Introduction to PowerBI Workshop

1) Installation

- **For Windows-** Install from Microsoft Store

- **For Mac-** Desktop app not available but PowerBI online service available https://app.powerbi.com/

2) Dataset

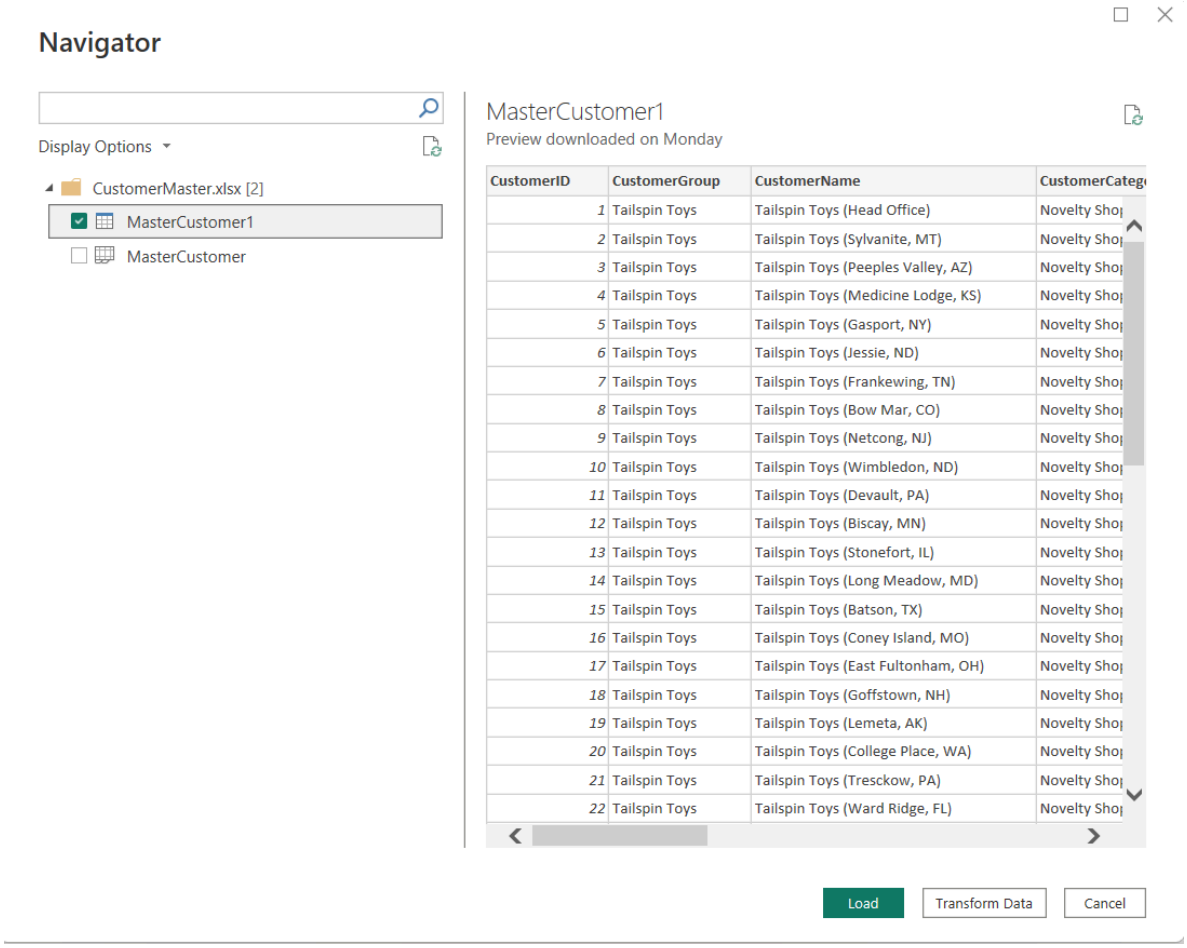
A. **Customer Master Sheet**-Contains the following attributes
   a. CustomerID-Unique ID for different stores
   b. CustomerGroup-Group of Stores
   c. CustomerName
   d. CustomerCategoryName-Type of Shop
   e. Primary Contact
   f. FaxNumber
   g. WebsiteURL
   h. DeliveryMethod
   i. CityProvince- City and Province of the Store

