
- Renaming and Deleting Applied Steps
- Observing Changes on Data via Applied Steps
- Changing Queries Name and Properties
- Organizing Queries in Different Groups
- Close and Load Data to Excel
- Refreshing Queries

- Adding, Removing, Moving, Renaming Columns
- Duplicating, Splitting, Merging Columns
- Understanding Security Warning When Opening File

2. Combining Multiple Data Sources as Single Result

- Importing Multiple Data Files
- Append Multiple Queries as Single Queries
- Organizing Queries in Different Groups
- Changing from Load-Data to Connection-Only
- Changing from Connection-Only to Load-Data
- Experimenting “Fast Load” in Query Options
- Close and Load Data

3. Filter and Output Different Results

- Import Data
- Make Copies of Same Query via Referencing
- Make Copies of Same Query via Duplicating
- Seeing Multiple Queries Available in Queries pane
- Changing Queries Name and Properties
- Filtering Desired Values
- Close and Load Data
- Return to Power Query Editor
- Adjusting Columns on Original Query
- Observing Changes on Referenced and Duplicated Queries
- Close and Load Data

4. Importing All Files in a Folder

- Importing Data from a Folder
- Removing Repeated Headers from Subsequent Files
- Removing Duplicate Records
- Changing Column Headers
- Changing Data Type
- Changing Date-in-Text to Date Data by Specifying its Locale
- Showing Latest Dated Records
- Close and Load Data

5. Making Columned Data as Individual Rows

Before	Region	Salesperson	Fruit	2014	2015	2016	2017
	North	Judy Walker	Apple	447.30	4,146.30	1,066.50	25.20
	East	Angela Robinson	Orange	716.00	3,315.20	650.40	224.80
	South	Cheryl Foster	Pineapple	446.60	3,301.90	445.90	651.00
After	Region	Salesperson	Fruit	Year	Sales		
	North	Judy Walker	Apple	2014	447.3		
	North	Judy Walker	Apple	2015	4146.3		
	North	Judy Walker	Apple	2016	1066.5		
	North	Judy Walker	Apple	2017	25.2		
	East	Angela Robinson	Orange	2014	716		
	East	Angela Robinson	Orange	2015	3315.2		
	East	Angela Robinson	Orange	2016	650.4		
	East	Angela Robinson	Orange	2017	224.8		

- Importing Data File
- Using Header as First Row
- Unpivoting Columns to Rows
- Using First Row as Header
- Changing Data Type
- Understanding Different Data Type
- Close and Load Data

6. Transposing a Table Orientation

Before	Customer	Monster Inc.	Dreamy Lands	Cozy Travels	Swiss Gofit Club	Baby Boss Corp.	Titanium Motors	Ocean Gate Security
	Item	Grape	Guava	Durian	Lemon	Papaya	Berries	Pineapple
	Quantity	25	NEW	NEW	92	99	NEW	
After	Customer	Item	Quantity					
	Monster Inc.	Grape	25					
	Dreamy Lands	Guava	0					
	Cozy Travels	Durian	0					
	Swiss Gofit Club	Lemon	92					
	Baby Boss Corp.	Papaya	99					
	Titanium Motors	Berries	0					
	Ocean Gate Security	Pineapple	21					

- Importing Data File
- Adjusting Applied Steps
- Transposing a Table
- Changing Data Type
- Removing Errors
- Future Proofing by Preventing “Auto Data Type”
- Close and Load Data

7. Making Multi-row Raw Data into Single Row

Before	CUSTOMER DATABASE			
	PRIVATE AND CONFIDENTIAL			
	Name		Gender	
	Email		Mobile	
	Rachelle Reed		F	
	rachelle.reed@yahoo.co.uk		014-03303707	
	Gino Mcconnell		M	
	gino.mcconnell@aol.com		013-80958608	
	Raphael Durham		M	
	raphael.durham@ bp.com		014-72226097	
After	Name	Gender	Email	Mobile
	Rachelle Reed	F	rachelle.reed@yahoo.co.uk	014-03303707
	Gino Mcconnell	M	gino.mcconnell@aol.com	013-80958608
	Raphael Durham	M	raphael.durham@ bp.com	014-72226097
	Sonia Cook	F	sonia.cook@gmail.com	011-70996373
	Aldo Jarvis	M	aldo.jarvis@aol.com	010-34532119

