

Name of Student: Pushkar Sane		
Roll Number: 45		Lab Assignment Number: 8
Title of Lab Assignment: To learn various Data Preprocessing activities in Power BI.		
DOP: 07-10-2024		DOS: 07-10-2024
CO Mapped:	PO Mapped:	Signature:

Practical No. 8

Aim: To learn various Data Preprocessing activities in Power BI.

Theory:

Power BI: Tool Overview

Power BI is a business analytics tool by Microsoft that allows users to visualize data, create dashboards, and share insights across an organization. It helps in transforming raw data into meaningful insights using data visualization techniques.

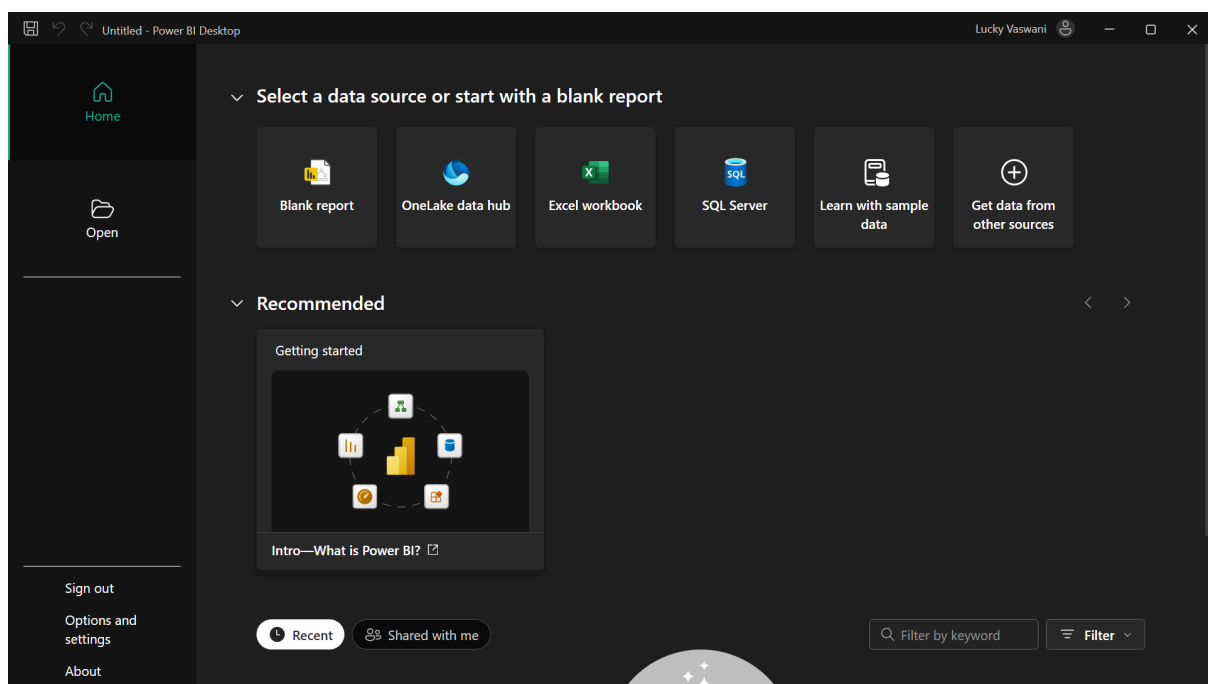
Power BI includes components like:

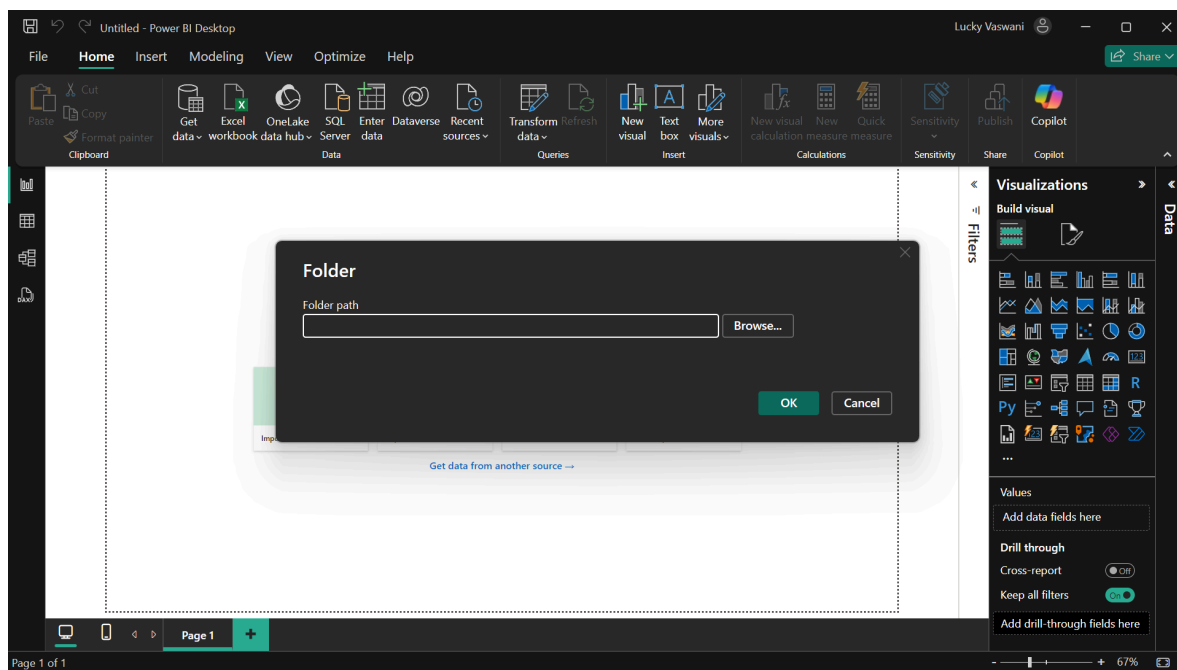
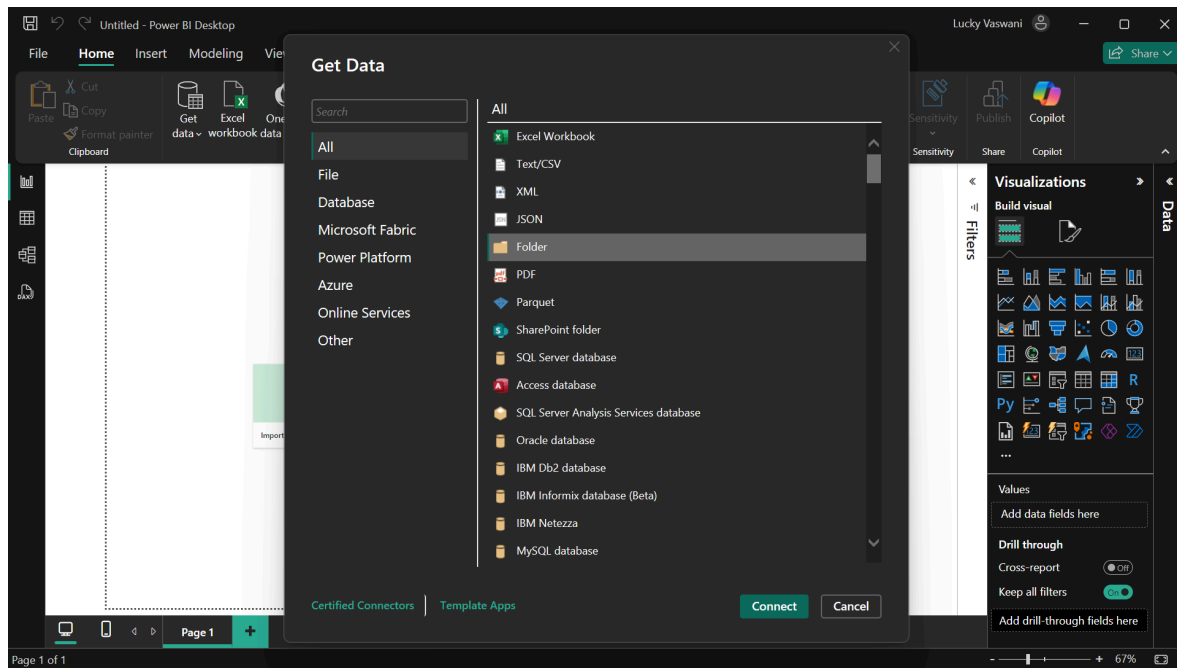
1. Power BI Desktop: For creating reports and visualizations.
2. Power BI Service: A cloud-based platform to share reports and dashboards.
3. Power BI Mobile Apps: To view reports on mobile devices.

Importing Data

Power BI supports a wide range of data sources such as Excel, CSV files, SQL databases, Azure, and many others. The process of importing data into Power BI involves:

1. Connect: Connecting to the data source using the "Get Data" option.
2. Transform: Cleaning and transforming the data to ensure it is ready for analysis.
3. Load: Loading the transformed data into Power BI for visualization.





Folder

Folder path

C:\Users\vaswa\Downloads\pizza_sales

Content	Name	Extension	Date accessed	Date modified	Date created	Attributes	Folder Path
Binary	orders.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM	12/07/2024 05:59:02 AM	Record	C:\Users\vaswa\Downl
Binary	order_details.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM	12/07/2024 05:59:02 AM	Record	C:\Users\vaswa\Downl
Binary	pizzas.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM	12/07/2024 05:59:02 AM	Record	C:\Users\vaswa\Downl
Binary	pizza_types.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM	12/07/2024 05:59:02 AM	Record	C:\Users\vaswa\Downl

Basic Transformations

In Power BI, transforming data is essential to prepare it for analysis. The most common basic transformations include:

1. Removing Duplicates: Ensuring no redundant data.
2. Splitting Columns: Breaking a column into multiple parts (e.g., splitting full names into first and last names).
3. Renaming Columns: Renaming columns to meaningful titles.
4. Filtering Rows: Removing rows that are not needed based on specific criteria.

Example: Splitting a "Full Name" column into "First Name" and "Last Name."