B. InvoiceData- Contains the following attributes
   a. InvoiceLineID-Unique ID for the Invoice
   b. CustomerCode- Same as CustomerID
   c. TransactionID- Unique ID for the transaction
   d. Description
   e. Date(Year,Month,Day)
   f. Quantity
   g. Sales
   h. No. of Dry and Chilled Items

3) Loading Data

A. Loading CustomerMasterSheet

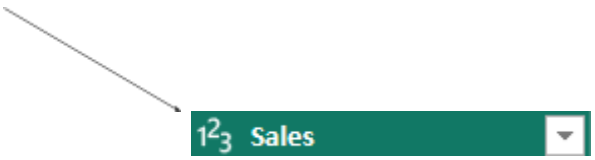
a. Click on Transform Data to enter the PowerQuery Editor,repeat the same step for the InvoiceData file.



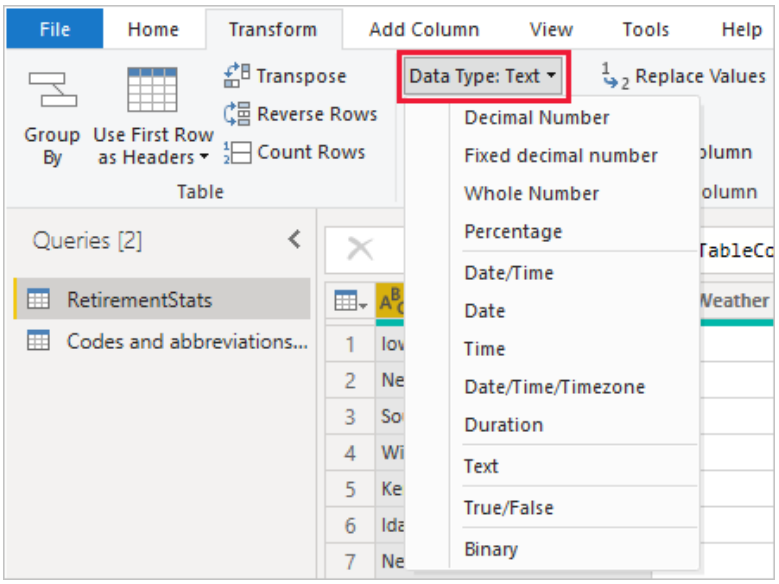
4) Data Transformations

a)Changing Data Type of Columns

- Click on the Column where we want to change the DataType and select the icon to the left of the column name.

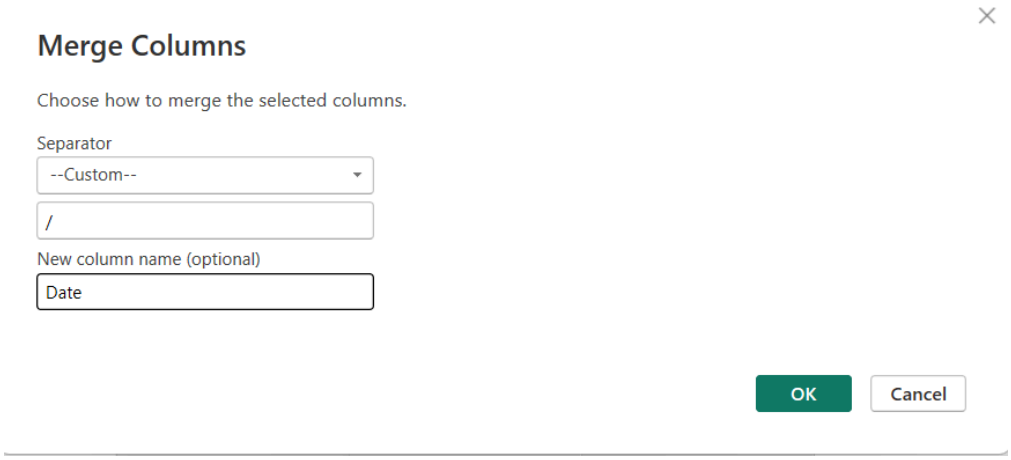


- Choose the Data Type you want to use.



