



# Power BI **Visualization**

Module 6

# Outline

1. What is Power BI?
2. Power BI Desktop vs Service
3. Components of Power BI
4. Power BI Dashboard Interface
5. Creating your First Viz
6. Power Query
7. DAX



# Problem statement

Suppose I work for a company that sells **products** in Australia through a membership program.

I wanted to create a report on our customer performance.

The visuals in the report should also include the:

- Gender distribution
- Civil status distribution



M06 \_withCSR - Copy--UPDATED - Power BI Desktop

Sign in

File Home Insert Modeling View Help

Cut Copy Format painter Paste

Clipboard Data Queries Insert Calculations Sensitivity Share

Get data Excel Power BI Server SQL Data Datasource Enter data Dataverse Recent sources Transform Refresh data New visual Text box More visuals New measure Quick measure Sensitivity Publish

**CUSTOMER BASE PER MONTH**

MONTH-YEAR  
All

add QBE/QUINTEGRAL logo

Month-Year	Customer Count
2017 Feb	756
2017 March	276
2017 May	506
2017 June	526
2017 July	626
2017 September	627
2017 October	727
2017 November	827
2018 December	927
2018 January	982
2018 February	982
2018 March	874
2018 April	877
2018 May	692
2018 June	592
2018 July	627
2018 September	692
2018 October	862
2018 November	882
2019 December	952
2019 January	112
2019 February	832
2019 March	747
2019 April	792
2019 May	192
2019 June	282
2019 July	392
2019 August	602
2019 October	162
2019 November	252
2019 December	992

**GENDER DISTRIBUTION**

Gender	Count	Percentage
M	3.30K	33.05%
F	3.33K	33.33%
O	3.31K	33.05%

**CIVIL STATUS DISTRIBUTION**

Civil Status	Count	Percentage
S	2.44K	24.35%
W	2.57K	25.66%
D	2.49K	24.92%
M	2.51K	25.07%

CUST INSU CSR +

Type here to search

Fields

Visualizations

Filters

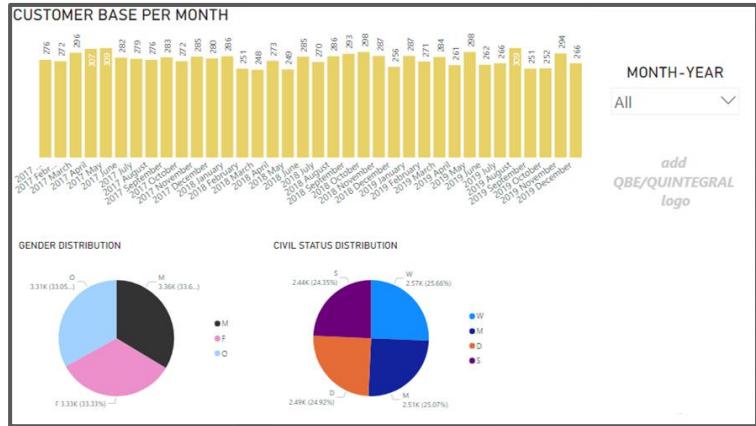
Page 1 of 3

6:29 am 28/10/2021

PC > Documents > 1\_QBE > for\_demo

Name	Date modified	Type	Size
6_cust	15/07/2021 3:30 am	Microsoft Excel C...	499 KB
6_sales	21/09/2021 12:21 pm	Microsoft Excel C...	561 KB
rates	27/10/2021 1:05 am	Microsoft Excel C...	1 KB