Untitled - Power Query Editor

Home Transform Add Column View Tools Help

Close & Apply, New Source, Recent Sources, 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: Binary, Merge, Append, Replace Values, Transform, Com

Queries [1]

pizza_sales

= Folder.Files("C:\Users\vaswa\Downloads\pizza_sales")

	Content	File Name	Extension	Date accessed	Date modified
1	Binary	orders.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM
2	Binary	order_details.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM
3	Binary	pizzas.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM
4	Binary	pizza_types.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM

Query Settings

PROPERTIES

Name: pizza_sales

APPLIED STEPS

Source

8 COLUMNS, 4 ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 11:44 PM

Untitled - Power Query Editor

Home Transform Add Column View Tools Help

Close & Apply, New Source, Recent Sources, 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: Binary, Merge, Append, Replace Values, Transform, Com

Queries [2]

pizza_sales

pizza_sales (2)

= Folder.Files("C:\Users\vaswa\Downloads\pizza_sales")

	Content	File Name	Extension	Date accessed	Date modified
1	Binary	orders.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM
2	Binary	order_details.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM
3	Binary	pizzas.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM
4	Binary	pizza_types.csv	.csv	05/10/2024 11:38:35 PM	05/10/2024 11:38:35 PM

Query Settings

PROPERTIES

Name: pizza_sales (2)

APPLIED STEPS

Source

8 COLUMNS, 4 ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 11:48 PM

Queries [2]

pizza_sales (2)

CAUsers\vaswa\Downloa...

= Table.TransformColumnTypes(#"Promoted Headers",{"order_id", Int64.Type}, {"date", type date},

	order_id	date	time
1	1	01/01/2015	11:38:36 AM
2	2	01/01/2015	11:57:40 AM
3	3	01/01/2015	12:12:28 PM
4	4	01/01/2015	12:16:31 PM
5	5	01/01/2015	12:35:30 PM

Query Settings

PROPERTIES

Name: orders

APPLIED STEPS

Untitled - Power Query Editor

Home Transform Add Column View Tools Help

Group By Use First Row as Headers Use First Row as Headers

Query: Use Headers as First Row

Query Settings

PROPERTIES

Name

pizza types

APPLIED STEPS

Source

Navigation

Imported CSV

Changed Type

APC Column1	APC Column2	APC Column3	APC Column4
1	pizza_type_id	name	category
2	bbq_chn	The Barbecue Chicken Pizza	Chicken
3	cali_chn	The California Chicken Pizza	Chicken
4	chn_alfredo	The Chicken Alfredo Pizza	Chicken
5	chn_pesto	The Chicken Pesto Pizza	Chicken
6	southw_chn	The Southwest Chicken Pizza	Chicken
7	thai_chn	The Thai Chicken Pizza	Chicken
8	big_meat	The Big Meat Pizza	Classic
9	classic_dlx	The Classic Deluxe Pizza	Classic
10	hawaiian	The Hawaiian Pizza	Classic
11	ital_cpcllo	The Italian Capocollo Pizza	Classic
12	napolitana	The Napolitana Pizza	Classic
13	pep_msh_pep	The Pepperoni, Mushroom, and Peppers Pizza	Classic
14	pepperoni	The Pepperoni Pizza	Classic
15	the_greek	The Greek Pizza	Classic
16	brie_carre	The Brie Carre Pizza	Supreme
17	calabrese	The Calabrese Pizza	Supreme
18	ital_supr	The Italian Supreme Pizza	Supreme
19	peppr_salami	The Pepper Salami Pizza	Supreme
20	prsc_argla	The Prosciutto and Arugula Pizza	Supreme
21	sicilian	The Sicilian Pizza	Supreme
22			

4 COLUMNS, 33 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 12:06 AM

Untitled - Power Query Editor

Home Transform Add Column View Tools Help

Group By Use First Row as Headers Use First Row as Headers

Query: Use Headers as First Row

Query Settings

PROPERTIES

Name

pizza types

APPLIED STEPS

Source

Navigation

Imported CSV

Changed Type

Promoted Headers

Changed Type1

APC pizza_type_id	APC name	APC category	APC ingredients
1	bbq_chn	The Barbecue Chicken Pizza	Chicken
2	cali_chn	The California Chicken Pizza	Chicken
3	chn_alfredo	The Chicken Alfredo Pizza	Chicken
4	chn_pesto	The Chicken Pesto Pizza	Chicken
5	southw_chn	The Southwest Chicken Pizza	Chicken
6	thai_chn	The Thai Chicken Pizza	Chicken
7	big_meat	The Big Meat Pizza	Classic
8	classic_dlx	The Classic Deluxe Pizza	Classic
9	hawaiian	The Hawaiian Pizza	Classic
10	ital_cpcllo	The Italian Capocollo Pizza	Classic
11	napolitana	The Napolitana Pizza	Classic
12	pep_msh_pep	The Pepperoni, Mushroom, and Peppers Pizza	Classic
13	pepperoni	The Pepperoni Pizza	Classic
14	the_greek	The Greek Pizza	Classic
15	brie_carre	The Brie Carre Pizza	Supreme
16	calabrese	The Calabrese Pizza	Supreme
17	ital_supr	The Italian Supreme Pizza	Supreme
18	peppr_salami	The Pepper Salami Pizza	Supreme
19	prsc_argla	The Prosciutto and Arugula Pizza	Supreme
20	sicilian	The Sicilian Pizza	Supreme
21	soppressata	The Soppressata Pizza	Supreme
22			

4 COLUMNS, 32 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 12:07 AM

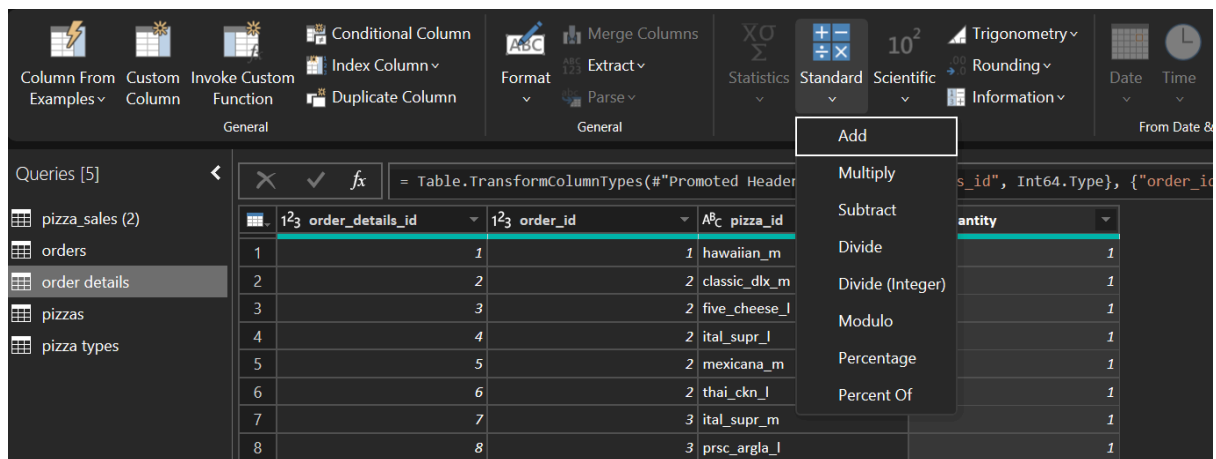
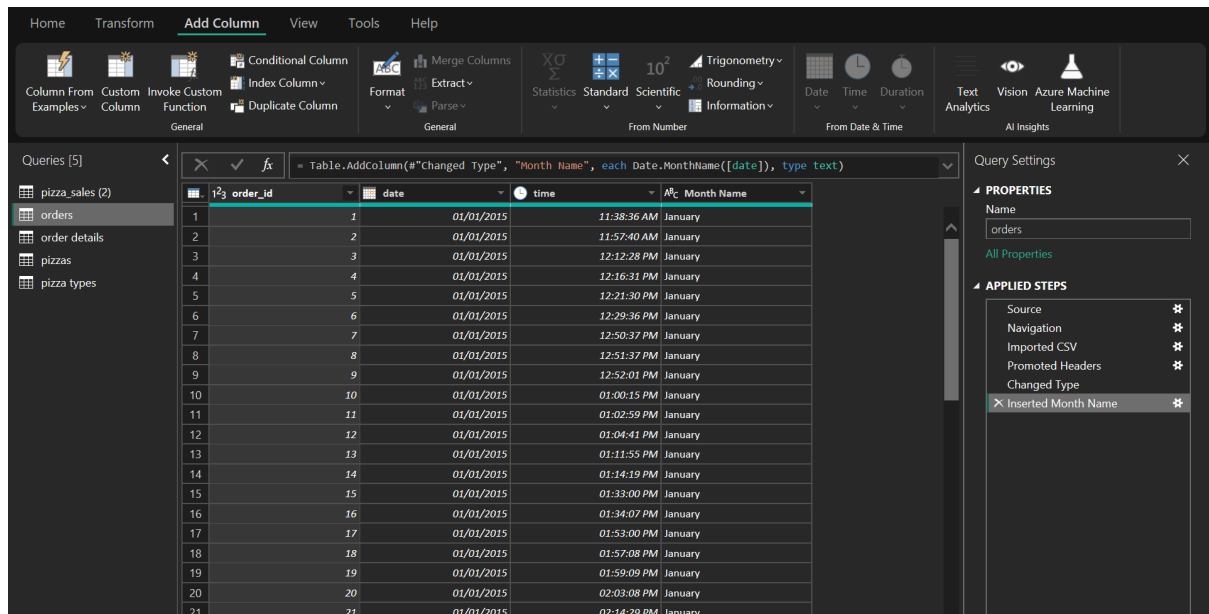
Adding column