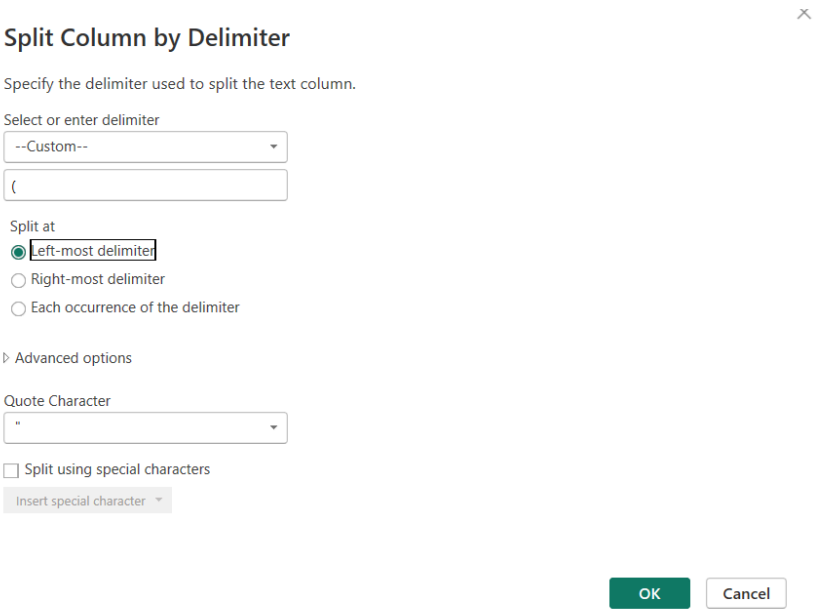
b)Merging Columns

- Select the columns you want to merge and under the Transformation tab select Merge Columns
- Select the Separator for the merged columns and enter the new Column name.



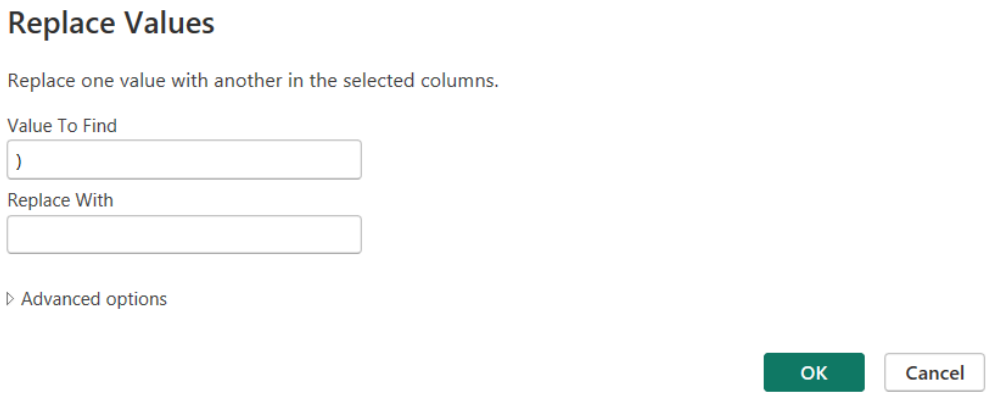
c)Splitting Columns

- Select the columns to split and under the Transform tab select Split Column.
- Enter the delimiter to Split the Column and select at which occurrence of the delimiter the splitting can occur.



d)Replacing Values

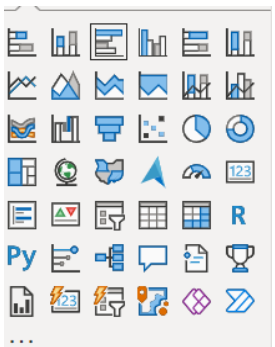
- Select the columns where values should be replaced and under the Transform tab select Replace Values.
- Choose the Value to replace and what it should be replaced by.



