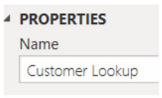
Power BI - Data Transformation - p2

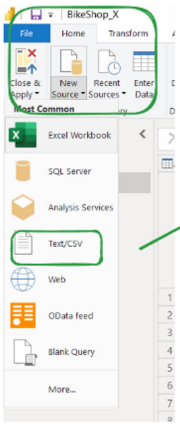
We are trying to transform other dataset as well.

Step 1 . Power BI Front End > Get Data > Import Data "Customer Lookup" > Transform data to Power Query Editor.

Step 2

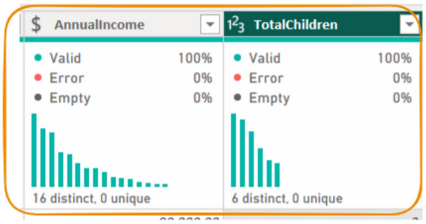


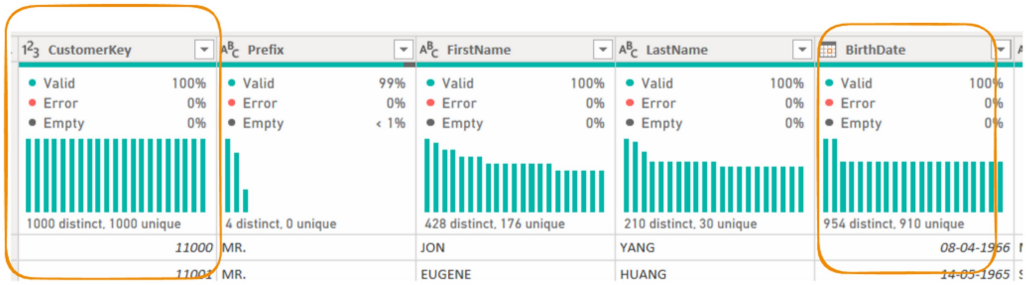
Rename it to customer Lookup.

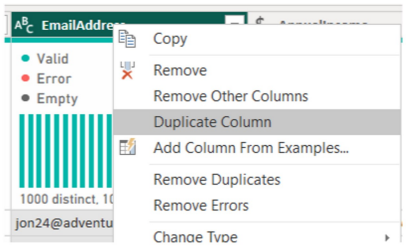


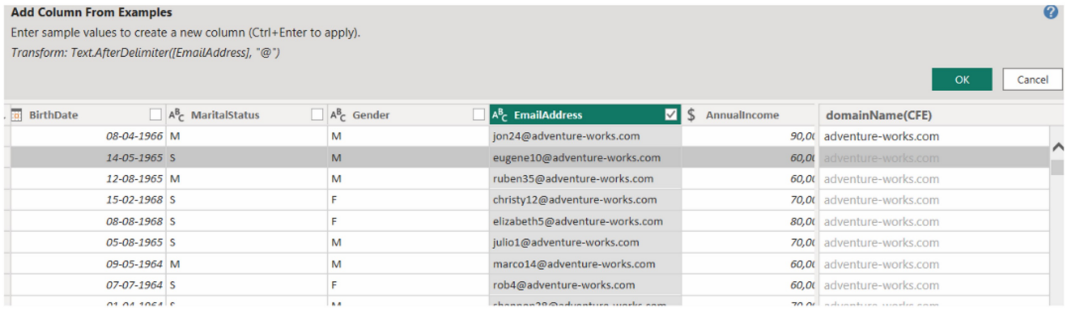
You can also do it directly from P.Q.Editor

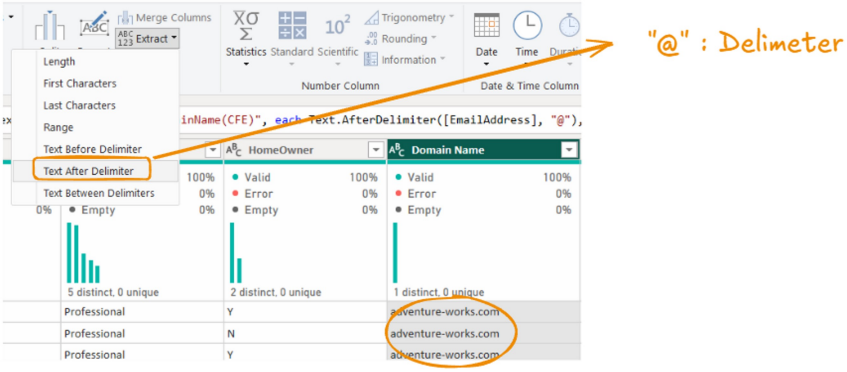
Step 3 : Promote The Headers .
Step 4 : Change the data type of each columns