# How do we get here from scratch?



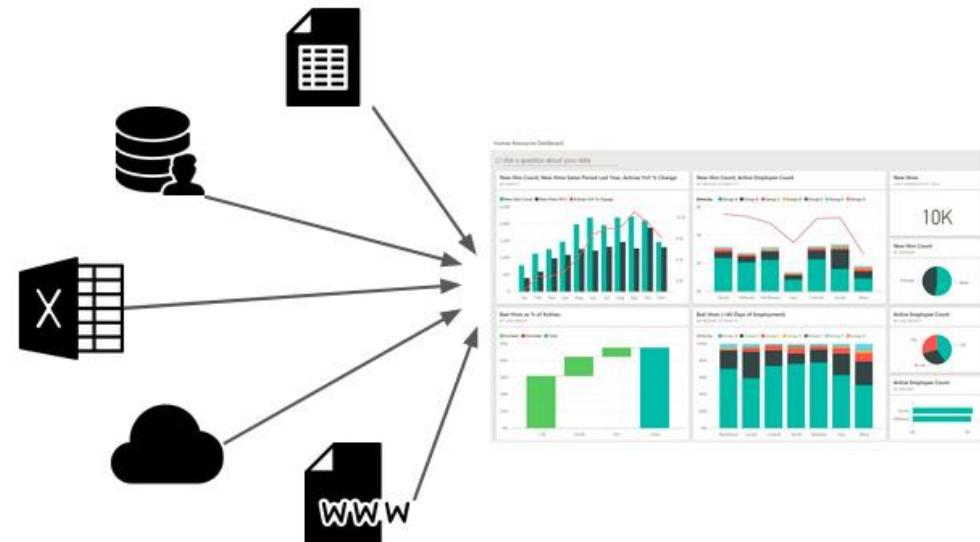


**Power BI**

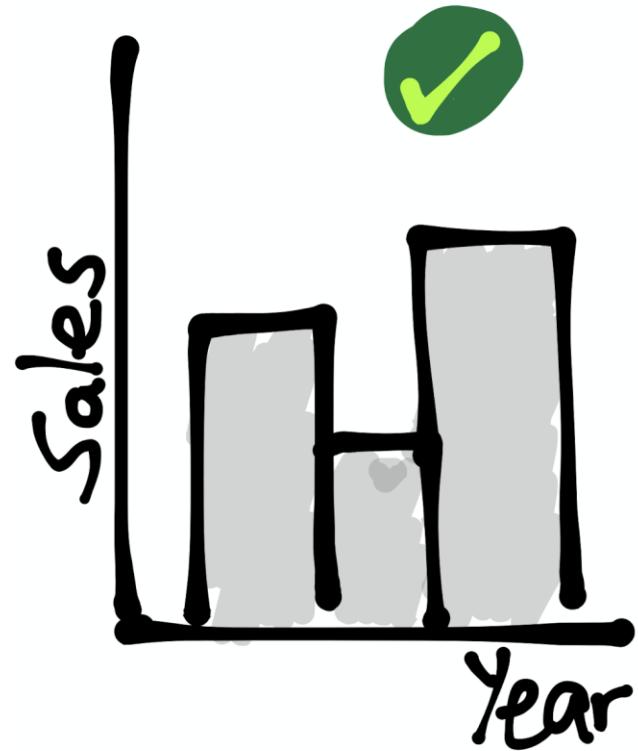
# What is Power BI?

Power BI is a tool that:

- allows **interactive data exploration** to gain insights
- effectively reports insights through **easy-to-use customizable visualizations**



Visually  
representing data  
lets people interpret  
and analyze data  
faster.



Year	Sales
...	...
...	...
...	...
...	...

M06\_demo - Power BI Desktop

File Home Insert Modeling View Help

Search

Cut Copy Format painter

Paste

Clipboard

Get data

Excel workbook

Power BI datasets

SQL Server

Enter data

Data

Transform data

Recent sources

New measure

Quick measure

Sensitivity

Transform data

Measure

Share

TOTAL SALES

Refresh

JP Maulion

# Power BI Desktop vs. Service

## Power BI Desktop

- Desktop version
- Tool for data analysis and report creation
- **FREE**
- *Windows OS only*

## Power BI Service

- Cloud-based version
- Suitable for light report editing
- Can share reports



# Download and Installation

1. Installer
2. Microsoft Store



# 1 Installer

Go from data to insight to action with  
Power BI Desktop



Create rich, interactive reports with visual analytics at your fingertips—for free.

[Download free >](#)[See download or language options >](#)