- Importing Data File
- Adding Index Column
- Adding Conditional Column
- Filling Blanks with Data
- Filtering Excess Rows
- Change Data Type
- Close and Load Data

8. Performing Lookup and Comparison

- Importing Data File and Master Data File
- Merging Queries on Single or Multiple Matching Columns
- Returning Referenced Details on Those Matched
- Returning Results on Those Not Matched
- Aware on Different Matching Methods
- Close and Load Data

9. Transforming and Summarizing Data

- Importing Raw Data from Same Excel File
- Changing Positive Number to Negative and verse versa
- Rounding a Number Up, Down or specific approach
- Changing Text to Uppercase, Lowercase
- Extracting Part of Text
- Showing Date Time as Date or Time
- Combining Date Column and Time Column as One Column
- Summing Values based on Same Category
- Close and Load Data
- Adjusting Raw Data
- Refreshing Queries

10. Splitting Comma Delimited Data into Individual Row

- Importing Data File
- Adding Custom Column with Custom Formula
- Expanding Column into Individual Row
- Renaming and Removing Columns
- Close and Load Data

11. Combining Multiple Row into a Delimited Data

Before		After	
ID	Number	ID	Numbers
ALPHA	11	ALPHA	11,22,33
ALPHA	22	BETA	44,55
ALPHA	33	CHARLIE	66
BETA	44		
BETA	55		
CHARLIE	66		

- Import Data
- Merging Columns by Its Category Grouping
- Expanding List with Delimiter
- Renaming Columns
- Close and Load Data

12. Expanding B.O.M. into Multiple Detailed Items

Before			After				
Order			ID	Package	Quantity	Material ID	BOM Qty
ID	Package	Quantity	O001	CHARLIE	15	C01	5
O001	CHARLIE	15	O001	CHARLIE	15	C02	5
O002	BRAVO	48	O001	CHARLIE	15	C03	4
O003	ALPHA	23	O002	BRAVO	48	B01	3
O004	ALPHA	13	O002	BRAVO	48	B02	1
O005	BRAVO	10	O003	ALPHA	23	A01	5
O006	BRAVO	13	O003	ALPHA	23	A02	5
O007	CHARLIE	14	O003	ALPHA	23	A03	2
O008	BRAVO	40	O004	ALPHA	13	A01	5
O009	ALPHA	43	O004	ALPHA	13	A02	5
O010	BRAVO	22	O004	ALPHA	13	A03	2
BOM			O005	BRAVO	10	B01	3
Package	Material ID	BOM Qty	O005	BRAVO	10	B02	1
ALPHA	A01	5	O006	BRAVO	13	B01	3
ALPHA	A02	5	O006	BRAVO	13	B02	1
ALPHA	A03	2	O007	CHARLIE	14	C01	5
BRAVO	B01	3	O007	CHARLIE	14	C02	5
BRAVO	B02	1	O007	CHARLIE	14	C03	4
CHARLIE	C01	5	O008	BRAVO	40	B01	3
CHARLIE	C02	5	O008	BRAVO	40	B02	1
CHARLIE	C03	4	O009	ALPHA	43	A01	5
			O009	ALPHA	43	A02	5
			O009	ALPHA	43	A03	2
			O010	BRAVO	22	B01	3
			O010	BRAVO	22	B02	1

- Importing BOM ID and BOM Item
- Merging Two Data with Specific Joining Method
- Expanding BOM Items into Individual Rows
- Removing and Renaming Columns
- Close and Load Data

13. Make Data File Path to Dynamic to Current File

- Creating Excel Table with Dynamic Folder
- Import Data from Range
- Drilling Down a Value
- Editing Existing Queries in Advanced Editor
- Adjusting Query Privacy Level
- Close and Load Data

Note: The outline coverage may be adjusted to meet the actual training pace.

HARDWARE & SOFTWARE

- A laptop is required for this course (PCs not provided)
- Excel 2010/2013 is installed with Power Query
- Excel 2016 or above