The screenshot shows the Power Query Editor interface. The 'Add Column' tab is active, displaying various options like 'Date Type: Date', 'Replace Values', 'Unpivot Columns', 'Merge Columns', 'Split Column', 'Format', 'Extract', 'Parse', 'Statistics', 'Standard', 'Scientific', 'Rounding', 'Information', 'Date', 'Time', and 'Duration'. The main area shows a table with 22 rows and 3 columns: 'order_id', 'date', and 'time'. The 'date' column contains dates from 01/01/2015 to 01/01/2015, and the 'time' column contains times from 11:38:36 AM to 02:16:26 PM. The 'time' column header is highlighted with a clock icon. The 'Query Settings' pane on the right shows the 'Properties' tab with the name 'orders' and the 'Applied Steps' list containing 'Source', 'Navigation', 'Imported CSV', 'Promoted Headers', and 'Changed Type'.

order_id	date	time
1	01/01/2015	11:38:36 AM
2	01/01/2015	11:57:40 AM
3	01/01/2015	12:12:28 PM
4	01/01/2015	12:16:31 PM
5	01/01/2015	12:21:30 PM
6	01/01/2015	12:29:36 PM
7	01/01/2015	12:50:37 PM
8	01/01/2015	12:51:37 PM
9	01/01/2015	12:52:01 PM
10	01/01/2015	01:00:15 PM
11	01/01/2015	01:02:59 PM
12	01/01/2015	01:04:41 PM
13	01/01/2015	01:11:55 PM
14	01/01/2015	01:14:19 PM
15	01/01/2015	01:33:00 PM
16	01/01/2015	01:34:07 PM
17	01/01/2015	01:53:00 PM
18	01/01/2015	01:57:08 PM
19	01/01/2015	01:59:09 PM
20	01/01/2015	02:03:08 PM
21	01/01/2015	02:14:29 PM
22	01/01/2015	02:16:26 PM

The screenshot shows the Power Query Editor interface with the 'Add Column' tab active. The 'Add Column' menu is open, showing options like 'Date Only', 'Year', 'Month', 'Quarter of Year', 'Start of Year', 'End of Year', 'Start of Month', 'End of Month', 'Days in Month', 'Name of Month', 'Start of Quarter', 'End of Quarter', and 'Week of Year'. The main area shows a table with 16 rows and 3 columns: 'order_id', 'date', and 'time'. The 'date' column contains dates from 01/01/2015 to 01/01/2015, and the 'time' column contains times from 11:38:36 AM to 01:34:07 PM. The 'time' column header is highlighted with a clock icon. The 'Query Settings' pane on the right shows the 'Properties' tab with the name 'orders' and the 'Applied Steps' list containing 'Source', 'Navigation', 'Imported CSV', 'Promoted Headers', and 'Changed Type'.

order_id	date	time
1	01/01/2015	11:38:36 AM
2	01/01/2015	11:57:40 AM
3	01/01/2015	12:12:28 PM
4	01/01/2015	12:16:31 PM
5	01/01/2015	12:21:30 PM
6	01/01/2015	12:29:36 PM
7	01/01/2015	12:50:37 PM
8	01/01/2015	12:51:37 PM
9	01/01/2015	12:52:01 PM
10	01/01/2015	01:00:15 PM
11	01/01/2015	01:02:59 PM
12	01/01/2015	01:04:41 PM
13	01/01/2015	01:11:55 PM
14	01/01/2015	01:14:19 PM
15	01/01/2015	01:33:00 PM
16	01/01/2015	01:34:07 PM



Dealing With Text Tools

Power BI offers several tools to manipulate text data:

1. Merging Columns: Concatenating two or more columns into one.
2. Trim: Removing leading and trailing spaces from text.
3. Split: Splitting text into multiple columns based on delimiters like commas or spaces.
4. Extract (Email): Extracting specific parts of text such as usernames from email addresses.

Folder

Folder path

C:\Users\vaswa\Downloads\classic_models_dataset\classic_models_dataset

Browse...

OK

Cancel

C:\Users\vaswa\Downloads\classic_models_dataset\classic_models_dataset

Content	Name	Extension	Date accessed	Date modified	Date created	Attributes	
Binary	customers.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl
Binary	employees.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl
Binary	offices.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl
Binary	order details.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl
Binary	orders.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl
Binary	payments.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl
Binary	productlines.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl
Binary	products.csv	.csv	06/10/2024 12:25:22 AM	06/11/2023 01:33:52 PM	05/10/2024 11:21:25 PM	Record	C:\Users\vaswa\Downl

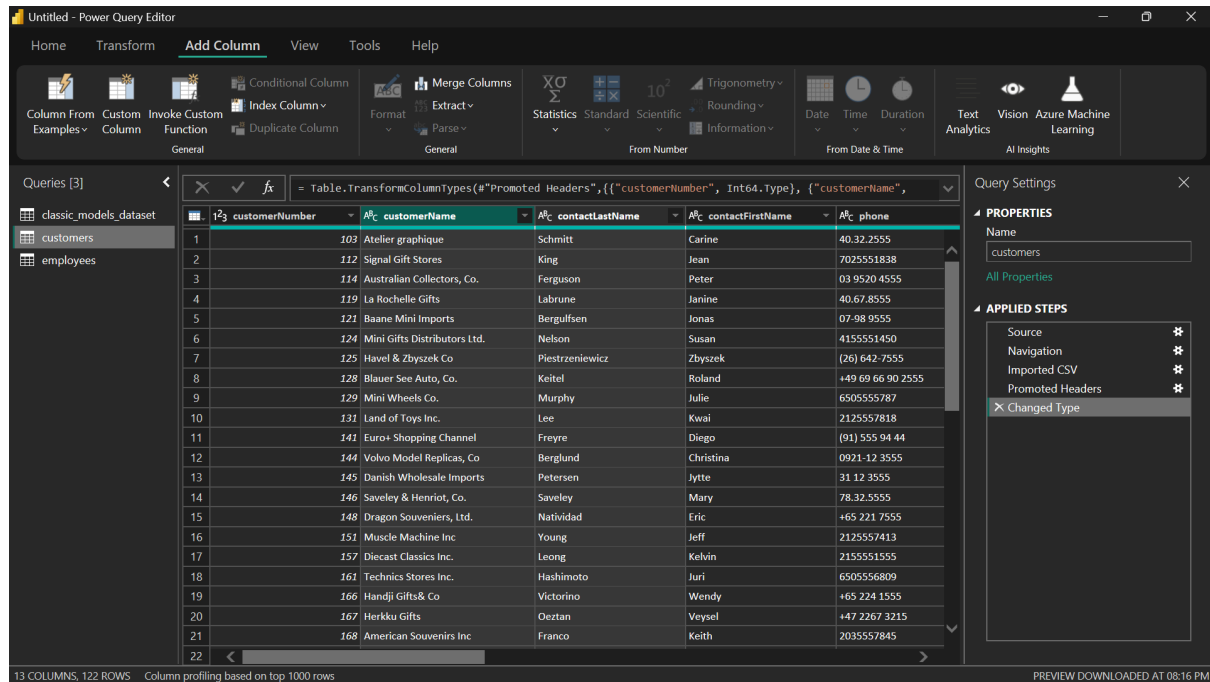
Combine

Load

Transform Data

Cancel

Merging Columns



Untitled - Power Query Editor

Home Transform Add Column View Tools Help

Column From Examples Custom Column Invoke Custom Function Conditional Column Index Column Duplicate Column Merge Columns Extract Parse Statistics Standard Scientific Rounding Trigonometry Date Time Duration Text Analytics Vision Azure Machine Learning AI Insights

Queries [3] classic_models_dataset customers employees

13 COLUMNS, 122 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 08:16 PM

Table.TransformColumnTypes(#Promoted Headers,{"customerNumber", Int64.Type}, {"customerName",

	customerNumber	customerName	contactLastName	contactFirstName	phone
1	103	Atelier graphique	Schmitt	Carine	40.32.2555
2	112	Signal Gift Stores	King	Jean	7025551838
3	114	Australian Collectors, Co.	Ferguson	Peter	03 9520 4555
4	119	La Rochelle Gifts	Labrune	Janine	40.67.8555
5	121	Baane Mini Imports	Bergulfsen	Jonas	07-98 9555
6	124	Mini Gifts Distributors Ltd.	Nelson	Susan	4155551450
7	125	Havel & Zbyszek Co	Piestrzeniewicz	Zbyszek	(26) 642-7555
8	128	Blauer See Auto, Co.	Keitel	Roland	+49 69 66 90 2555
9	129	Mini Wheels Co.	Murphy	Julie	650555787
10	131	Land of Toys Inc.	Lee	Kwai	2125557818
11	141	Euro+ Shopping Channel	Freyre	Diego	(91) 555 94 44
12	144	Volvo Model Replicas, Co	Berglund	Christina	0921-12 3555
13	145	Danish Wholesale Imports	Petersen	Jytte	31 12 3555
14	146	Saveley & Henriot, Co.	Saveley	Mary	78.32.5555
15	148	Dragon Souvenirs, Ltd.	Natividad	Eric	+65 221 7555
16	151	Muscle Machine Inc	Young	Jeff	2125557413
17	157	Diecast Classics Inc.	Leong	Kelvin	2155551555
18	161	Technics Stores Inc.	Hashimoto	Juri	6505556809
19	166	Handji Gifts & Co	Victorino	Wendy	+65 224 1555
20	167	Herkuu Gifts	Oeztan	Veysel	+47 2267 3215
21	168	American Souvenirs Inc	Franco	Keith	2035557845
22					

Query Settings

PROPERTIES

Name customers

APPLIED STEPS

Source Navigation Imported CSV Promoted Headers Changed Type

Merge Columns

Choose how to merge the selected columns.