Go to >> <https://powerbi.microsoft.com/en-us/desktop/> <<



## 2. Microsoft Store



### Power BI Desktop

Microsoft Corporation • Business > Data & analytics

Share

Power BI Desktop

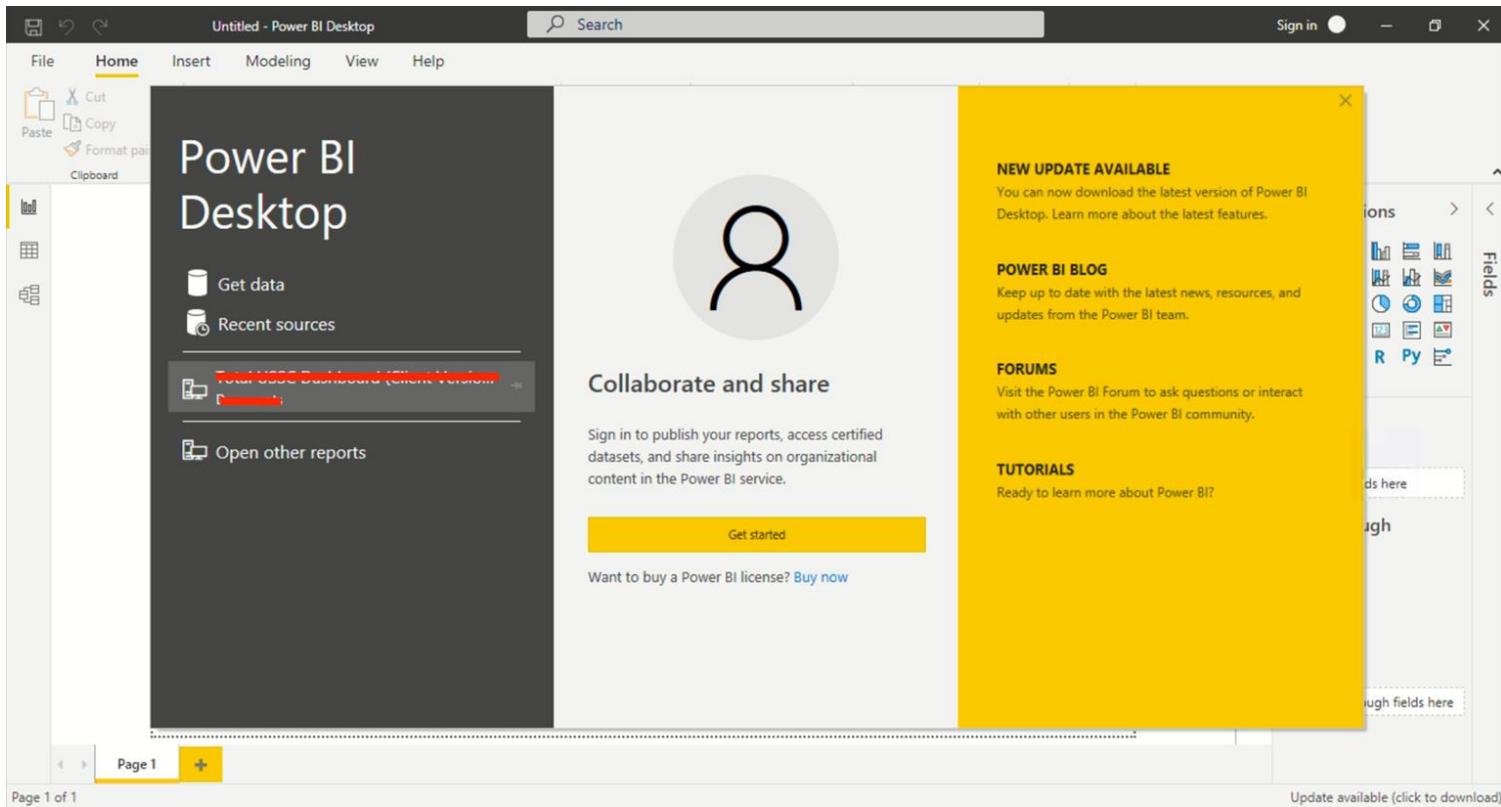
Free

Get

More



# Power BI interface



Untitled - Power BI Desktop

Search

Sign in

File Home Insert Modeling View Help

Cut Copy Format painter

Get data Excel Power BI datasets SQL Server Enter data Dataverse Recent sources Transform Refresh data New visual Text box More visuals New measure Quick measure Sensitivity (preview) Publish

Clipboard Data Queries Insert Calculations Sensitivity Share

Add data to your report

Once loaded, your data will appear in the Fields pane.

Import data from Excel Import data from SQL Server Paste data into a blank table Try a sample dataset

Get data from another source →

Visualizations

Filters

Fields

Values

Add data fields here

Drill through

Cross-report

Off On

Keep all filters

On

Add drill-through fields here

Page 1 +

Page 1 of 1

Update available (click to download)

18

# Supported data sources\*

## File data sources

- **Excel**
- **Text/CSV**
- **XML**
- **JSON**
- **Folder**
- **PDF**

## Database data sources

- SQL Server database
- **MySQL database**
- PostgreSQL database
- Access database
- Oracle database
- IBM Db2 database
- Google BigQuery
- Amazon Redshift

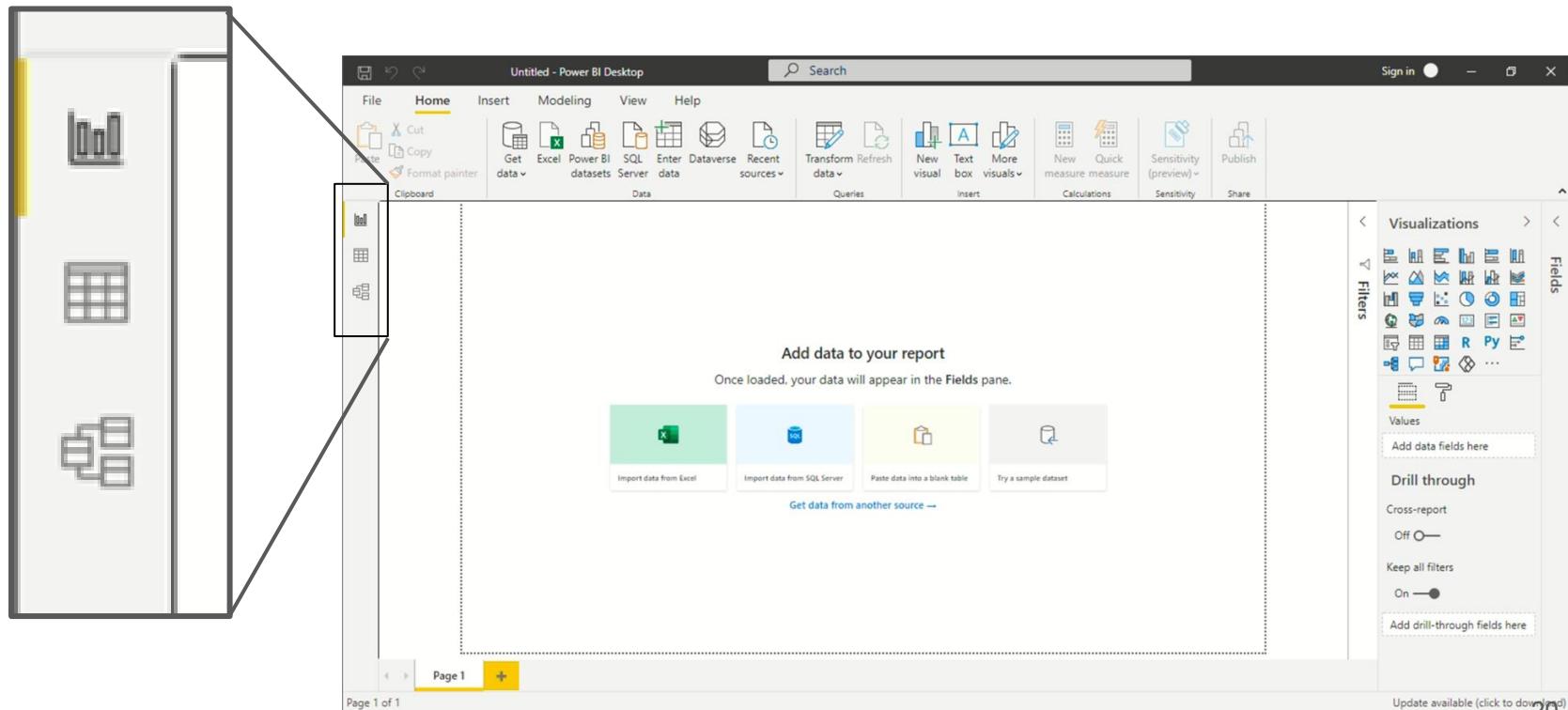


# Power BI Views

Report

Data

Model



# Report View

Sales by Year, Month and Country

Country: Canada (blue), France (orange), Germany (red), Mexico (purple), United States of America (pink)

- Default view  
- User can create reports and visuals

The Power BI Desktop interface is visible, showing the ribbon menu (File, Home, Insert, Modeling, View, Help) and various toolbars for data management and visualization creation.