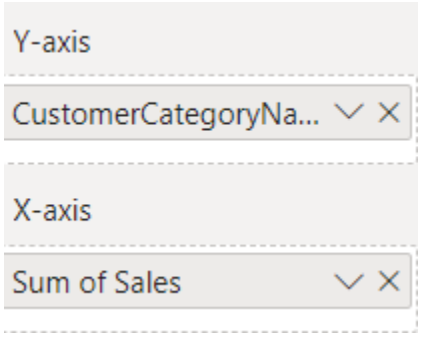
5) Data Visualizations

a)Clustered Bar Chart

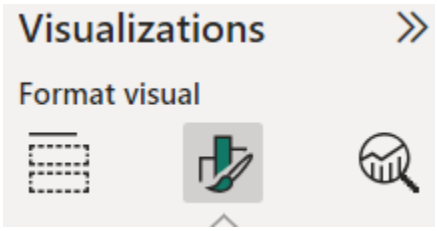
- Select clustered bar chart under the Visualizations tab



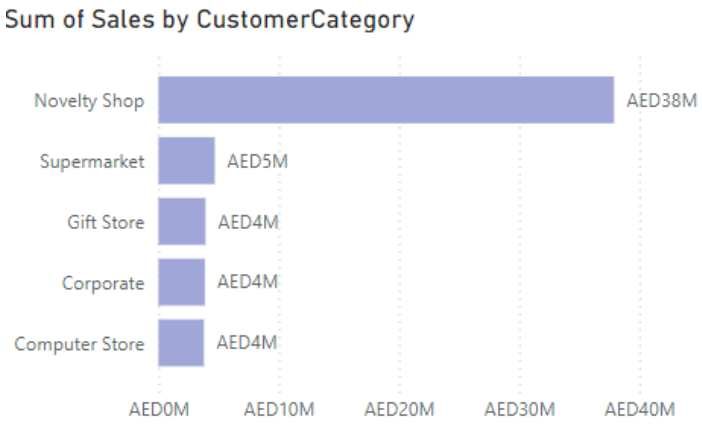
- Select the attributes for Y and X-axis in this case we will be using CustomerCategory and Sales for the Y and X-axis respectively.



- We can format the visual by using the Format tab.

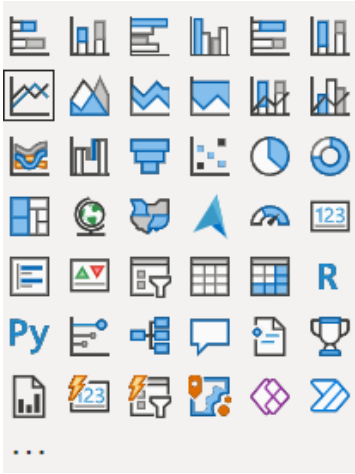


- The visual will be displayed as follows

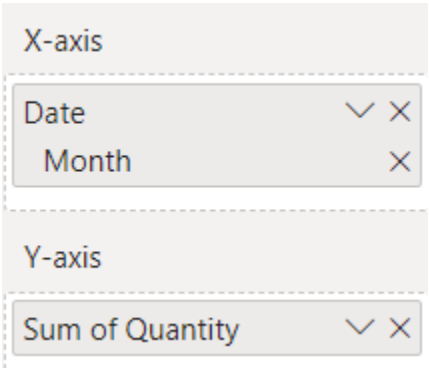


b)Line Chart

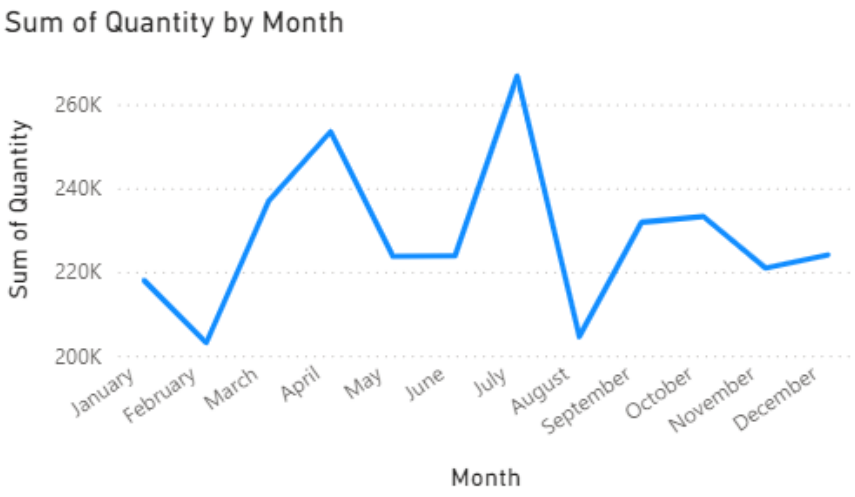
- Select Line chart under the Visualizations tab