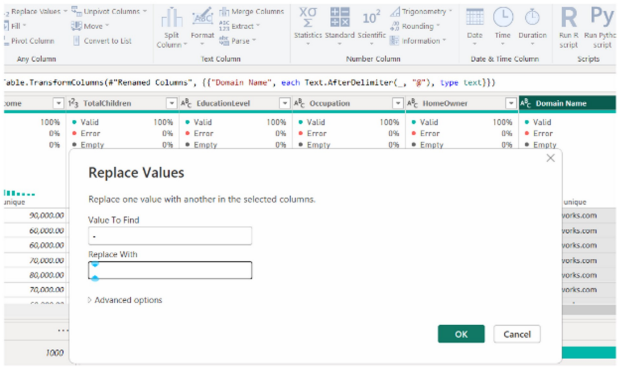


"@" : Delimeter

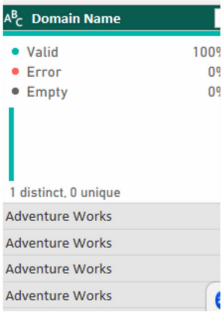
adventure-works.com

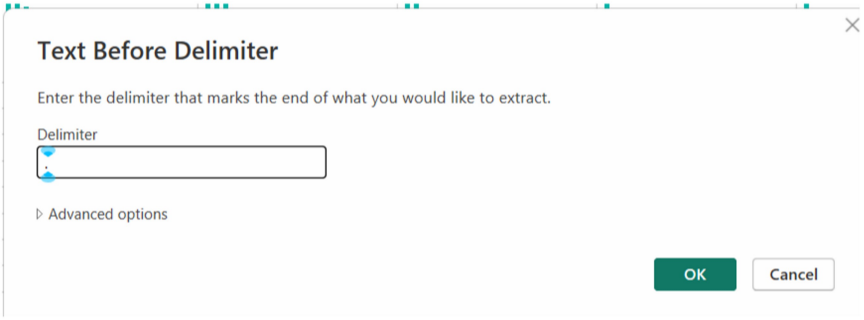
- : space

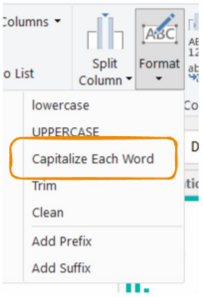
(i.e. "Adventure Works")


Replace Values
Replace one value with another in the selected columns.
Value To Find
Replace With
Advanced options
OK
Cancel

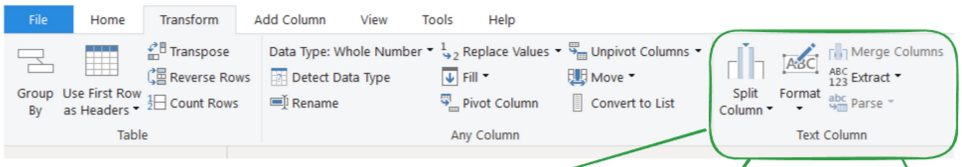

adventure works
adventure works

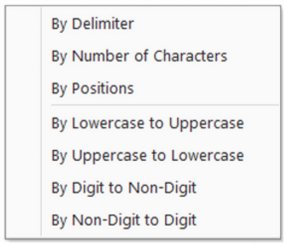

Domain Name
Valid
Error
Empty
1 distinct, 0 unique
Adventure Works
Adventure Works
Adventure Works
Adventure Works


Text Before Delimiter
Enter the delimiter that marks the end of what you would like to extract.
Delimiter
Advanced options
OK
Cancel

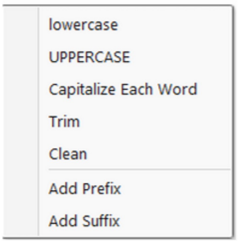

Split Column
Format
lowercase
UPPERCASE
Capitalize Each Word
Trim
Clean
Add Prefix
Add Suffix

TEXT TOOLS

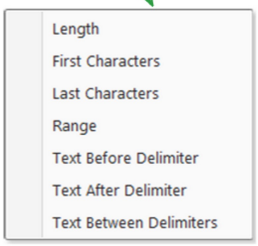




Split a text column based on a specific delimiter, number of characters, or other attributes



Format a text column to upper, lower or proper case, or add a prefix or suffix



Extract characters from text based on fixed lengths, first/last characters, ranges or delimiters

You can access many tools from both the "Transform" and "Add Column" menus -the difference is whether you want to ADD a new column or OVERWRITE an existing one

Tip: Use "Trim" to eliminate leading & trailing spaces, or "Clean" to remove non-printable characters

Text Tool : Assignment

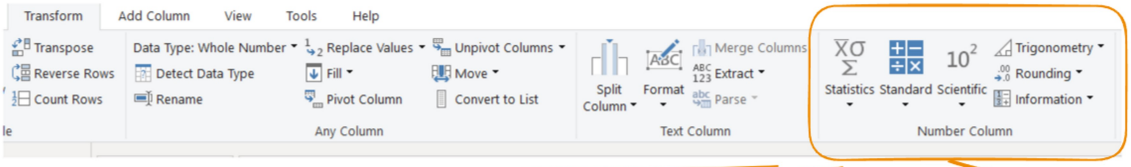
1. Duplicate the email address column and name it "Domain Name"

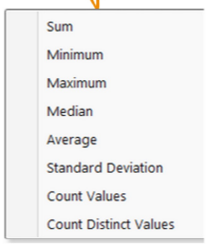
2. In the new column, remove all text/characters except for the domain name

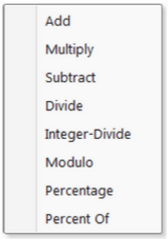
3. Use transformation steps to clean up and capitalize the domain names (i.e. "Adventure Works")

4. Save & Apply changes

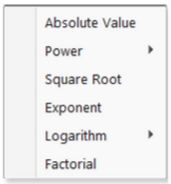
NUMERICAL TOOLS



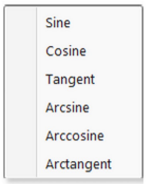




Standard



Scientific



Trigonometry

Information tools allow you to define binary flags (1/0 or TRUE/FALSE) to mark rows as even, odd, positive or negative

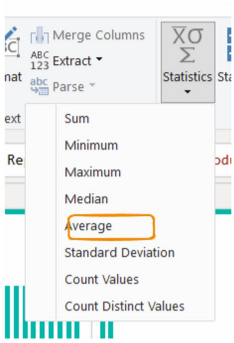
Standard, Scientific and Trigonometry tools allow you to apply standard operations (addition, multiplication, division, etc.) or more advanced calculations (power, logarithm, sine, tangent, etc.) to each value in a column

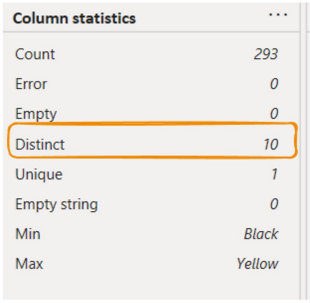
Note: These tools return a SINGLE value, and are commonly used to explore a table rather than prepare it for loading