**Visualizations:**

- Bar chart (selected)
- Line chart
- Map
- Scatter plot
- Donut chart
- Table
- Matrix
- Card
- Text
- Image
- Calculated table
- Calculated column

**Fields:**

- Financials
  - Sales
  - COGS
  - Country
- Date
  - Discount Band
  - Discounts
  - Gross Sales
  - Manufacturing Pr...
  - Month Name
  - Month Number
  - Product
  - Profit
  - Sale Price
  - Segment
  - Units Sold
  - Year

**Filters:**

- Add data fields here
- Values
- Drill through
- Cross-report
- Off
- Keep all filters
- On
- Add drill-through fields here

Page 1

Update available (click to download)

# Data View

User can view the data used in report/s

The screenshot shows the 'Untitled - Power BI Desktop' window with the 'Table tools' tab selected in the ribbon. A table named 'financials' is displayed, containing 700 rows of data. The table structure includes columns for Segment, Country, Product, Discount Band, Units Sold, Manufacturing Price, Sale Price, Gross Sales, Discounts, Sales, COGS, Profit, and Date. The data shows various sales entries across different countries and products, with dates ranging from 'Monday, 1 Decem' to 'Sunday, 1 Septem'. A yellow callout on the right side points to the table area. The bottom status bar indicates 'Table: financials (700 rows)' and 'Update available (click to download)'.

# Model View

The screenshot shows the Power BI Desktop interface with the 'Home' tab selected in the ribbon. The ribbon also includes 'File', 'Help', and other tabs like 'Clipboard', 'Data', 'Queries', 'Relationships', 'Security', 'Q&A', 'Linguistic schema', and 'Share'. On the left, there's a navigation pane with icons for 'All tables', 'Recent sources', 'Transform Refresh data', 'Manage relationships', 'View roles as', 'Q&A', and 'Language setup'. A central panel displays a tree view of a data model named 'financials', which contains tables like Sales, COGS, Country, Date, Discount Band, Discounts, Gross Sales, Manufacturing Price, Month Name, Month Number, and Product. To the right, there are two panels: 'Properties' (with a note to select objects) and 'Fields' (with a search bar and a result for 'financials'). The bottom status bar shows 'Update available (click to download)'.

Select one or more model objects to set their properties.

User can view and manage the relationships among tables in the **data model**

# Power Query Editor

The screenshot shows the Microsoft Power Query Editor interface. The main area displays a table with 24 rows and 8 columns. The columns are labeled: MEMBER\_NO, DATE, BRANCH\_CODE, BRANCH\_TYPE, AMOUNT, and CURRENCY. The data includes various member numbers, dates ranging from 06/12/2020 to 05/02/2020, branch codes (MOB, STORE), branch types (MOBILE, STORE), amounts (e.g., 9831.75 PHP, 1369.25 PHP), and currencies (PHP). The table has a yellow header row.

**Queries [4]**

- 6\_cust
- 6\_claims
- Table 3
- csr\_operations\_data

**Properties**

Name: 6\_claims

**Applied Steps**

- Source
- Promoted Headers
- Changed Type

8 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

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28/10/2021 10:53 pm ENG

Windows Start Type here to search

System tray icons: File Explorer, Task View, Edge, Firefox, File Manager, Settings, Control Panel, Microsoft Store, System, Task Manager, Screenshot, and a network icon.



# Canvas Area

The screenshot shows the Power BI desktop interface with a grouped bar chart in the canvas area. The chart displays sales data by year, month, and country. The legend indicates five countries: Canada (blue), France (orange), Germany (red), Mexico (purple), and United States of America (pink). The Y-axis represents Sales in millions, ranging from 0M to 4M. The X-axis shows dates from September 2013 to December 2014, grouped by month. The chart title is "CANVAS AREA".

**File Home Insert Modeling View Help**

**Cut Copy Format painter**

**Get data** Excel Power BI datasets Server Enter Dataverse Recent sources Transform Refresh data New visual Text box More visuals New measure Quick measure Sensitivity (preview)

**Clipboard** Sales by Year, Month and Country

Country: Canada, France, Germany, Mexico, United States of America

**Visualizations**

**Fields**

**Search**

**Filters**

**Values**

Add data fields here

**Drill through**

Cross-report

Off

Keep all filters

On

Add drill-through fields here

Page 1

Page 1 of 1

Update available (click to download)

# Filters pane

The screenshot shows the Microsoft Power BI desktop interface. A bar chart titled "Sales by Year, Month and Country" is displayed on the left, showing sales volume for five countries across different months from 2013 to 2014. The Y-axis represents Sales in millions, ranging from 0M to 4M. The X-axis represents the Date Month. The legend indicates the countries: Canada (blue), France (orange), Germany (red), Mexico (purple), and United States of America (pink). The chart has a light gray background with horizontal dashed grid lines.