Separator

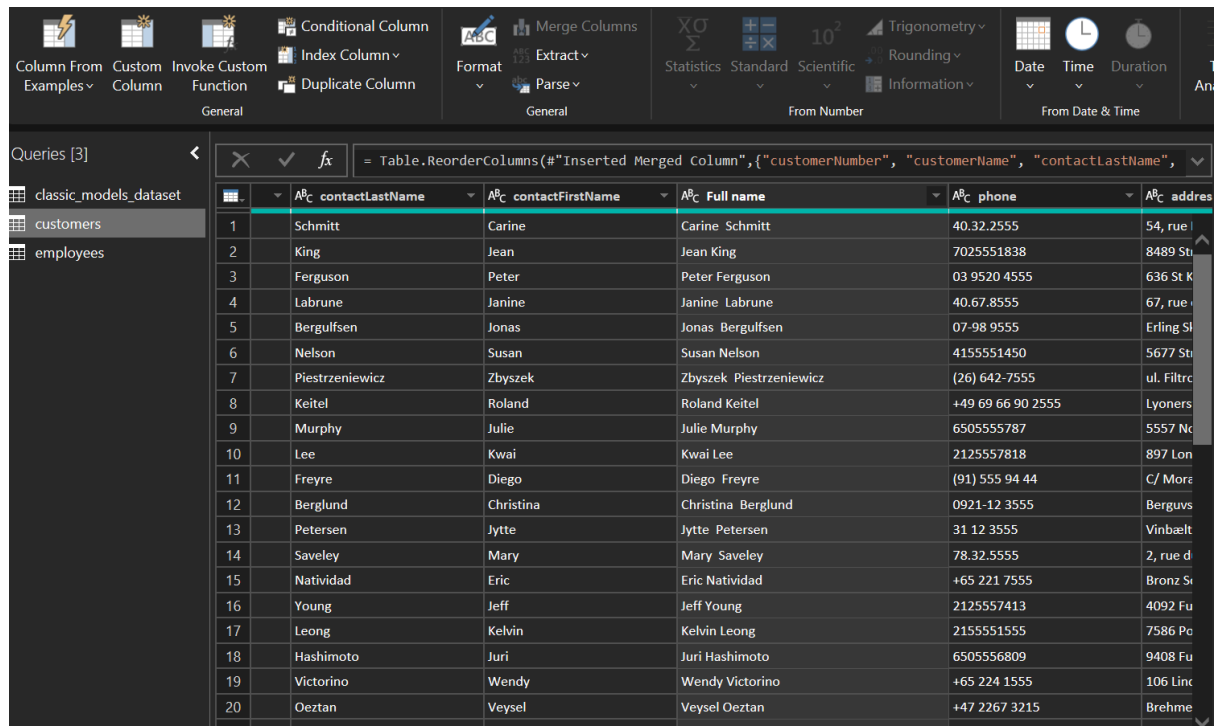
Space

New column name (optional)

Full name

OK

Cancel



Queries [3]

classic_models_dataset

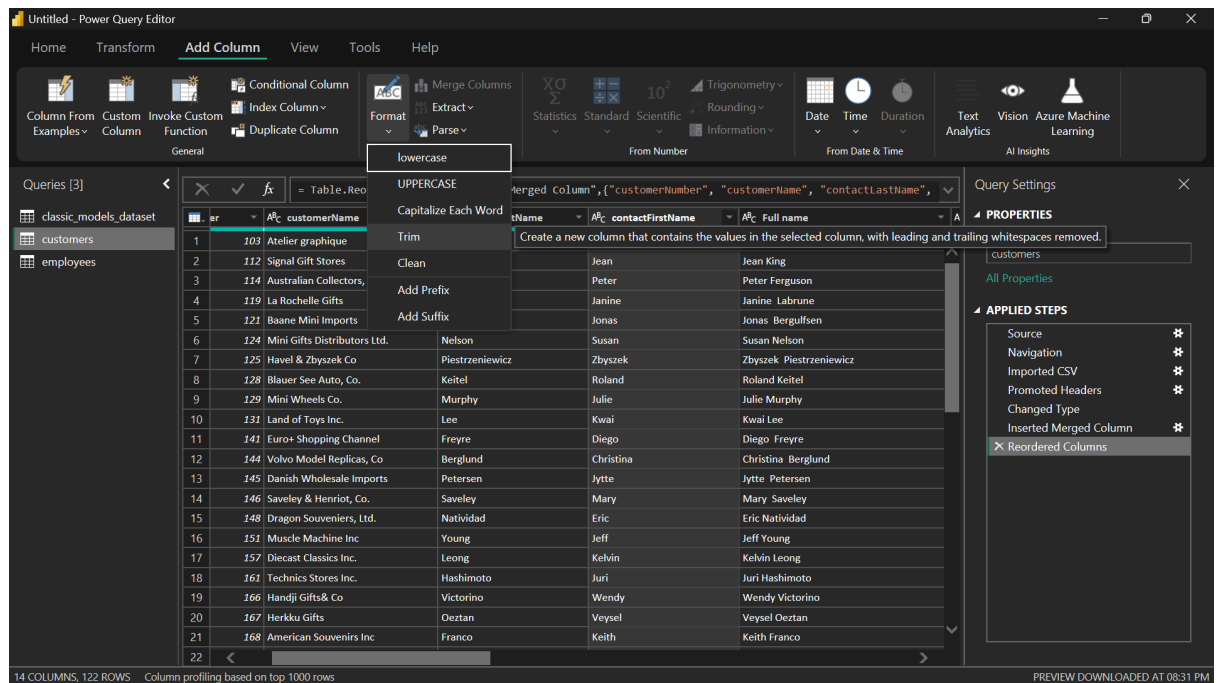
customers

employees

Table.ReorderColumns("#Inserted Merged Column",{"customerNumber", "customerName", "contactLastName", ...

	contactLastName	contactFirstName	Full name	phone	address
1	Schmitt	Carine	Carine Schmitt	40.32.2555	54, rue I
2	King	Jean	Jean King	7025551838	8489 St
3	Ferguson	Peter	Peter Ferguson	03 9520 4555	636 St K
4	Labrun	Janine	Janine Labrun	40.67.8555	67, rue
5	Bergulfsen	Jonas	Jonas Bergulfsen	07-98 9555	Erling St
6	Nelson	Susan	Susan Nelson	4155551450	5677 St
7	Piastzeniewicz	Zbyszek	Zbyszek Piastzeniewicz	(26) 642-7555	ul. Filtr
8	Keitel	Roland	Roland Keitel	+49 69 66 90 2555	Lyoners
9	Murphy	Julie	Julie Murphy	6505555787	5557 No
10	Lee	Kwai	Kwai Lee	2125557818	897 Lon
11	Freyre	Diego	Diego Freyre	(91) 555 94 44	C/ Mora
12	Berglund	Christina	Christina Berglund	0921-12 3555	Berguvs
13	Petersen	Jytte	Jytte Petersen	31 12 3555	Vinbaelt
14	Saveley	Mary	Mary Saveley	78.32.5555	2, rue d
15	Natividad	Eric	Eric Natividad	+65 221 7555	Bronz S
16	Young	Jeff	Jeff Young	2125557413	4092 Fu
17	Leong	Kelvin	Kelvin Leong	2155551555	7586 Po
18	Hashimoto	Juri	Juri Hashimoto	6505556809	9408 Fu
19	Victorino	Wendy	Wendy Victorino	+65 224 1555	106 Lin
20	Oeztan	Veysel	Veysel Oeztan	+47 2267 3215	Brehme

Trim



Untitled - Power Query Editor

Home Transform Add Column View Tools Help

Column From Custom Invoke Custom Index Column Conditional Column Merge Columns Format Extract Parse

lowercase

UPPERCASE Capitalize Each Word Trim Clean Add Prefix Add Suffix

Table.ReorderColumns("#Inserted Merged Column",{"customerNumber", "customerName", "contactLastName", ...

Query Settings

PROPERTIES

customers

employees

APPLIED STEPS

Source

Navigation

Imported CSV

Promoted Headers

Changed Type

Inserted Merged Column

Reordered Columns

	customerName	contactFirstName	Full name
1	103 Atelier graphique	Jean	Jean King
2	112 Signal Gift Stores	Peter	Peter Ferguson
3	114 Australian Collectors,	Janine	Janine Labrun
4	119 La Rochelle Gifts	Jonas	Jonas Bergulfsen
5	121 Baane Mini Imports	Susan	Susan Nelson
6	124 Mini Gifts Distributors Ltd.	Piastzeniewicz	Zbyszek Piastzeniewicz
7	125 Havel & Zbyszek Co.	Keitel	Roland Keitel
8	128 Blauer See Auto, Co.	Murphy	Julie Murphy
9	129 Mini Wheels Co.	Lee	Kwai Lee
10	131 Land of Toys Inc.	Freyre	Diego Freyre
11	141 Euro+ Shopping Channel	Berglund	Christina Berglund
12	144 Volvo Model Replicas, Co	Petersen	Jytte Petersen
13	145 Danish Wholesale Imports	Saveley	Mary Saveley
14	146 Saveley & Henriot, Co.	Natividad	Eric Natividad
15	148 Dragon Souvenirs, Ltd.	Young	Jeff Young
16	151 Muscle Machine Inc.	Leong	Kelvin Leong
17	157 Diecast Classics Inc.	Hashimoto	Juri Hashimoto
18	161 Technics Stores Inc.	Victorino	Wendy Victorino
19	166 Handji Gifts & Co	Oeztan	Veysel Oeztan
20	167 Herkku Gifts	Franco	Keith Franco
21	168 American Souvenirs Inc		
22			

14 COLUMNS, 122 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 08:31 PM

Query [3] = Table.AddColumn(#"Reordered Columns", "Trim", each Text.Trim([contactFirstName]), type text)

salCode	country	salesRepEmployeeNumber	creditLimit	Trim
1	France	1370	21000	Carine
2	USA	1166	71800	Jean
3	Australia	1611	117300	Peter
4	France	1370	118200	Janine
5	Norway	1504	81700	Jonas
6	USA	1165	210500	Susan
7	Poland	NULL	0	Zbystek
8	Germany	1504	59700	Roland
9	USA	1165	64600	Julie
10	USA	1323	114900	Kwai
11	Spain	1370	227600	Diego
12	Sweden	1504	53100	Christina
13	Denmark	1401	83400	Jytte
14	France	1337	123900	Mary
15	Singapore	1621	103800	Eric
16	USA	1286	138500	Jeff
17	USA	1216	100600	Kelvin
18	USA	1165	84600	Juri
19	Singapore	1612	97900	Wendy
20	Norway	1504	96800	Veysel
21	USA	1286	0	Keith