- Select the attributes for Y and X-axis in this case we will be using Quantity and Month for the Y and X-axis respectively.

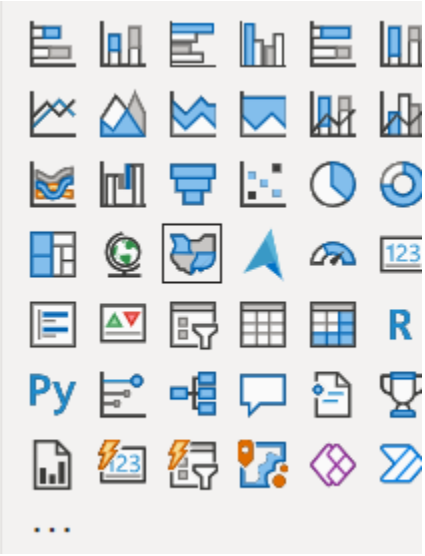


- We can format the visual similarly to the previous one using the Format tab.The visual will be displayed as follows.



c)Filled Map

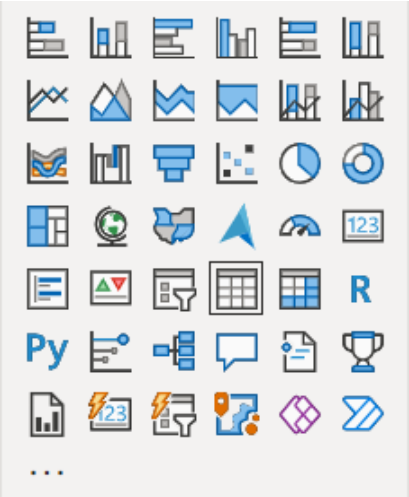
- Select Filled Map under the Visualizations tab.



- Select Province as the Location based attribute to plot the map and Sum of Sales as the value to be displayed.It will display the provinces and the total sales from each province in the form of a map.

d)Table

- Select Table under the Visualizations tab.



- Select the columns to be added to the table in our case we will be using Months and Sales.

- The Visual should appear as follows.

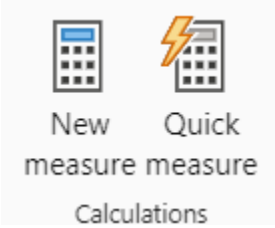
Month	Sum of Sales
January	AED16,742,308
February	AED14,498,110
March	AED16,966,302
April	AED17,858,142
May	AED18,524,570
June	AED12,885,840
July	AED14,366,716
August	AED11,549,610
September	AED12,354,719
October	AED12,721,380
Total	**AED172,800,307**

6) Quick Measures

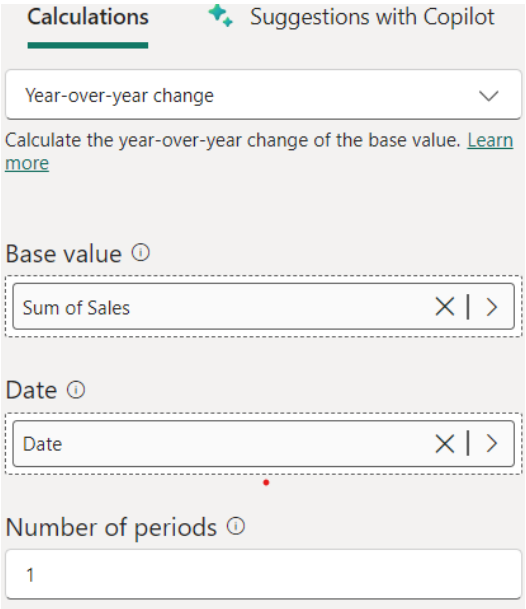
- We can use Quick Measures to generate new measures or attributes in our Visualizations.

a)Sales Year over Year Percentage

- Select the Quick Measure Icon under the Home tab



- Select Year over Year Change and set the base value as Sales and the Date as the Date Attribute.