The ribbon at the top includes tabs: File, Home, Insert, Modeling, View, Help, Format, Data / Drill, and several sub-tabs like New visual, Text box, More visuals, New measure, Quick measure, Sensitivity (preview), and Publish.

A large black arrow points to the "Filters" pane on the right side of the screen. This pane contains a search bar and two main sections: "Filters on this visual" and "Filters on this page".

- Filters on this visual:**
  - Sales is (All)
  - Country is (All)
  - Date - Month is (All)
  - Date - Year is (All)
  - Add data fields here
- Filters on this page:**
  - Add data fields here

Below the filters pane, there is a "Visualizations" pane showing icons for various chart types and a "Values" section with a "Sales" field.

# Visualizations pane

The screenshot shows the Microsoft Power BI desktop application. The ribbon menu at the top includes File, Home, Insert, Modeling, View, Help, Format, Data / Drill, and Sensitivity. The Home tab is selected. The main area displays a grouped bar chart titled "Sales by Year, Month and Country". The chart shows monthly sales for five countries: Canada (blue), France (orange), Germany (red), Mexico (purple), and United States of America (pink). The Y-axis represents Sales in millions, ranging from 0M to 4M. The X-axis represents the Date Month from September 2013 to December 2014. A legend at the bottom left identifies the countries by color. The Visualizations pane is open on the right side, showing various visualization options like charts, tables, and maps. The Fields pane also shows a list of financial fields such as Sales, COGS, and Profit.

**VISUALIZATIONS PANES**

**Filters**

- Sales is (All)
- Country is (All)
- Date - Month is (All)
- Date - Year is (All)
- Add data fields here

**Visualizations**

- Bar chart
- Line chart
- Map
- Table
- Card
- Text box
- Image
- Calculated field
- Measure
- Drill-through

**Fields**

- financials
  - Sales
  - COGS
  - Country
- Date
  - Discount Band
  - Discounts
  - Gross Sales
  - Manufacturing Pr...
  - Month Name
  - Month Number
  - Product
  - Profit
  - Sale Price
  - Segment
  - Units Sold
  - Year

Page 1

Page 1 of 1

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# Fields pane

The screenshot shows the Microsoft Power BI Fields pane open on the right side of the application. The Fields pane lists various data fields categorized under financials, Date, and other metrics. The visual on the left is a grouped bar chart showing Sales over time, with filters applied for Sales, Country, Date - Month, and Date - Year.

**Fields pane categories:**

- financials:**
  - $\sum$  Sales
  - $\sum$  COGS
  - Country
- Date:**
  - Date
  - Discount Band
  - $\sum$  Discounts
  - $\sum$  Gross Sales
  - $\sum$  Manufacturing Pr..
  - Month Name
  - $\sum$  Month Number
  - Product
  - $\sum$  Profit
  - $\sum$  Sale Price
  - Segment
- Others:**
  - Sales

# Creating the first dashboard

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File Home Insert Modeling View Help

Cut Copy Format painter

Get data v Excel Power BI SQL Enter data Dataverse Recent sources v Transform Refresh data v New visual Text box More visuals v New measure Quick measure Sensitivity v Publish

Clipboard Data Queries Insert Calculations Sensitivity Share

**CUSTOMER BASE PER MONTH**

Month-Year	Customer Base
2017 February	276
2017 March	272
2017 April	295
2017 May	307
2017 June	309
2017 July	282
2017 August	279
2017 September	276
2017 October	283
2017 November	272
2017 December	285
2018 January	200
2018 February	266
2018 March	251
2018 April	248
2018 May	273
2018 June	249
2018 July	265
2018 August	270
2018 September	266
2018 October	253
2018 November	287
2018 December	200
2019 January	256
2019 February	287
2019 March	271
2019 April	264
2019 May	261
2019 June	280
2019 July	262
2019 August	266
2019 September	309
2019 October	251
2019 November	252
2019 December	264

**MONTH-YEAR**  
All

*add QBE/QUINTEGRAL logo*

**GENDER DISTRIBUTION**

Gender	Count	Percentage
M	3.36K	(33.6%)
F	3.33K	(33.33%)
O	3.31K	(33.05%)

**CIVIL STATUS DISTRIBUTION**

Civil Status	Count	Percentage
S	2.44K	(24.35%)
W	2.57K	(25.66%)
D	2.49K	(24.92%)
M	2.51K	(25.07%)

CUST INSU CSR +

Page 1 of 3

Type here to search

Search icon, Task View icon, Edge icon, Firefox icon, File Explorer icon, Control Panel icon, Settings icon, System icon