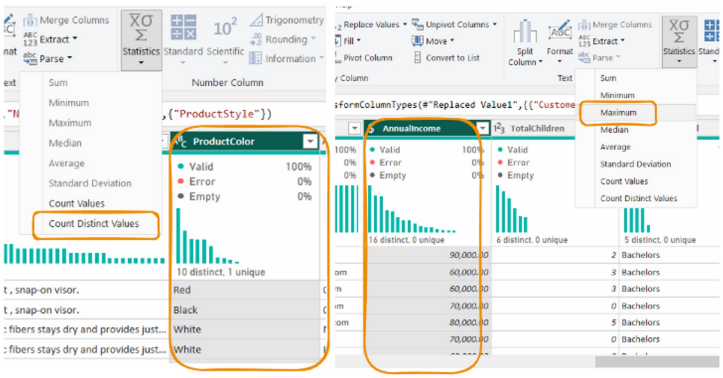
Note: Unlike the Statistics tools, these are applied to each row in the table

NUMERICAL TOOLS : Assignment

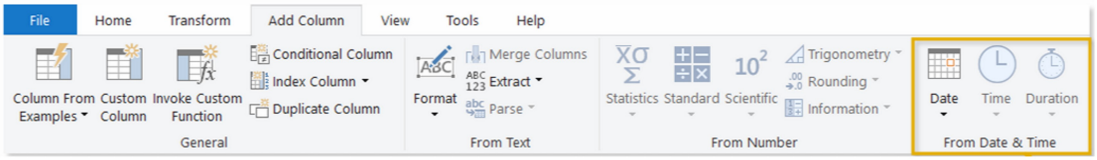
1. What is our average product cost? 413.66
2. How many colors do we sell our products in? 10
3. How many distinct customers do we have? 18021 18018
4. What is the maximum annual customer income? 170000
5. Return the tables to their original state



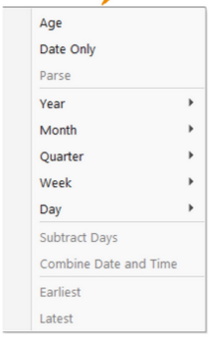




DATE & TIME TOOLS



Date & Time tools are relatively straight-forward, and include the following options:



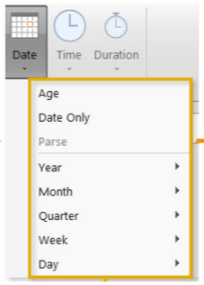
- Age: Difference between the current date and the date in each row
- Date Only: Removes the time component from a date/time field
- Year/Month/Quarter/Week/Day: Extracts individual components from a date field (time specific options include Hour, Minute, Second, etc.)
- Earliest/Latest: Evaluates the earliest or latest date from a column as a single value (can only be accessed from the "Transform" menu)

Note: You will almost always want to perform these operations from the "Add Column" menu to build out new fields, rather than transforming an individual date/time column

PRO TIP: Load up a table containing a single date column and use Date tools to build out an entire calendar table

CREATING A CALENDAR TABLE

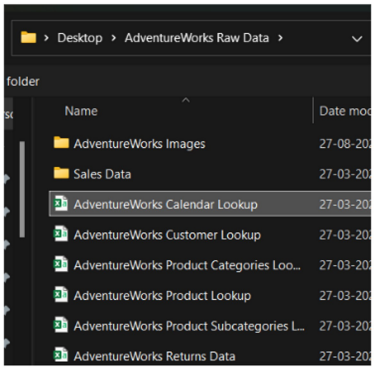
	Date
1	1/1/2020
2	1/2/2020
3	1/3/2020
4	1/4/2020
5	1/5/2020
6	1/6/2020
7	1/7/2020
8	1/8/2020
9	1/9/2020
10	1/10/2020
11	1/11/2020
12	1/12/2020
13	1/13/2020
14	1/14/2020
15	1/15/2020
16	1/16/2020
17	1/17/2020
18	1/18/2020
19	1/19/2020
20	1/20/2020
21	1/21/2020
22	1/22/2020
23	1/23/2020
24	1/24/2020
25	1/25/2020
26	1/26/2020
27	1/27/2020
28	1/28/2020



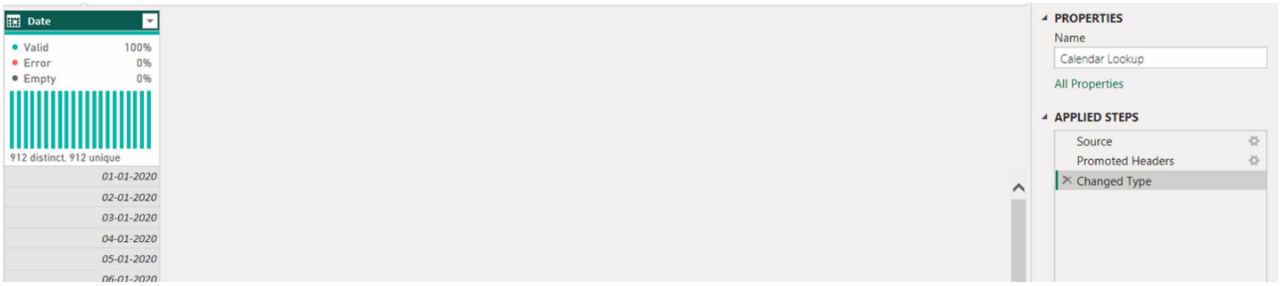
Use the Date options in the Add Column menu to quickly build out an entire calendar table from a list of dates