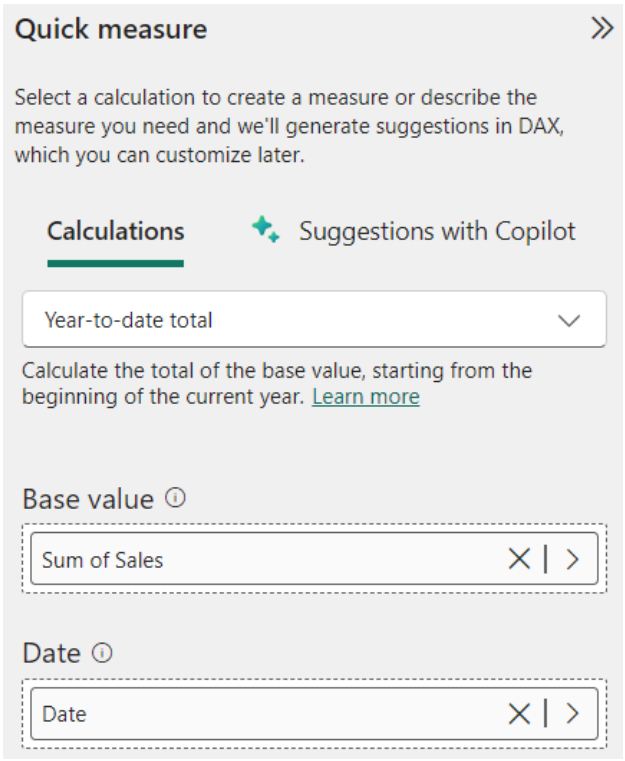


- We can then add this attribute to our Visualizations.Let us add it to our table.

Month	Sum of Sales	Sales YoY%
January	AED4,412,736	8.18%
February	AED4,206,249	20.82%
March	AED4,540,794	17.22%
April	AED5,087,923	23.84%
May	AED4,493,822	-2.39%
June	AED4,526,866	5.84%
July	AED5,170,122	7.72%
August	AED3,948,728	-3.56%
September	AED4,672,855	20.04%
October	AED4,506,062	1.23%
November	AED4,100,510	1.80%
December	AED4,471,595	2.17%
Total	**AED54,138,262**	**8.13%**

b)Sales Year to Date

- We again use Quick measures but this time we select Year-to-Date total with the base value as Sales and the Date as the Date Attribute.

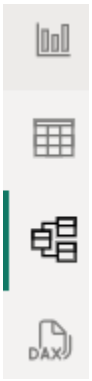


- We can then add this attribute to our Visualizations.Let us add it to our table.

Month	Sum of Sales	Sales YoY%	Sales YTD
January	AED4,412,736	8.18%	AED4,412,736
February	AED4,206,249	20.82%	AED8,618,985
March	AED4,540,794	17.22%	AED13,159,779
April	AED5,087,923	23.84%	AED18,247,702
May	AED4,493,822	-2.39%	AED22,741,524
June	AED4,526,866	5.84%	AED27,268,390
July	AED5,170,122	7.72%	AED32,438,512
August	AED3,948,728	-3.56%	AED36,387,240
September	AED4,672,855	20.04%	AED41,060,095
October	AED4,506,062	1.23%	AED45,566,157
November	AED4,100,510	1.80%	AED49,666,667
Total	**AED54,138,262**	**8.13%**	**AED54,138,262**