6:29 am ENG 28/10/2021

30

PC > Documents > 1\_QBE > for\_demo

Name	Date modified	Type	Size
6_cust	15/07/2021 3:30 am	Microsoft Excel C...	499 KB
6_sales	21/09/2021 12:21 pm	Microsoft Excel C...	561 KB
rates	27/10/2021 1:05 am	Microsoft Excel C...	1 KB

```
6 sales.csv x + ▶ ▷ 1 MEMBER_NO,DATE,BRANCH_CODE,BRANCH_TYPE,AMOUNT,CURRENCY,TRAN_CODE,TRAN_DESC  
2 0773806167,2020-12-06,MOB,MOBILE,9831.75,PHP,IN1003,TYPE3  
3 8666135657,2020-09-20,963,STORE,1369.25,PHP,IN1005,TYPE5  
4 5509330826,2020-10-28,MOB,MOBILE,3539.00,PHP,IN1002,TYPE2  
5 3064271133,2020-10-20,826,STORE,153.75,PHP,IN1001,TYPE1  
6 0443118051,2020-02-02,MOB,MOBILE,2043.25,PHP,IN1001,TYPE1  
7 9559647049,2020-09-22,447,STORE,6436.25,PHP,IN1003,TYPE3  
8 9959931848,2020-12-12,MOB,MOBILE,3889.50,PHP,IN1002,TYPE2  
9 6365985243,2020-02-26,MOB,MOBILE,2160.25,PHP,IN1004,TYPE4  
10 8700231322,2020-07-02,MOB,MOBILE,5330.50,PHP,IN1003,TYPE3  
11 7011759861,2020-02-26,520,STORE,8742.75,PHP,IN1001,TYPE1  
12 9102619148,2020-04-21,300,STORE,7341.00,PHP,IN1005,TYPE5  
13 9886062431,2020-03-11,MOB,MOBILE,861.25,PHP,IN1001,TYPE1  
14 0695049755,2020-07-06,MOB,MOBILE,6559.50,PHP,IN1003,TYPE3  
15 5345946297,2020-01-17,782,STORE,9082.00,PHP,IN1005,TYPE5  
16 0136694797,2020-10-31,MOB,MOBILE,6499.25,PHP,IN1005,TYPE5  
17 4251479882,2020-07-22,849,STORE,379.00,PHP,IN1004,TYPE4  
18 6530320511,2020-09-19,893,STORE,3182.50,PHP,IN1002,TYPE2  
19 9446539303,2020-11-21,319,STORE,5437.75,PHP,IN1002,TYPE2
```

# sales data

MEMBER\_NO: 10-digit number

DATE: {2020}-{1-12}-{1-28/29/30/31} (transaction date)

BRANCH: 123 / MOB (MOB means that transaction was done via mobile app)

BRANCH\_TYPE: STORE / MOBILE

AMOUNT: range = [10.00-10000.75]

CURRENCY: {PHP}

TRAN\_CODE: {IN1001, IN1002, ..., IN1005}

TRAN\_DESC: {TYPE1, TYPE2, ..., TYPE5} (product type)



	MEMBER_NO,ENROLLED_DATE,BIRTH_DATE,GENDER,CIVIL_STATUS,BRANCH_CODE,BRANCH_TYPE,STATE
1	9946910374,2018-01-04,1995-10-21,M,S,443,STORE,VIC
2	5218880921,2019-04-20,1983-11-09,F,D,119,STORE,TAS
3	1231130840,2019-03-02,1985-03-16,O,W,MOB,MOBILE,ACT
4	6417181135,2018-06-08,1988-02-29,M,W,MOB,MOBILE,NSW
5	4457034841,2018-06-01,1997-07-21,M,W,431,STORE,SA
6	4161099774,2017-09-25,1995-05-23,O,D,MOB,MOBILE,ACT
7	2797877520,2018-02-02,2001-04-08,O,D,646,STORE,WA
8	2690183236,2019-04-29,1981-10-27,M,S,MOB,MOBILE,QLD
9	9213400351,2018-04-30,1988-07-19,M,D,MOB,MOBILE,NSW
10	7118793488,2017-01-18,1975-11-12,O,W,517,STORE,NT
11	5385825171,2018-05-07,1977-10-24,M,S,477,STORE,VIC
12	4114118930,2017-02-22,1992-08-15,O,S,657,STORE,SA
13	3494985156,2019-06-05,1998-06-09,O,S,MOB,MOBILE,ACT

## customer data

MEMBER\_NO: 10-digit number

DATE: {2017-2019}-{1-12}-{1-28/29/30/31} (date enrolled)

BDATE: {1970-2005}-{1-12}-{1-28/29/30/31} (birthdate)

GENDER: {M/F/Other}

CIVIL\_STATUS: {S/single, M/married, D/divorced, W/widowed}

BRANCH: BRANCH\_123 / BRANCH\_MOB (branch enrolled)

BRANCH\_TYPE: STORE / MOBILE

STATE: Australian state (NSW, VIC, QLD, WA, SA, TAS, ACT, NT)





rates.csv



```
1 |TRAN_CODE,REV_RATE
2 IN1001,0.01
3 IN1002,0.10
4 IN1003,0.25
5 IN1004,0.3
6 IN1005,0.5
```

rate data

TRAN\_CODE: {IN1001, IN1002, ..., IN1005}

RATE: Net profit rate per product type



<https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-types-for-reports-and-q-and-a>

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Filter by title

Which Power BI license do I have?

Learn how to ask questions using natural language

How to

- > Dashboards
- > Reports

Visualizations

Types of visualizations

- Show the data that was used to create the visualization
- Copy a visual and paste it elsewhere
- Drill down in a visualization

> Power BI in Teams

> Common tasks

> Get data

> Ask questions of your data

> Resources

[Download PDF](#)

This article lists visualizations available in Power BI. We'll be adding new visualizations, stay tuned!

And check out the [Microsoft AppSource](#), where you'll find a growing list of [Power BI visuals](#) you can download and use in your own dashboards and reports. Feeling creative? [Learn how to create and add your own visuals to this community site.](#)

## Visualizations in Power BI

All of these visualizations can be added to Power BI reports, specified in Q&A, and pinned to dashboards.

### Area charts: Basic (Layered) and Stacked

This Year Sales  
Last Year Sales  
\$4M  
\$3M  
\$2M

Is this page helpful?