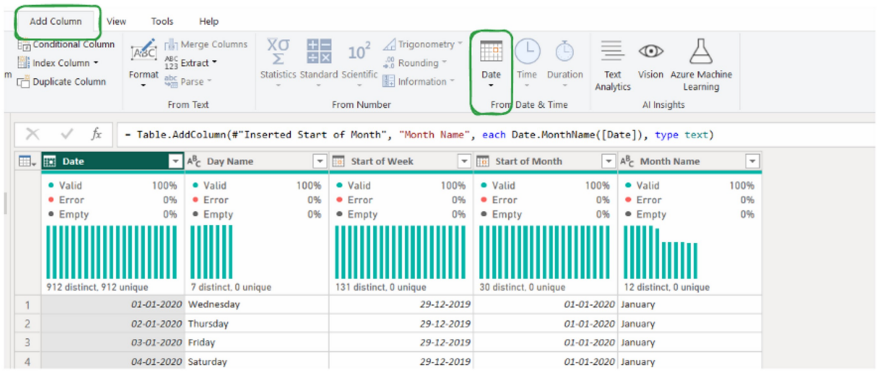
	Date	Day Name	Start of Week	Start of Month	Month Name
1	1/1/2020	Wednesday	12/29/2019	1/1/2020	January
2	1/2/2020	Thursday	12/29/2019	1/1/2020	January
3	1/3/2020	Friday	12/29/2019	1/1/2020	January
4	1/4/2020	Saturday	12/29/2019	1/1/2020	January
5	1/5/2020	Sunday	1/5/2020	1/1/2020	January
6	1/6/2020	Monday	1/5/2020	1/1/2020	January
7	1/7/2020	Tuesday	1/5/2020	1/1/2020	January
8	1/8/2020	Wednesday	1/5/2020	1/1/2020	January
9	1/9/2020	Thursday	1/5/2020	1/1/2020	January
10	1/10/2020	Friday	1/5/2020	1/1/2020	January
11	1/11/2020	Saturday	1/5/2020	1/1/2020	January
12	1/12/2020	Sunday	1/12/2020	1/1/2020	January
13	1/13/2020	Monday	1/12/2020	1/1/2020	January
14	1/14/2020	Tuesday	1/12/2020	1/1/2020	January
15	1/15/2020	Wednesday	1/12/2020	1/1/2020	January
16	1/16/2020	Thursday	1/12/2020	1/1/2020	January
17	1/17/2020	Friday	1/12/2020	1/1/2020	January
18	1/18/2020	Saturday	1/12/2020	1/1/2020	January
19	1/19/2020	Sunday	1/19/2020	1/1/2020	January
20	1/20/2020	Monday	1/19/2020	1/1/2020	January
21	1/21/2020	Tuesday	1/19/2020	1/1/2020	January
22	1/22/2020	Wednesday	1/19/2020	1/1/2020	January
23	1/23/2020	Thursday	1/19/2020	1/1/2020	January
24	1/24/2020	Friday	1/19/2020	1/1/2020	January
25	1/25/2020	Saturday	1/19/2020	1/1/2020	January
26	1/26/2020	Sunday	1/26/2020	1/1/2020	January
27	1/27/2020	Monday	1/26/2020	1/1/2020	January
28	1/28/2020	Tuesday	1/26/2020	1/1/2020	January

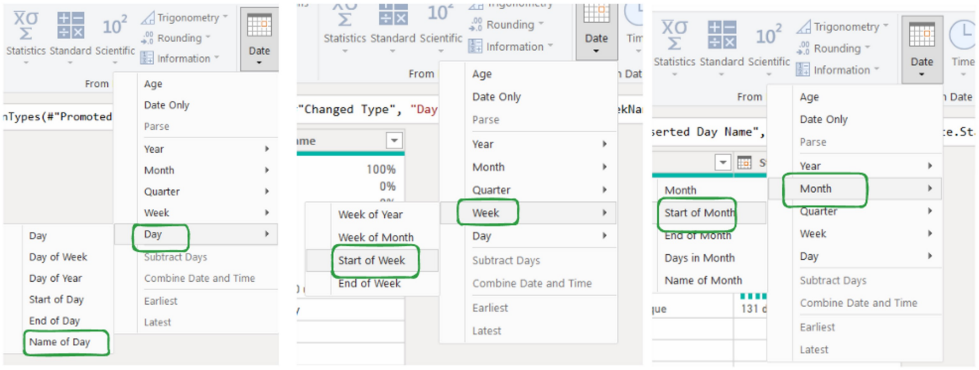
Now, we are trying to transform calendar lookup

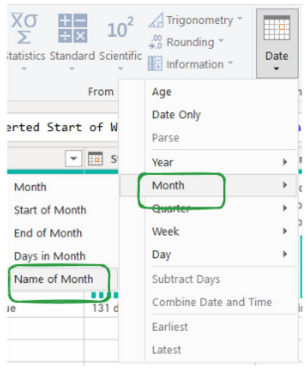


Step 1 : If you are in P.Q.Editor itself , try to click on New Source, Add the csv file name "Calendar Lookup"..


Date
Valid 100%
Error 0%
Empty 0%
912 distinct, 912 unique
01-01-2020
02-01-2020
03-01-2020
04-01-2020
05-01-2020
06-01-2020
PROPERTIES
Name
Calendar Lookup
All Properties
APPLIED STEPS
Source
Promoted Headers
Changed Type

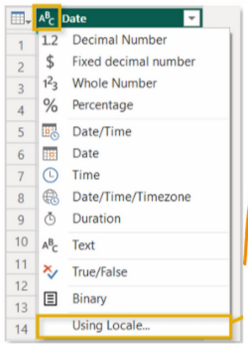

Add Column
View
Tools
Help
From Text
From Number
From Date & Time
AI Insights
= Table.AddColumn(#"Inserted Start of Month", "Month Name", each Date.MonthName([Date]), type text)
Date
Day Name
Start of Week
Start of Month
Month Name
912 distinct, 912 unique
7 distinct, 0 unique
131 distinct, 0 unique
30 distinct, 0 unique
12 distinct, 0 unique
01-01-2020 Wednesday 29-12-2019 01-01-2020 January
02-01-2020 Thursday 29-12-2019 01-01-2020 January
03-01-2020 Friday 29-12-2019 01-01-2020 January
04-01-2020 Saturday 29-12-2019 01-01-2020 January