Query Settings

PROPERTIES

Name: customers

APPLIED STEPS

- Source
- Navigation
- Imported CSV
- Promoted Headers
- Changed Type
- Inserted Merged Column
- Reordered Columns
- Inserted Trimmed Text

Split

Query [3] = Table.AddColumn(#"Reordered Columns", "Trim", each Text.Trim([contactFirstName]), type text)

phone	addressLine1	city
40.32.2555	54, rue Royale	Nantes
7025551838	8489 Strong St.	Las Vegas
03 9520 4555	636 St Kilda Road	Melbourne
40.67.8555	67, rue des Cinquante	Nantes
07-98 9555	Erling Skakkes gate 7	Stavern
4155551450	5677 Strong St.	San Rafael
(26) 642-7555	ul. Filtrowa 68	Warszawa
+49 69 66 90 2555	Lyonerstr. 34	Frankfurt
6505555787	5557 North Pendale Street	San Francisco
2125557818	897 Long Airport Avenue	NYC
(91) 555 94 44	C/ Moralzarzal, 86	Madrid
0921-12 3555	Berguvsvägen 8	Luleå
31 12 3555	Vinballetet 34	Kobenhavn
78.32.5555	2, rue du Commerce	Lyon
+65 221 7555	Bronz Sok.	Singapore
2125557413	4092 Furth Circle	NYC
2155551555	7586 Pompton St.	Allentown
6505556809	9408 Furth Circle	Burlingame
+65 224 1555	106 Linden Road Sandown	Singapore
+47 2267 3215	Brehmen St. 121	Bergen
2035557845	149 Spinnaker Dr.	New Haven

Query Settings

PROPERTIES

Name: customers

APPLIED STEPS

- Source
- Navigation
- Imported CSV
- Promoted Headers
- Changed Type
- Inserted Merged Column
- Reordered Columns
- Inserted Trimmed Text

Split Column by Delimiter

Specify the delimiter used to split the text column.

Select or enter delimiter

Space

Split at

☐ Left-most delimiter

☐ Right-most delimiter

☒ Each occurrence of the delimiter

Advanced options

Quote Character

"

☐ Split using special characters

Insert special character

OK Cancel

Home Transform Add Column View Tools Help

Group By Use First Row as Headers Count Rows

Transpose Reverse Rows Detect Data Type Fill Rename Pivot Column Convert to List

Data Type: Text Replace Values Unpivot Columns Move

Split Column Format Extract Parse

Statistics Standard Scientific Rounding Information

Trigonometry Date Time Duration

Queries [3]

classic_models_dataset customers employees

phone addressLine.1 addressLine.2 addressLine.3 addressLine.4

1 32.2555 54, rue Royale null

2 5551838 8489 Strong St. null

3 3520 4555 636 St Kilda Road

4 57.8555 67, rue des Cinquante

5 38 9555 Erling Skakkes gate 78

6 5551450 5677 Strong St. null

7 642-7555 ul. Filtrowa 68 null

8 69 66 90 2555 Lyonerstr. 34 null

9 5555787 5557 North Pendale Street

10 5557818 897 Long Airport Avenue

11 555 94 44 C/ Moraltzarzal, 86 null

12 1-12 3555 Berguvsvägen 8 null

13 12 3555 Vinbæltet 34 null

14 32.5555 2, rue du Commerce

15 221 7555 Bronz Sok. null

16 5557413 4092 Furth Circle null

17 5551555 7586 Pompton St. null

18 5556809 9408 Furth Circle null

19 224 1555 106 Linden Road Sandown

20 2267 3215 Brehmen St. 121 null

21 5557845 149 Spinnaker Dr. null

Query Settings

PROPERTIES

Name customers

APPLIED STEPS

Source *

Navigation *

Imported CSV *

Promoted Headers *

Changed Type

Inserted Merged Column *

Reordered Columns

Inserted Trimmed Text *

Split Column by Delimiter *

Changed Type1

Extract (Email)

The screenshot shows the Power Query Editor interface. The 'Add Column' tab is active, and the 'Extract' menu is open, displaying options like 'Length', 'First Characters', 'Last Characters', 'Range', 'Text Before Delimiter', 'Text After Delimiter', and 'Text Between Delimiters'. The 'Text Before Delimiter' option is selected. The data table below shows columns for 'extension', 'email', 'eCode', 'reportsTo', and 'jobTitle'. The 'email' column contains various email addresses, and the 'jobTitle' column contains roles like 'VP Sales', 'VP Marketing', 'Sales Manager (APAC)', 'Sales Manager (EMEA)', 'Sales Manager (NA)', 'Sales Rep', and 'Sales Rep'.

	extension	email	eCode	reportsTo	jobTitle
1	800	dmurphy@cl	1	1002	VP Sales
2	611	mpatterso@	1	1002	VP Marketing
3	273	jfirrelli@cl	6	1056	Sales Manager (APAC)
4	871	wpatterson@	4	1056	Sale Manager (EMEA)
5	408	gbondur@classicmodelcars.com	1	1056	Sales Manager (NA)
6	428	abow@classicmodelcars.com	1	1143	Sales Rep
7	291	ljennings@classicmodelcars.com	1	1143	Sales Rep
8	065	lhompson@classicmodelcars.com	2	1143	Sales Rep
9	173	jfirrelli@classicmodelcars.com	2	1143	Sales Rep
10	334	spatterson@classicmodelcars.com	3	1143	Sales Rep
11	248	ftseng@classicmodelcars.com	3	1143	Sales Rep
12	102	gvanauf@classicmodelcars.com	3	1143	Sales Rep
13	493	lbondur@classicmodelcars.com	4	1102	Sales Rep
14	028	ghernande@classicmodelcars.com	4	1102	Sales Rep
15	759	pcastillo@classicmodelcars.com	4	1102	Sales Rep
16	311	lbott@classicmodelcars.com	7	1102	Sales Rep
17	02	bjones@classicmodelcars.com	7	1102	Sales Rep
18	01	afixter@classicmodelcars.com	6	1088	Sales Rep
19	02	pmarsh@classicmodelcars.com	6	1088	Sales Rep
20	03	tking@classicmodelcars.com	6	1088	Sales Rep

The 'Text Before Delimiter' dialog box is shown, prompting the user to enter the delimiter that marks the end of what they would like to extract. The 'Delimiter' field contains '@'. There is an 'Advanced options' link and 'OK' and 'Cancel' buttons.

Text Before Delimiter

Enter the delimiter that marks the end of what you would like to extract.

Delimiter

@

Advanced options

OK Cancel

Queries [3]

classic_models_dataset
customers
employees

Formula Bar: = Table.ReorderColumns(#"Inserted Text Before Delimiter",{"employeeNumber", "lastName", "firstName", ...})

	extension	email	Text Before Delimiter	officeCode	re
1	x5800	dmurphy@classicmodelcars.com	dmurphy	1	10
2	x4611	mpatterson@classicmodelcars.com	mpatterson	1	10
3	x9273	jfirrelli@classicmodelcars.com	jfirrelli	1	10
4	x4871	wpatterson@classicmodelcars.com	wpatterson	6	10
5	x5408	gbondur@classicmodelcars.com	gbondur	4	10
6	x5428	abow@classicmodelcars.com	abow	1	10
7	x3291	ljennings@classicmodelcars.com	ljennings	1	11
8	x4065	lthompson@classicmodelcars.com	lthompson	1	11
9	x2173	jfirrelli@classicmodelcars.com	jfirrelli	2	11
10	x4334	spatterson@classicmodelcars.com	spatterson	2	11
11	x2248	ftseng@classicmodelcars.com	ftseng	3	11
12	x4102	gvanauf@classicmodelcars.com	gvanauf	3	11
13	x6493	lbondur@classicmodelcars.com	lbondur	4	11
14	x2028	ghernande@classicmodelcars.com	ghernande	4	11
15	x2759	pcastillo@classicmodelcars.com	pcastillo	4	11
16	x2311	lbott@classicmodelcars.com	lbott	7	11
17	x102	bjones@classicmodelcars.com	bjones	7	11
18	x101	afixter@classicmodelcars.com	afixter	6	10
19	x102	pmarsh@classicmodelcars.com	pmarsh	6	10
20	x103	tking@classicmodelcars.com	tking	6	10
21	x101	mnishi@classicmodelcars.com	mnishi	5	10
22					

Query Settings

PROPERTIES

Name: employees

APPLIED STEPS

- Source
- Navigation
- Imported CSV
- Promoted Headers
- Changed Type
- Inserted Text Before Delimiter
- Reordered Columns

Dealing with Unwanted Columns and Null Values

1. Delete columns: Removing irrelevant or redundant columns.
2. Remove duplicates: Deleting rows that have duplicate values.
3. Remove Null values: Removing rows or columns containing null (missing) data.
4. Fill values: Filling in missing data with specific values or the last non-null value.
5. Change Data type: Changing column data types to appropriate formats (e.g., text to number, date to string).