Yes No

In this article

- [Visualizations in Power BI](#)
- [Area charts: Basic \(Layered\) and Stacked](#)
- [Bar and column charts](#)
- [Cards](#)
- [Combo charts](#)
- [Decomposition tree](#)
- [Doughnut charts](#)
- [Funnel charts](#)
- [Gauge charts](#)
- [Key influencers chart](#)
- [KPIs](#)
- [Line charts](#)
- [Maps](#)
- [Matrix](#)
- [Pie charts](#)
- [Power Apps visual](#)
- [Q&A visual](#)

[Link](#) to the non-exhaustive list of visualizations

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2018 February	286
2018 March	251
2018 April	248
2018 May	273
2018 June	249
2018 July	255
2018 August	266
2018 September	293
2018 October	287
2018 November	256
2018 December	287
2019 January	271
2019 February	284
2019 March	261
2019 April	268
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2019 June	266
2019 July	269
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2019 September	252
2019 October	294
2019 November	266
2019 December	266

MONTH-YEAR  
All

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CUSTOMER BASE PER MONTH

Customer Base per Month

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2019 September	262
2019 October	266
2019 November	251
2019 December	252
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2020 February	266
2020 March	266

Fields

Filters

Visualizations

AI MONTH-YEAR

All

QI add QBE/QUINTEGRAL logo

GENDER DISTRIBUTION

CUST 3.31K (33.05%) M 1.36K (33.6%) F 1.33K (33.33%) O 3.31K (33.05%)

CIVIL STATUS DISTRIBUTION

INSU 2.44K (24.33%) D 2.40K (24.92%) S 2.57K (25.68%) W 2.51K (25.07%) M 2.51K (25.07%)