Age
Date Only
Year
Month
Quarter
Week
Day
Name of Day
Week of Year
Week of Month
Start of Week
End of Week
Start of Month
End of Month
Days in Month
Name of Month
Subtract Days
Combine Date and Time
Earliest
Latest

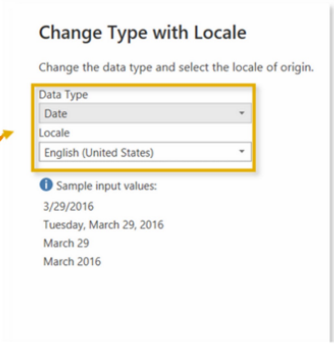

Name of Month

CHANGE TYPE WITH LOCALE

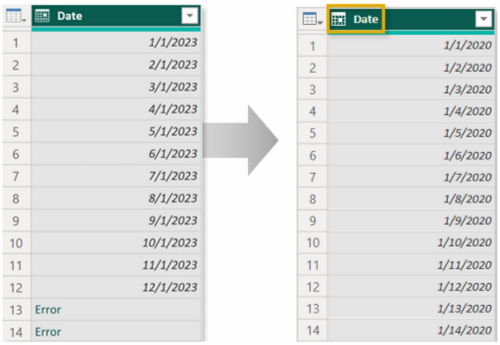
mm/dd/yyyy[USA Format]
dd/mm/yyyy[India / UK Format]



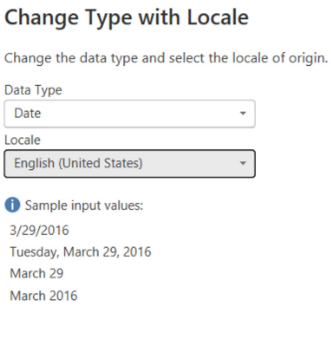
1) Left click the data type icon in the column header and select the Using Locale option

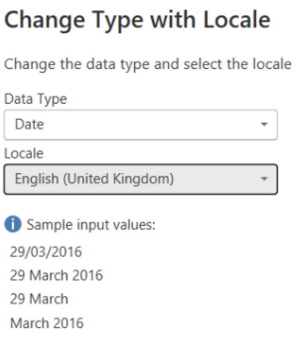


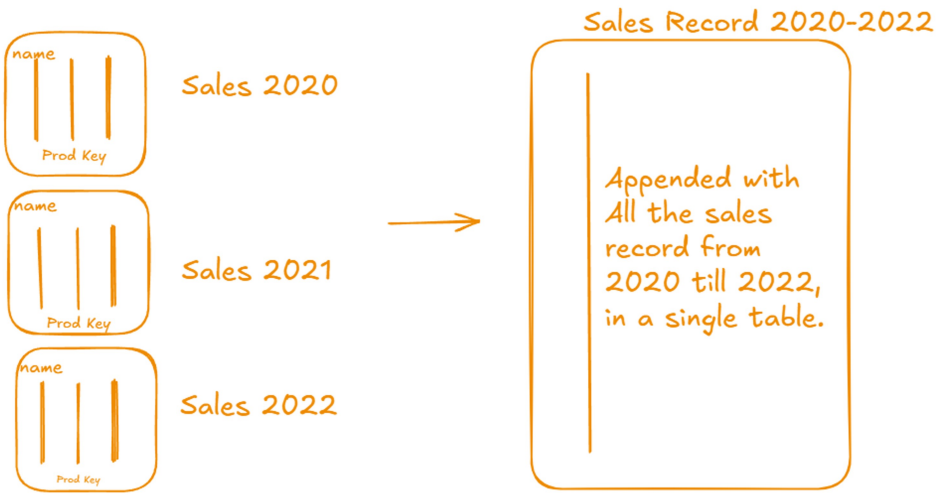
2) Select Date as the data type and English (United States) as the locale for all datasets in this course (regardless of your actual location)

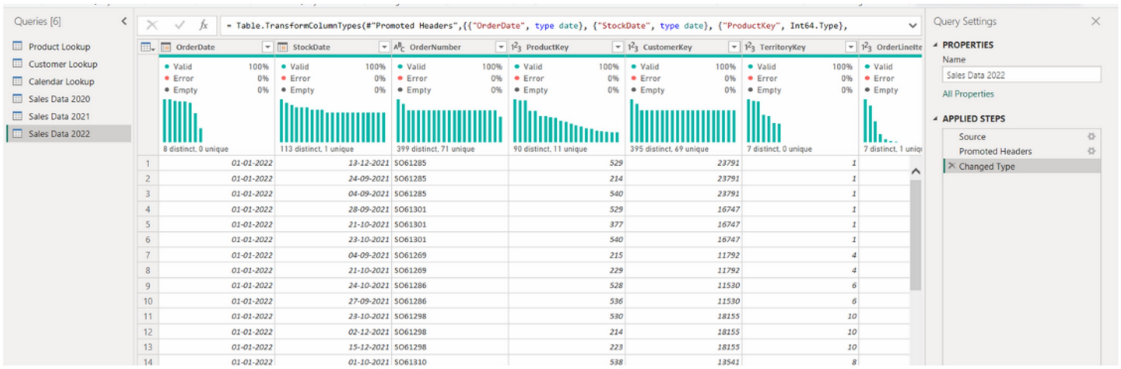


3) Confirm that the data type is correctly recognized.
You should see a calendar icon next to the column name in the header and no errors in the column





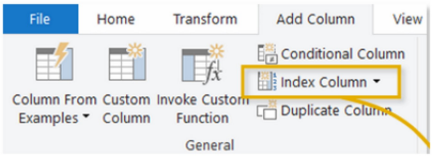




Add 3 Sales Record ---- And do some basic Transformation like :
Promoted Headers , Changing the data type.