Delete columns

Queries [9]

classic_models_dataset
customers
employees
offices
order details
orders
payments
productlines
products

Formula Bar: = Table.TransformColumnTypes(#"Split Column by Delimiter",{{"addressLine1.1", type text}, ...})

	actFirstName	Full name	phone	addressLine1.2
1	Carine	Schmitt	40.32.2555	
2	Jean	King	7025551838	
3	Peter	Ferguson	03 9520 4555	
4	Janine	Labrune	40.67.8555	
5	Jonas	Bergulfsen	07-98 9555	
6	Susan	Nelson	4155551450	
7	Zbyszek	Piestrzeniewicz	(26) 642-7555	
8	Roland	Keitel	+49 69 66 90 2555	
9	Julie	Murphy	6505555787	
10	Kwai	Lee	2125557818	
11	Diego	Freyre	(91) 555 94 44	
12	Christina	Berglund	0921-12 3555	
13	Jytte	Petersen	31 12 3555	
14	Mary	Saveley	78.32.5555	
15	Eric	Natividad	+65 221 7555	
16	Jeff	Young	2125557413	
17	Kelvin	Leong	2155551555	
18	Juri	Hashimoto	6505556809	
19	Wendy	Victorino	+65 224 1555	

Query Settings

PROPERTIES

Name: customers

APPLIED STEPS

- Source
- Navigation
- Imported CSV
- Promoted Headers
- Changed Type
- Inserted Merged Column
- Reordered Columns
- Inserted Trimmed Text
- Split Column by Delimiter
- Changed Type1


Remove, Merge with all the tables


Close


New Query


Data Sources


Queries [9]


 classic_models_dataset


 customers


 employees


 offices


 order details


 orders


 payments

 productlines


 products







= Tab

 123 customerNumber

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

Remove duplicates

Queries [9] <

- classic_models_dataset
- customers
- employees
- offices
- order details
- orders
- payments
- productlines
- products

fx = Table.RemoveColumns(#"Merged Columns",{"addressLine1", "postalCode"})

	customerNumber	full name	city	state
1		Carine Schmitt	Nantes	NULL
2		Jean King	Las Vegas	NV
3		Peter Ferguson	Melbourne	Victoria
4		Janine Labrune	Nantes	NULL
5		Jonas Bergulfsen	Stavern	NULL
6		Susan Nelson	San Rafael	CA
7		Zbyszek Piastzeniewicz	Warszawa	NULL
8		Roland Keitel	Frankfurt	NULL
9		Julie Murphy	San Francisco	CA
10		Kwai Lee	NYC	NY
11		Diego Freyre	Madrid	NULL
12		Christina Berglund	Luleå	NULL
13		Jytte Petersen	Kobenhavn	NULL
14		Mary Saveley	Lyon	NULL
15		Eric Natividad	Singapore	NULL
16		Jeff Young	NYC	NY
17		Kelvin Leong	Allentown	PA
18		Juri Hashimoto	Burlingame	CA
19		Wendy Victorino	Singapore	NULL
20		Veysel Oeztan	Bergen	NULL
21	168 American Souvenirs Inc	Keith Franco	New Haven	CT

Remove Null values

Home Transform Add Column View Tools Help

Group By Use First Row as Headers Reverse Rows Count Rows

Data Type: Text v

Replace Values v

Unpivot Columns v

Split Column v

Format

Merge Columns

Extract v

Parse v

Statistics Standard Scientific

Table

Queries [9] <

- classic_models_dataset
- customers
- employees
- offices
- order details
- orders
- payments
- productlines
- products

fx = Table.Distinct(#"Removed Columns1", {"customerNumber"})

	city	state	country	salesRepEmployeeNumber	creditLimit
1	Nantes	NULL	France	1370	
2	Las Vegas	NV	USA	1166	
3	Melbourne	Victoria	Australia	1611	
4	Nantes	NULL	France	1370	
5	Stavern	NULL	Norway	1504	
6	San Rafael	CA	USA	1165	
7	Warszawa	NULL	Poland	NULL	
8	Frankfurt	NULL	Germany	1504	
9	San Francisco	CA	USA	1165	
10	NYC	NY	USA	1323	
11	Madrid	NULL	Spain	1370	
12	Luleå	NULL	Sweden	1504	

Replace Values

Replace one value with another in the selected columns.

Value To Find

NULL

Replace With

null

Advanced options

OK Cancel

Queries [9]

classic_models_dataset

customers

employees

offices

order details

orders

payments

productlines

products

Table

Replace Values

Unpivot Columns

Split Column

Format

Extract

Parse

Statistics

Standard

Scientific

Trigonometry

Rounding

Information

Date

Time

Date & Time Column

Query Settings

PROPERTIES

Name

customers

APPLIED STEPS

Source

Navigation

Imported

Promoted Headers

Changed Type

Removed Columns

Trimmed Text

Merged Columns

Removed Columns1

Removed Duplicates

Replaced Value

	APC city	APC state	APC country	APC salesRepEmployeeNumber	123 creditLimit
1	Nantes		France	1370	
2	Las Vegas	NV	USA	1166	
3	Melbourne	Victoria	Australia	1611	
4	Nantes		France	1370	
5	Stavern		Norway	1504	
6	San Rafael	CA	USA	1165	
7	Warszawa		Poland	1165	
8	Frankfurt		Germany	1504	
9	San Francisco	CA	USA	1165	
10	NYC	NY	USA	1323	
11	Madrid		Spain	1370	
12	Luleå		Sweden	1504	
13	København		Denmark	1401	
14	Lyon		France	1337	
15	Singapore		Singapore	1621	
16	NYC	NY	USA	1286	
17	Allentown	PA	USA	1216	

Fill value

Queries [9]

classic_models_dataset

customers

employees

offices

order details

orders

payments

productlines

products

Table

Replace Values

Unpivot Columns

Split Column

Format

Extract

Parse

Statistics

Standard

Scientific

Trigonometry

Rounding

Information

Date

Time

Date & Time Column

Query Settings

PROPERTIES

Name

customers

APPLIED STEPS

Source

Navigation

Imported CSV

Promoted Headers

Changed Type

Removed Columns

Trimmed Text

Merged Columns

Removed Columns1

Removed Duplicates

Replaced Value

Replaced Value2

Replaced Value1

	full name	APC city	APC country	APC salesRepEmployeeNumber	123 creditLimit
1	je Schmitt	Nantes	France	1370	210
2	King	Las Vegas	USA	1166	718
3	Ferguson	Melbourne	Australia	1611	1173
4	e Labrune	Nantes	France	1370	1182
5	Bergulfsen	Stavern	Norway	1504	817
6	n Nelson	San Rafael	USA	1165	2105
7	tek Piestzeniewicz	Warszawa	Poland		null
8	nd Keitel	Frankfurt	Germany	1504	597
9	Murphy	San Francisco	USA	1165	646
10	Lee	NYC	USA	1323	1149
11	Freyre	Madrid	Spain	1370	2276
12	tina Berglund	Luleå	Sweden	1504	531
13	Petersen	København	Denmark	1401	834
14	Saveley	Lyon	France	1337	1239
15	katividad	Singapore	Singapore	1621	1038
16	oung	NYC	USA	1286	1385
17	n Leong	Allentown	USA	1216	1006
18	hashimoto	Burlingame	USA	1165	846
19	dy Victorino	Singapore	Singapore	1612	979

Filled

6	n Nelson	San Rafael	USA	1165
7	zek Piestrzeniewicz	Warszawa	Poland	1165

Changed Data Type

The screenshot shows the Power BI Desktop interface. The 'Table' ribbon is active, and the 'Format' dropdown is open, showing various data types. The 'salesRepEmployeeNumber' column is selected, and its data type is being changed to 'Decimal Number'.

name	city	country	salesRepEmployeeNumber	creditLimit
1	chmitt	Nantes	France	21000
2	g	Las Vegas	USA	71800
3	rguson	Melbourne	Australia	117300
4	abrune	Nantes	France	118200
5	rgulfsen	Stavern	Norway	81700
6	elson	San Rafael	USA	210500
7	Piestrzeniewicz	Warszawa	Poland	0
8	teitel	Frankfurt	Germany	59700
9	rphy	San Francisco	USA	64600
10		NYC	USA	114900
11	eyre	Madrid	Spain	227600
12	Berglund	Luleå	Sweden	53100
13	ersen	Kobenhavn	Denmark	83400
14	veley	Lyon	France	123900
15	vidad	Singapore	Singapore	103800
16	ng	NYC	USA	138500
17	song	Allentown	USA	100600

Dealing with Numerical tools

Power BI provides several tools to manipulate numerical data:

- Statistics: Generating basic statistical summaries such as averages and sums.
- Rounding Up and Down: Rounding off values to specific decimal places.
- Standard and Scientific Formats: Representing numbers in different formats based on the nature of the data.

Untitled - Power Query Editor

Home Transform **Add Column** View Tools Help

Column From Examples Custom Invoke Custom Function Conditional Column Index Column Duplicate Column

Format Merge Columns Extract Statistics Standard Scientific Rounding Information Date Time Duration Text Analytics Vision Azure Machine Learning

Queries [9]

classic_models_dataset customers employees offices **order details** orders payments productlines products

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

10100 10100 10100 10100 10101 10101 10101 10101 10102 10102 10103 10103 10103 10103 10103 10103 10103 10103 10103 10103 10103

S18_1749 S18_2248 S18_4409 S24_3969 S18_2325 S18_2795 S24_1937 S24_2022 S18_1342 S18_1367 S10_1949 S10_4962 S12_1666 S18_1097 S18_2432 S18_2949 S18_2957 S18_3136 S18_3320 S18_4600 S18_4668

136 55.09 75.46 35.29 108.06 167.06 32.53 44.35 95.55 43.13 214.3 119.67 121.64 94.5 58.34 92.19 61.84 86.92 86.31 98.07 40.75

Query Settings

PROPERTIES

Name

order details

APPLIED STEPS

Source

Navigation

Imported CSV

Promoted Headers

Changed Type

Home Transform **Add Column** View Tools Help

Column From Examples Custom Invoke Custom Function Conditional Column Index Column Duplicate Column

Format Merge Columns Extract Statistics Standard Scientific Rounding Information Date Time Duration Text Analytics Vision Azure Machine Learning

Create a new column in this table, based on a custom formula.

Custom Column

Add a column that is computed from the other columns.

New column name

Sales

Custom column formula ⓘ

= [priceEach]*[quantityOrdered]

Available columns

- orderNumber
- productCode
- quantityOrdered
- priceEach
- orderLineNumber

<< Insert

✓ No syntax errors have been detected.