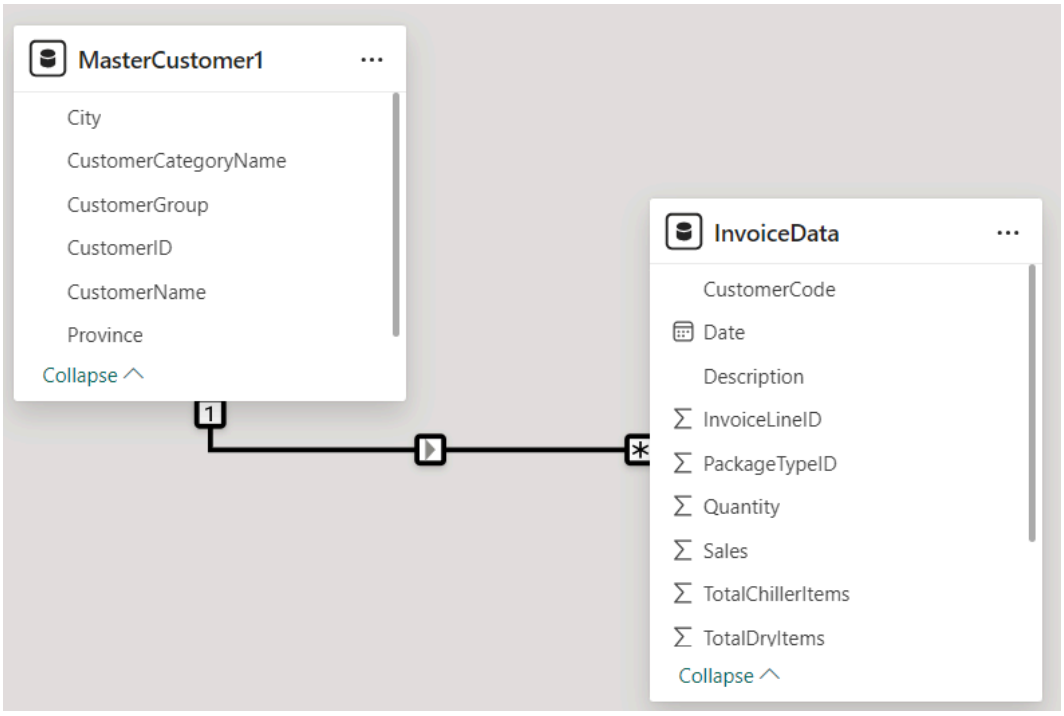
7)Managing Relationships

- We can manage relationships between our data in the model view.Power BI by default identifies relationships between the data when it is loaded in.



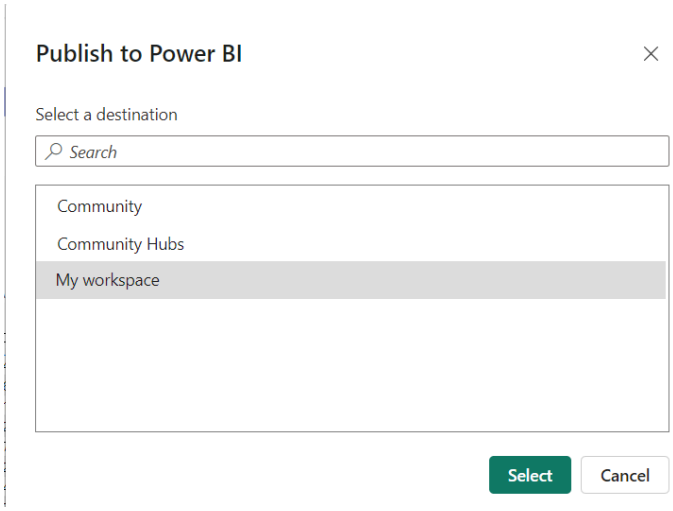
(Model View)

- In our Datasets PowerBI identifies a one to many relationship between CustomerID in the MasterCustomer Table and CustomerCode in the Invoice Dataset.We can also add additional relationships manually if required.



8)Publishing Reports

- We can publish our reports onto the PowerBI service so it can be shared and accessed by others.Select the Publish button under the share tab and then select the destination to share to.Let's go ahead with my workspace.



- You can then access your report using the PowerBI service and share it to the required personnel.

Thank you for attending our PowerBI workshop..We hope you understood the basics to PowerBI and can start developing reports for your own datasets.