Index Column → Try to add index column to all the 3 sales record and move it to the beginning

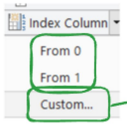
INDEX COLUMNS



Index Columns contain a list of sequential values that can be used to identify each unique row in a table (typically starting from 0 or 1)

These are often used to create unique IDs that can be used to form relationships between tables (more on that later!)

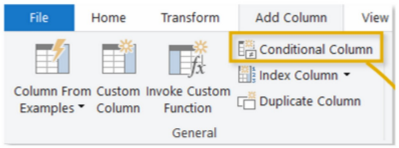
Index	Order Date	Stock Date	Order Number	Product Key
1	1/1/2020	9/21/2019	SO45080	332
2	1/1/2020	12/5/2019	SO45079	312
3	1/1/2020	10/29/2019	SO45082	350
4	1/1/2020	11/16/2019	SO45081	338
5	1/2/2020	12/15/2019	SO45083	312
6	1/2/2020	10/12/2019	SO45084	310
7	1/2/2020	12/18/2019	SO45086	314
8	1/2/2020	10/9/2019	SO45085	312
9	1/3/2020	10/3/2019	SO45093	312
10	1/3/2020	9/29/2019	SO45090	310
11	1/3/2020	12/11/2019	SO45088	345
12	1/3/2020	10/24/2019	SO45092	313
13	1/3/2020	12/16/2019	SO45089	351
14	1/3/2020	10/26/2019	SO45091	314
15	1/3/2020	9/11/2019	SO45087	350
16	1/3/2020	9/11/2019	SO45094	310
17	1/4/2020	10/30/2019	SO45096	312
18	1/4/2020	10/30/2019	SO45097	313
19	1/4/2020	9/15/2019	SO45098	310
20	1/4/2020	12/7/2019	SO45095	344



where you start with it put the next value as an auto_increment.

1112110

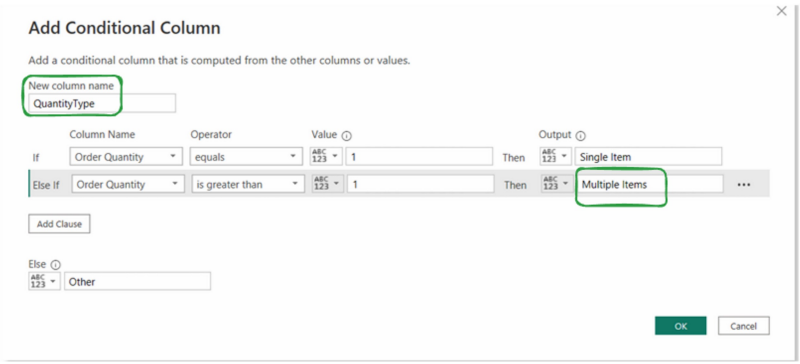
CONDITIONAL COLUMNS

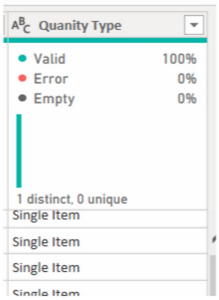


Conditional Columns allow you to define new fields based on logical rules and conditions (IF/THEN statements)

Here we're creating a conditional column named Quantity Type, which is based on Order Quantity:

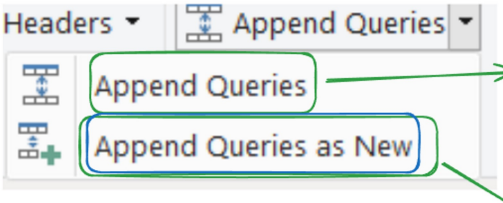
- If Order Quantity =1, Quantity Type = "Single Item"
- Else If Order Quantity >1, Quantity Type = "Multiple Items"
- Else; Quantity Type = "Other"





Appending Queries :

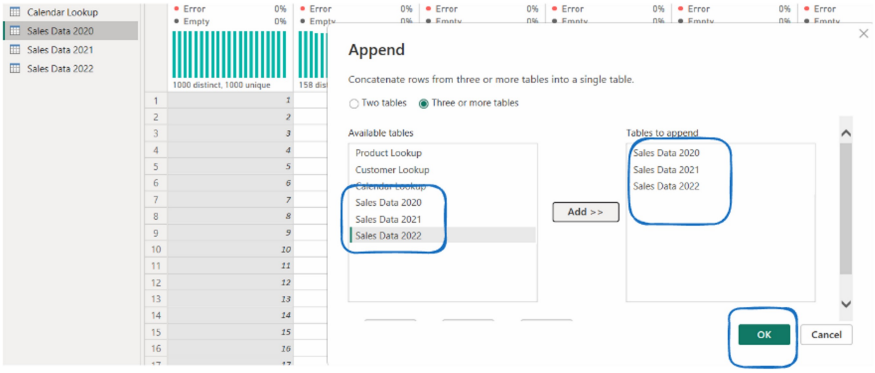
1. Sales Data - 2020 , 2021 , 2022 - They should follow the same format.