OK Cancel

Examples	Column	Function	Duplicate Column	Parse	Information	Analytics	Learning
		General		General	From Number	From Date & Time	AI Insights

Queries [9]	classic_models_dataset	customers	employees	offices	order details	orders	payments	productlines	products
-------------	------------------------	-----------	-----------	---------	---------------	--------	----------	--------------	----------

productCode	quantityOrdered	priceEach	Sales	orderLineNumber
1 \$18_1749	30	136	4,080.00	
2 \$18_2248	50	55.09	2,754.50	
3 \$18_4409	22	75.46	1,660.12	
4 \$24_3969	49	35.29	1,729.21	
5 \$18_2325	25	108.06	2,701.50	
6 \$18_2795	26	167.06	4,343.56	
7 \$24_1937	45	32.53	1,463.85	
8 \$24_2022	46	44.35	2,040.10	
9 \$18_1342	39	95.55	3,726.45	
10 \$18_1367	41	43.13	1,768.33	
11 \$10_1949	26	214.3	5,571.80	
12 \$10_4962	42	119.67	5,026.14	
13 \$12_1666	27	121.64	3,284.28	
14 \$18_1097	35	94.5	3,307.50	
15 \$18_2432	22	58.34	1,283.48	
16 \$18_2949	27	92.19	2,489.13	
17 \$18_2957	35	61.84	2,164.40	
18 \$18_3136	25	86.92	2,173.00	
19 \$18_3320	46	86.31	3,970.26	
20 \$18_4600	36	98.07	3,530.52	
21 \$18_4668	41	40.75	1,670.75	

Query Settings

PROPERTIES

Name

order details

APPLIED STEPS

- Source
- Navigation
- Imported CSV
- Promoted Headers
- Changed Type
- Added Custom
- Changed Type1
- Reordered Columns

Statistics

Group By	Use First Row as Headers	Count Rows	Transpose	Reverse Rows	Detect Data Type	Replace Values	Unpivot Columns	Split Column	Format	Extract	Merge Columns	Statistics	Standard	Scientific	Trigonometry
Table					Rename	Fill	Move	Convert to List	Text Column	Parse		Sum	Minimum	Maximum	Median

Queries [9]	classic_models_dataset	customers	employees	offices	order details	orders	payments
-------------	------------------------	-----------	-----------	---------	---------------	--------	----------

productCode	quantityOrdered	priceEach	Sales	orderLineNumber
1 \$18_1749	30	136	4,080.00	
2 \$18_2248	50	55.09	2,754.50	
3 \$18_4409	22	75.46	1,660.12	
4 \$24_3969	49	35.29	1,729.21	
5 \$18_2325	25	108.06	2,701.50	
6 \$18_2795	26	167.06	4,343.56	
7 \$24_1937	45	32.53	1,463.85	
8 \$24_2022	46	44.35	2,040.10	
9 \$18_1342	39	95.55	3,726.45	
10 \$18_1367	41	43.13	1,768.33	
11 \$10_1949	26	214.3	5,571.80	
12 \$10_4962	42	119.67	5,026.14	
13 \$12_1666	27	121.64	3,284.28	
14 \$18_1097	35	94.5	3,307.50	
15 \$18_2432	22	58.34	1,283.48	
16 \$18_2949	27	92.19	2,489.13	
17 \$18_2957	35	61.84	2,164.40	
18 \$18_3136	25	86.92	2,173.00	
19 \$18_3320	46	86.31	3,970.26	
20 \$18_4600	36	98.07	3,530.52	
21 \$18_4668	41	40.75	1,670.75	

Statistics

Sum

Minimum

Maximum

Median

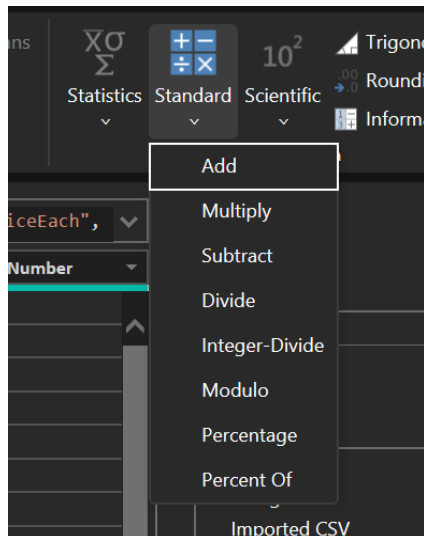
Average

Standard Deviation

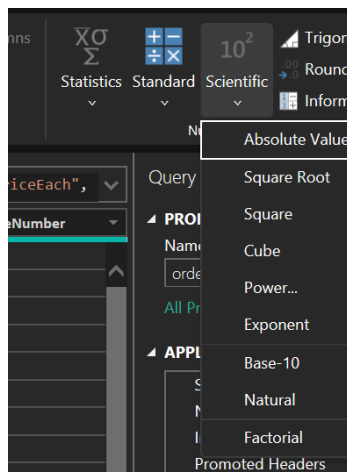
Count Values

Count Distinct Values

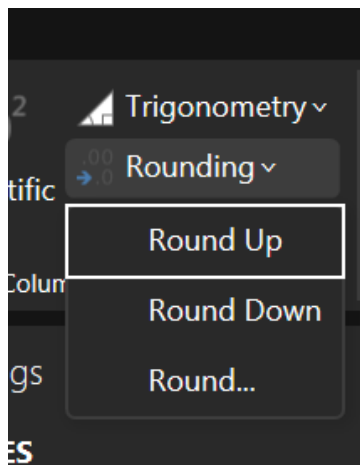
Standard



Scientific



Rounding Up and Down



Dealing with Date and Time

1. Add year column: Extracting the year from a date field.
2. Average shipping days: Calculating the average number of days for order deliveries or shipments

	orderNumber	orderDate	requiredDate	shippedDate	
1	10100	06/01/2003	13/01/2003	2003-01-10	
2	10101	09/01/2003	18/01/2003	2003-01-11	
3	10102	10/01/2003	18/01/2003	2003-01-14	
4	10103	29/01/2003	07/02/2003	2003-02-02	
5	10104	31/01/2003	09/02/2003	2003-02-01	Shipped
6	10105	11/02/2003	21/02/2003	2003-02-12	Shipped
7	10106	17/02/2003	24/02/2003	2003-02-21	Shipped
8	10107	24/02/2003	03/03/2003	2003-02-26	Shipped
9	10108	03/03/2003	12/03/2003	2003-03-08	Shipped
10	10109	10/03/2003	19/03/2003	2003-03-11	Shipped
11	10110	18/03/2003	24/03/2003	2003-03-20	Shipped
12	10111	25/03/2003	31/03/2003	2003-03-30	Shipped
13	10112	24/03/2003	03/04/2003	2003-03-29	Shipped
14	10113	26/03/2003	02/04/2003	2003-03-27	Shipped

Replace Values

Replace one value with another in the selected columns.

Value To Find

Replace With

☐ Advanced options

shippedDate	status
3/	
3/	
8/	
7/	
9/	
1/	

shippedDate
 14 (4%)
 Error

...

The screenshot shows the Power Query Editor interface. The ribbon includes 'Close & Apply', 'New Source', 'Recent Sources', 'Enter Data', 'Data source settings', 'Manage Parameters', 'Refresh Preview', 'Advanced Editor', 'Choose Columns', 'Remove Columns', 'Keep Rows', 'Remove Rows', 'Split Column', and 'Group By'. The 'Remove Rows' dropdown menu is open, showing options: 'Remove Top Rows', 'Remove Bottom Rows', 'Remove Alternate Rows', 'Remove Duplicates', 'Remove Blank Rows', and 'Remove Errors'. The 'Remove Errors' option is highlighted. The background shows a table with columns: orderNumber, orderDate, requiredDate, and shippedDate. The formula bar shows: `= Table.TransformColumnTypes(#"replaced value",{{"shippedDate", type date}})`.

Add year column

The screenshot shows the Power Query Editor interface. The ribbon includes 'Column From Examples', 'Custom Column', 'Invoke Custom Function', 'Index Column', 'Duplicate Column', 'Format', 'Merge Columns', 'Extract', 'Parse', 'Statistics', 'Standard', 'Scientific', 'Rounding', 'Information', 'Date', 'Time', 'Duration', 'Text', 'Vision', 'Azure Machine Learning', and 'AI Insights'. The 'Date' dropdown menu is open, showing options: 'Date Only', 'Parse', 'Year', 'Start of Year', 'End of Year', 'Month', 'Start of Month', 'End of Month', 'Days in Month', 'Name of Month', 'Quarter of Year', 'Start of Quarter', 'End of Quarter', 'Week of Year', and 'Week of Month'. The 'Name of Month' option is highlighted. The background shows a table with columns: orderDate, requiredDate, shippedDate, and APC status. The formula bar shows: `= Table.RemoveColumns(#"Removed Errors",{"comments"})`.

Average shipping days

The screenshot shows the 'Custom Column' dialog box. It has a title bar 'Custom Column' and a close button. The text 'Add a column that is computed from the other columns.' is displayed. There is a text box for 'New column name' containing 'Average shipping days'. Below it is a text box for 'Custom column formula' containing `= [shippedDate] - [orderDate]`. To the right is a list of 'Available columns': orderNumber, orderDate, requiredDate, shippedDate, status, and customerNumber. At the bottom right is a '<< Insert' button. At the bottom left, there is a green checkmark and the text 'No syntax errors have been detected.' Below the dialog box is a link 'Learn about Power Query formulas'. At the bottom right are 'OK' and 'Cancel' buttons.