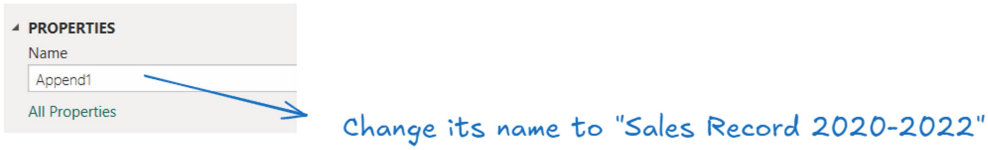


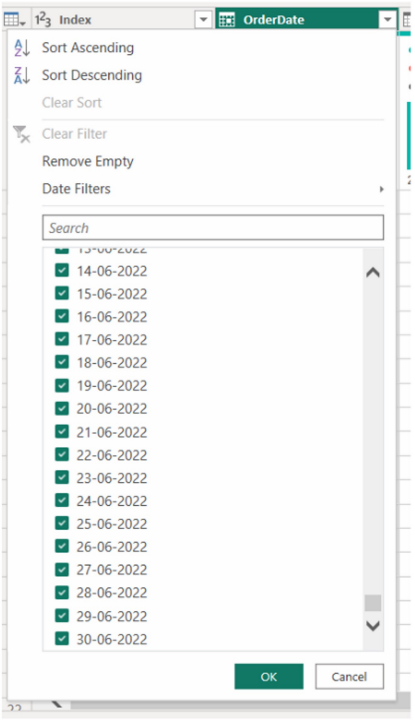
Append it to the same table which is selected.

This will create a new table and append all data which is being selected.

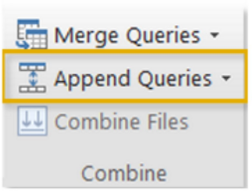

Append
Concatenate rows from two tables into a single table.
Two tables
Three or more tables
First table
Sales Data 2020
Second table
We have 3 table , so we go with 2 option


Calendar Lookup
Sales Data 2020
Sales Data 2021
Sales Data 2022
Append
Concatenate rows from three or more tables into a single table.
Two tables
Three or more tables
Available tables
Product Lookup
Customer Lookup
Sales Data 2020
Sales Data 2021
Sales Data 2022
Add >>
Tables to append
Sales Data 2020
Sales Data 2021
Sales Data 2022
OK
Cancel

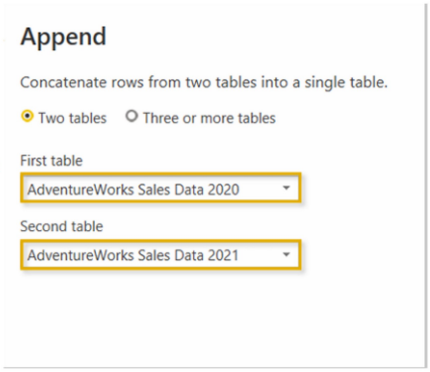

PROPERTIES
Name
Append1
All Properties
Change its name to "Sales Record 2020-2022"


Index
OrderDate
Sort Ascending
Sort Descending
Clear Sort
Clear Filter
Remove Empty
Date Filters
Search
14-06-2022
15-06-2022
16-06-2022
17-06-2022
18-06-2022
19-06-2022
20-06-2022
21-06-2022
22-06-2022
23-06-2022
24-06-2022
25-06-2022
26-06-2022
27-06-2022
28-06-2022
29-06-2022
30-06-2022
OK
Cancel

APPENDING QUERIES

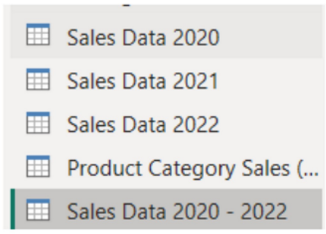


Appending queries allows you to combine or stack tables sharing the exact same column structure and data types

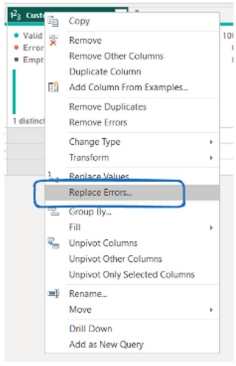


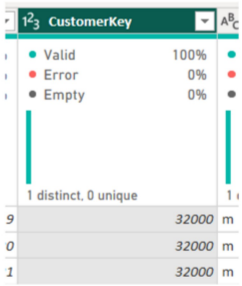
Here we're appending the Adventure Works Sales 2020 table to the Adventure Works Sales 2021 table, which is valid since they share identical table structures.

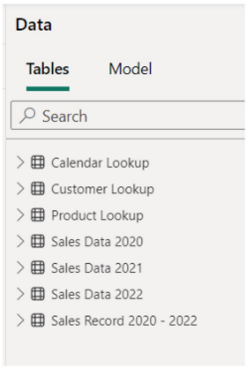
NOTE: Appending adds rows to an existing table/query