Home Transform **Add Column** View Tools Help

Column From Examples Custom Column Invoke Custom Function Index Column Duplicate Column Conditional Column Format Extract Merge Columns Statistics Standard Scientific Rounding Trigonometry Date Time Duration Text Analytics Vision Azure Machine Learning

Queries [9] `= Table.AddColumn(#"Removed Columns", "Average shipping days", each [shippedDate]-[orderDate])`

shippedDate	status	customerNumber	Average shipping
13/01/2003	Shipped	363	
18/01/2003	Shipped	128	
18/01/2003	Shipped	181	
07/02/2003	Shipped	121	
09/02/2003	Shipped	141	
21/02/2003	Shipped	145	
24/02/2003	Shipped	278	
03/03/2003	Shipped	131	
12/03/2003	Shipped	385	
19/03/2003	Shipped	486	
24/03/2003	Shipped	187	
31/03/2003	Shipped	129	
03/04/2003	Shipped	144	
02/04/2003	Shipped	124	
07/04/2003	Shipped	172	
12/04/2003	Shipped	424	
19/04/2003	Shipped	381	
24/04/2003	Shipped	148	

Query Settings

PROPERTIES

Name: orders

APPLIED STEPS

- Source
- Navigation
- Imported CSV
- Promoted Headers
- Changed Type
- Replaced Value
- Changed Type1
- Removed Errors
- Removed Columns
- Added Custom

Queries [9] `= Table.AddColumn(#"Added Custom", "Days", each Duration.Days([Average shipping days]), Int64.Type)`

shippedDate	status	customerNumber	Average shipping days	Days
10/01/2003	Shipped	363		4
11/01/2003	Shipped	128		2
14/01/2003	Shipped	181		4
02/02/2003	Shipped	121		4
01/02/2003	Shipped	141		1
12/02/2003	Shipped	145		1
21/02/2003	Shipped	278		4
26/02/2003	Shipped	131		2
08/03/2003	Shipped	385		5
11/03/2003	Shipped	486		1
20/03/2003	Shipped	187		2
30/03/2003	Shipped	129		5
29/03/2003	Shipped	144		5
27/03/2003	Shipped	124		1
02/04/2003	Shipped	172		1
07/04/2003	Shipped	424		3
13/04/2003	Shipped	381		2
17/04/2003	Shipped	148		1

Adding Conditional Columns:

Conditional columns allow the creation of new columns based on specific conditions:

- For example, in the Orders Table, you can add an "Order Priority" column that categorizes orders based on shipment dates using if...else if logic

HomeTransformAdd ColumnViewToolsHelp

Column From ExamplesCustom ColumnInvoke Custom FunctionGeneral

Conditional ColumnIndex ColumnDuplicate Column

FormatExtractParse

StatisticsStandardScientificRoundingInformation

DateTimeDurationFrom Date & Time

Text AnalyticsVision Azure ML AI Insights

Change casing of text or cleanse text.

Queries [9]

- classic_models_dataset
- customers
- employees
- offices
- order details
- orders
- payments
- productlines
- products

fx

= Table.TransformColumnTypes(#"Promoted Headers",{{"productCode", type text}, {"productName", type

productDescription	quantityInStock	buyPrice	MSRP
1 replica features working kickstand, front suspension, gear-shift le...	7933	48.81	
2 ale front wheels; steering function; detailed interior; detailed en...	7305	98.58	2
3 Moto Guzzi logos and insignias, saddle bags located on side of ...	6625	68.99	11
4 features, official Harley Davidson logos and insignias, detachabl...	5582	91.02	19
5 ion diecast replica, baked enamel finish, 1:10 scale model, remova			
6 es include: Turnable front wheels; steering function; detailed int...	3252	85.68	
7 es include: Turnable front wheels; steering function; detailed int...	6791	103.42	14
8 doors and trunk all open to reveal highly detailed interior featur...	68	95.34	19
9 ale front wheels; steering function; detailed interior; detailed en...	3619	95.59	2
10 features 30 windows, skylights & glare resistant glass, working ...	1579	77.9	13
11 logos and insignias, saddle bags located on side of motorcycle, ...	9997	66.27	15
12 ale die-cast about 10 long doors open	6906	89.14	15
13 ale model of a 1968 Dodge Charger. Hood, doors and trunk all o...	9123	75.16	11
14 ale front wheels; steering function; detailed interior; detailed en...	1049	83.05	17
15 detailed 1970 Plymouth Cuda model in 1:12 scale. The Cuda is ge...	5663	31.92	
16 ale die-cast about 20 long Hood opens	6125	55.7	1
17 d model of the 1969 Dodge Charger. This model includes finely ...	7323	58.73	11
18 odel features soft rubber tires, working steering, rubber mud gu...	2613	58.33	11
19 odel features, opening hood, opening doors, detailed engine, re...	3975	83.51	14
20 es opening engine cover, doors, trunk, and fuel filler cap. Color ...	8693	60.62	10

Query Settings

PROPERTIES

- Name
 - products
- All Properties

APPLIED STEPS

- Source
 - Navigation
 - Imported CSV
 - Promoted Hea
 - Changed Type

Add Conditional Column

Add a conditional column that is computed from the other columns or values.

New column name

Custom

Column Name

Operator

Value

Output

If

quantityInStock

is greater than or...

123

1000

Then

123

not required

...

Add Clause

Else

123

required

OK

Cancel

Perform basic math operations.

\times \checkmark f_x = Table.AddColumn("#Changed Type", "Custom", each if [quantityInStock] >= 1000 then "not required")

	1.3 quantityInStock	1.2 buyPrice	1.2 MSRP	ABC 123 Custom
1	suspension, gear-shift le...	7933	48.81	95.7 not required
2	ailed interior; detailed en...	7305	98.58	214.3 not required
3	e bags located on side of ...	6625	68.99	118.94 not required
4	s and insignias, detachabl...	5582	91.02	193.66 not required
	sh, 1:10 scale model, remova			
5	bring function; detailed int...	3252	85.68	136 not required
6	bring function; detailed int...	6791	103.42	147.74 not required
7	ly detailed interior featur...	68	95.34	194.57 required
8	ailed interior; detailed en...	3619	95.59	207.8 not required
9	-resistant glass, working ...	1579	77.9	136.67 not required
10	ed on side of motorcycle, ...	9997	66.27	150.62 not required
11		6906	89.14	151.08 not required
12	ood, doors and trunk all o...	9123	75.16	117.44 not required
13	ailed interior; detailed en...	1049	83.05	173.02 not required
14	1:12 scale. The Cuda is ge...	5663	31.92	79.8 not required
15	s	6125	55.7	118.5 not required
16	This model includes finely ...	7323	58.73	115.16 not required
17	g steering, rubber mud gu...	2613	58.33	116.67 not required
18	doors, detailed engine, re...	3975	83.51	141.54 not required
19	and fuel filler cap. Color ...	8693	60.62	102.74 not required
20	y die-cast metal and has a...	8635	24.26	53.91 not required

Orders table (else if clause)

Column From Examples Custom Invoke Custom Function Conditional Column Index Column Duplicate Column Format Extract Parse General Statistics Standard Scientific From Number Trigonometry Rounding Date Time Duration From Date & Time Text Analytics Vision Azure Machine Learning AI Insights

Queries [9] classic_models_dataset customers employees offices order details orders payments productlines products

\times \checkmark f_x = Table.AddColumn("#Added Custom", "Days", each Duration.Days([Average shipping days]), Int64.Type)

	1.3 orderNumber	orderDate	requiredDate	shippedDate	APC status
1	10100	06/01/2003	13/01/2003	10/01/2003	Shipped
2	10101	09/01/2003	18/01/2003	11/01/2003	Shipped
3	10102	10/01/2003	18/01/2003	14/01/2003	Shipped
4	10103	29/01/2003	07/02/2003	02/02/2003	Shipped
5	10104	31/01/2003	09/02/2003	01/02/2003	Shipped
6	10105	11/02/2003	21/02/2003	12/02/2003	Shipped
7	10106	17/02/2003	24/02/2003	21/02/2003	Shipped
8	10107	24/02/2003	03/03/2003	26/02/2003	Shipped
9	10108	03/03/2003	12/03/2003	08/03/2003	Shipped
10	10109	10/03/2003	19/03/2003	11/03/2003	Shipped
11	10110	18/03/2003	24/03/2003	20/03/2003	Shipped
12	10111	25/03/2003	31/03/2003	30/03/2003	Shipped
13	10112	24/03/2003	03/04/2003	29/03/2003	Shipped
14	10113	26/03/2003	02/04/2003	27/03/2003	Shipped
15	10114	01/04/2003	07/04/2003	02/04/2003	Shipped
16	10115	04/04/2003	12/04/2003	07/04/2003	Shipped
17	10116	11/04/2003	19/04/2003	13/04/2003	Shipped
18	10117	16/04/2003	24/04/2003	17/04/2003	Shipped
19	10118	21/04/2003	29/04/2003	26/04/2003	Shipped
20	10119	28/04/2003	05/05/2003	02/05/2003	Shipped

Query Settings

PROPERTIES

Name

orders

APPLIED STEPS

Source

Navigation

Imported CSV

Promoted Headers

Changed Type

Replaced Value

Changed Type1

Removed Errors

Removed Columns

Added Custom

Inserted Days

Add Conditional Column

Add a conditional column that is computed from the other columns or values.

New column name
Custom

	Column Name	Operator	Value	Output
If	Average shipping...	is less than or equ...	4	good
Else If	Average shipping...	is greater than or...	100	bad

Add Clause

Else
average

OK **Cancel**

Queries [9]

classic_models_dataset

customers

employees

offices

order details

orders

payments

productlines

products

Table.AddColumn(#"Inserted Days", "Custom", each if [Average shipping days] <= #duration(4, 0, 0, 0))

	customerNumber	Average shipping days	Days	Custom
1	363	4.00:00:00	4	good
2	128	2.00:00:00	2	good
3	181	4.00:00:00	4	good
4	121	4.00:00:00	4	good
5	141	1.00:00:00	1	good
6	145	1.00:00:00	1	good
7	278	4.00:00:00	4	good
8	131	2.00:00:00	2	good
9	385	5.00:00:00	5	average
10	486	1.00:00:00	1	good
11	187	2.00:00:00	2	good
12	129	5.00:00:00	5	average
13	144	5.00:00:00	5	average
14	124	1.00:00:00	1	good
15	172	1.00:00:00	1	good
16	424	3.00:00:00	3	good
17	381	2.00:00:00	2	good
18	148	1.00:00:00	1	good

Query Settings

PROPERTIES

Name
orders

APPLIED STEPS

- Source *
- Navigation *
- Imported CSV *
- Promoted Headers *
- Changed Type *
- Replaced Value *
- Changed Type1 *
- Removed Errors *
- Removed Columns *
- Added Custom *
- Inserted Days *
- Added Conditional Column *

Conclusion:

Power BI provides a comprehensive set of preprocessing tools to clean and structure raw data. These preprocessing steps help in ensuring data quality and accuracy before further analysis. By applying various transformations, you can prepare your data for detailed analysis, thus enhancing the insights derived from visualizations.