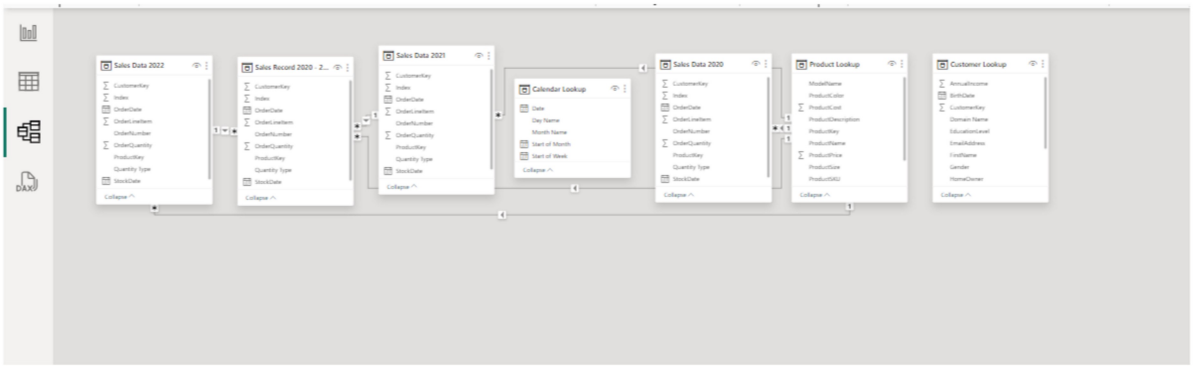


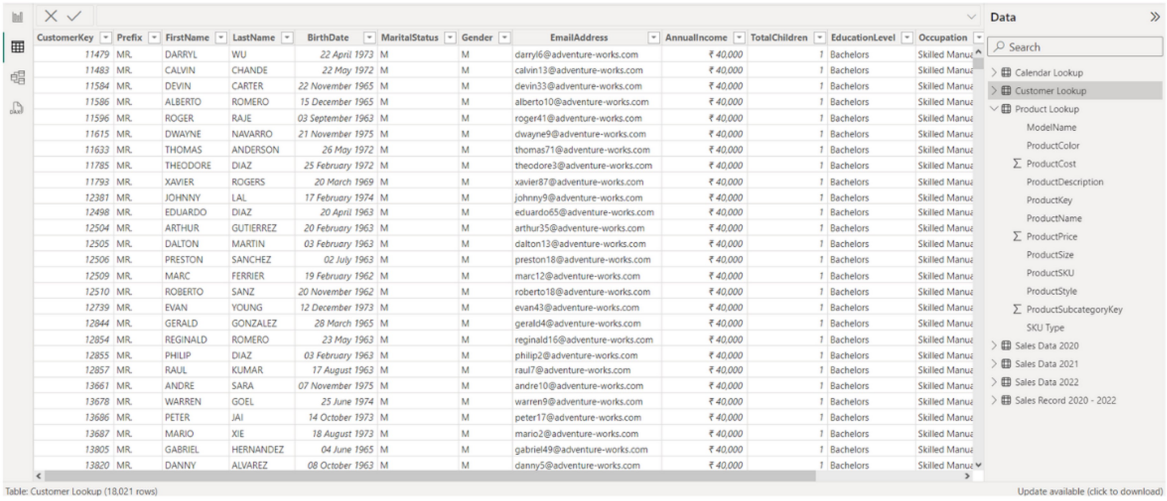
que		1 distinct, 0 unique	1 distinct, 0 unique	1 distinct, 0 unique	1 distinct, 0 unique	1 distinc
18019	Error	m			01-01-1900	
18020	Error	m			01-01-1900	
18021	Error	m			01-01-1900	


Copy
Remove
Remove Other Columns
Duplicate Column
Add Column From Examples...
Remove Duplicates
Remove Errors
Change Type
Transform
Replace Values...
Replace Errors...
Group By...
Fill
Unpivot Columns
Unpivot Other Columns
Unpivot Only Selected Columns
Rename...
Move
Drill Down
Add as New Query


CustomerKey
Valid 100%
Error 0%
Empty 0%
1 distinct, 0 unique
9 32000 m
0 32000 m
1 32000 m


Data
Tables
Model
Search
Calendar Lookup
Customer Lookup
Product Lookup
Sales Data 2020
Sales Data 2021
Sales Data 2022
Sales Record 2020 - 2022


Sales Data 2022
Sales Record 2020 - 2...
Sales Data 2021
Calendar Lookup
Sales Data 2020
Product Lookup
Customer Lookup


CustomerKey Prefix FirstName LastName BirthDate MaritalStatus Gender EmailAddress AnnualIncome TotalChildren EducationLevel Occupation
11479 MR. DARRYL WU 22 April 1973 M M darryl6@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11483 MR. CALVIN CHANDE 22 May 1972 M M calvin13@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11584 MR. DEVIN CARTER 22 November 1965 M M devin33@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11586 MR. ALBERTO ROMERO 15 December 1965 M M alberto10@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11596 MR. ROGER RAJE 03 September 1963 M M roger41@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11615 MR. DWAYNE NAVARRO 21 November 1975 M M dwayne9@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11633 MR. THOMAS ANDERSON 26 May 1972 M M thomas71@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11785 MR. THEODORE DIAZ 25 February 1972 M M theodore3@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
11793 MR. XAVIER ROGERS 20 March 1969 M M xavier87@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12381 MR. JOHNNY LAL 17 February 1974 M M johnny9@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12498 MR. EDUARDO DIAZ 20 April 1963 M M eduardo65@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12504 MR. ARTHUR GUTIERREZ 20 February 1963 M M arthur35@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12505 MR. DALTON MARTIN 03 February 1963 M M dalton13@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12506 MR. PRESTON SANCHEZ 02 July 1963 M M preston18@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12509 MR. MARC FERRIER 19 February 1962 M M marc12@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12510 MR. ROBERTO SANZ 20 November 1962 M M roberto18@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12739 MR. EVAN YOUNG 12 December 1973 M M evan43@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12844 MR. GERALD GONZALEZ 28 March 1965 M M gerald4@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12854 MR. REGINALD ROMERO 23 May 1963 M M reginald16@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12855 MR. PHILIP DIAZ 03 February 1963 M M philip2@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
12857 MR. RAUL KUMAR 17 August 1963 M M raul7@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
13661 MR. ANDRE SARA 07 November 1975 M M andre10@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
13678 MR. WARREN GOEL 25 June 1974 M M warren9@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
13686 MR. PETER JAI 14 October 1973 M M peter17@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
13687 MR. MARIO XIE 18 August 1973 M M mario2@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
13805 MR. GABRIEL HERNANDEZ 04 June 1965 M M gabriel49@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
13820 MR. DANNY ALVAREZ 08 October 1963 M M danny5@adventure-works.com ₹ 40,000 1 Bachelors Skilled Manual
Data
Search
Calendar Lookup
Customer Lookup
Product Lookup
ModelName
ProductColor
ProductCost
ProductDescription
ProductKey
ProductName
ProductPrice
ProductSize
ProductSKU
ProductStyle
ProductSubcategoryKey
SKU Type
Sales Data 2020
Sales Data 2021
Sales Data 2022
Sales Record 2020 - 2022
Table: Customer Lookup (18,021 rows)
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