CSR

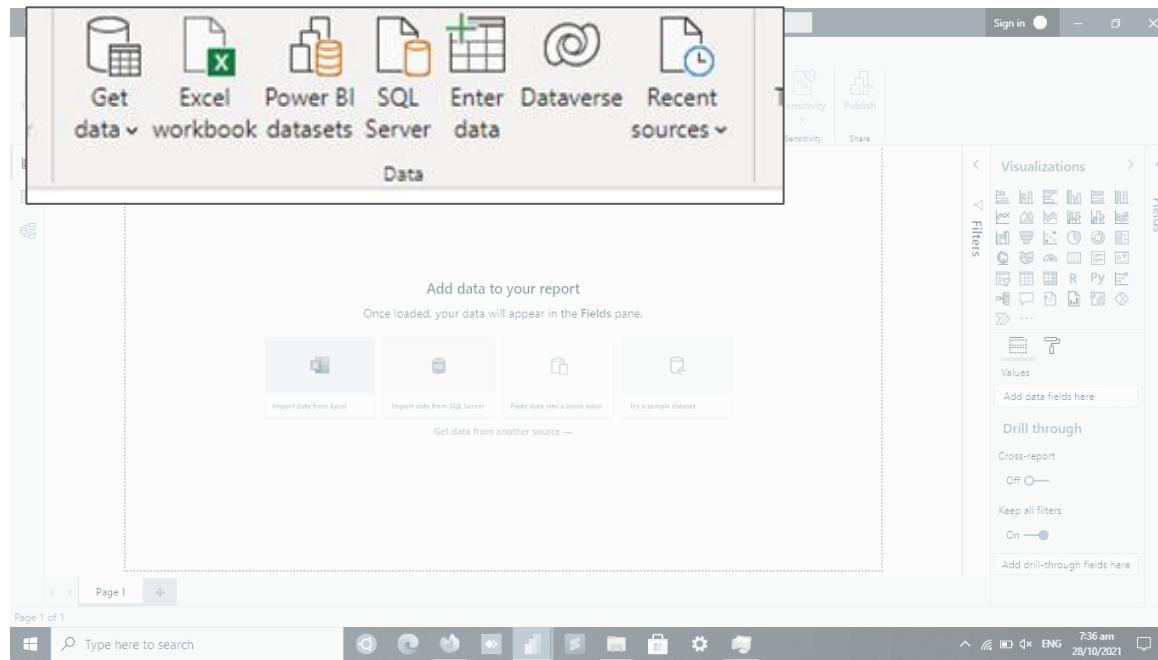
Page 1 of 3

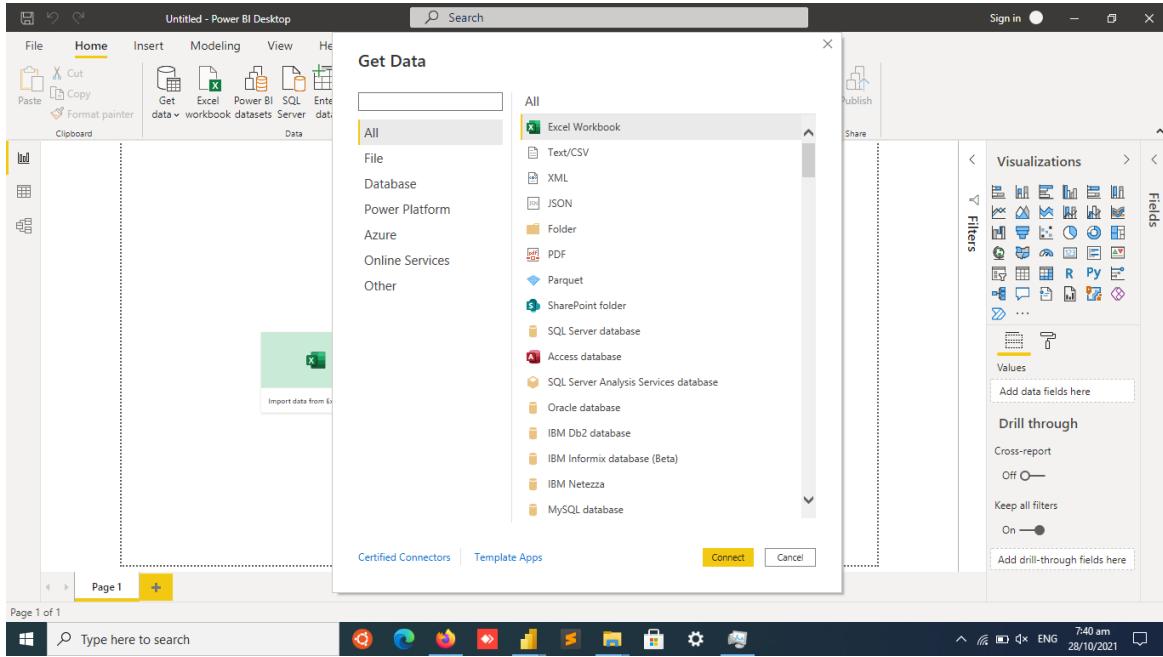
Type here to search

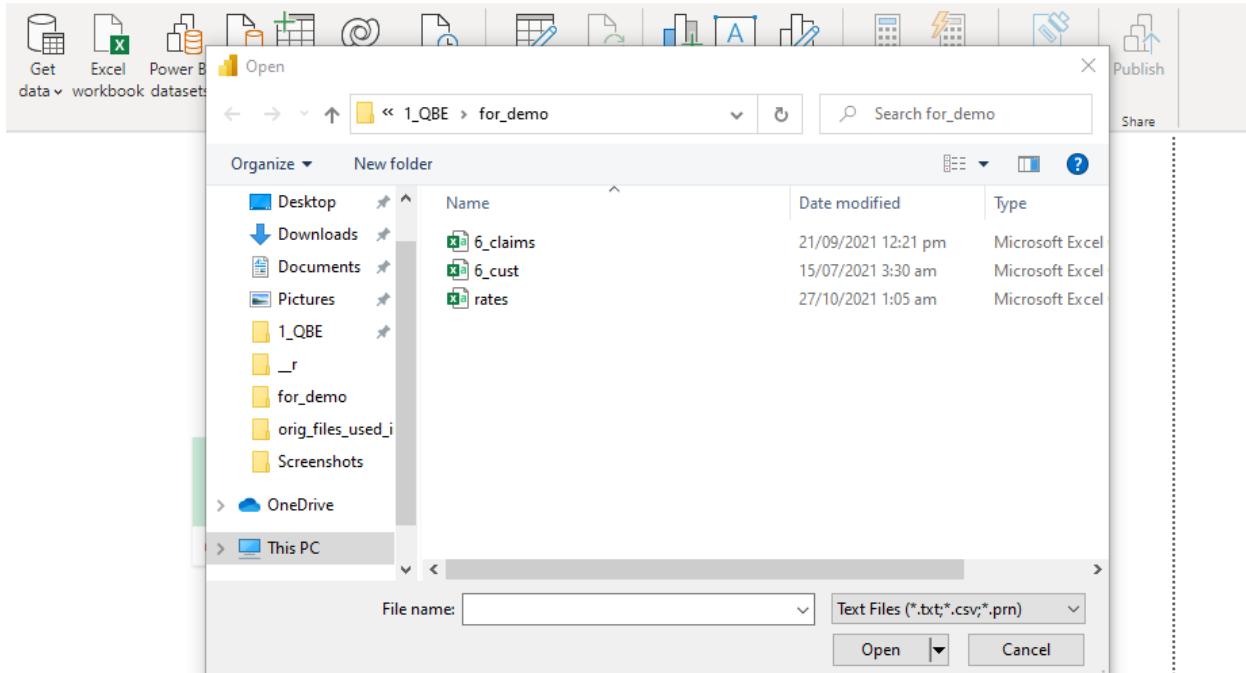
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# Get data







- a. Select Get Data → Text/CSV\*
- b. Go to the target folder and select the desired file
- c. Click open

\*can be any data type you wish to open

File Home Insert Modeling View Help

Cut Paste Copy Format painter Clipboard

Excel Power BI SQL Server Enter data Dataverse Recent sources Data

Transform data Refresh New visual Text box More visuals Insert New measure Quick measure Calculations Sensitivity Publish

Visualizations Filters Fields

Add data to your report

Once loaded, your data will appear in the Fields pane.

Import data from Excel Import data from SQL Server Paste data into a blank table Try a sample dataset

Get data from another source →

Page 1 +

The screenshot shows the Microsoft Power BI desktop application. The interface includes a top navigation bar with tabs: File, Home, Insert, Modeling, View, and Help. Below the navigation bar is a toolbar with icons for Paste, Cut, Copy, Format painter, and Clipboard. The main workspace is currently empty, with a central message "Add data to your report" and a sub-instruction "Once loaded, your data will appear in the Fields pane." At the bottom of the workspace, there are four buttons: "Import data from Excel" (with an Excel icon), "Import data from SQL Server" (with a SQL icon), "Paste data into a blank table" (with a clipboard icon), and "Try a sample dataset" (with a sample icon). Below these buttons is a link "Get data from another source →". To the right of the workspace, there are three vertical panes: "Visualizations" (showing icons for various chart types), "Filters" (showing icons for filter settings), and "Fields" (showing icons for field management). The bottom left corner shows page navigation buttons for "Page 1" and a plus sign, indicating a multi-page document.

# Navigator dialog

The screenshot shows the Power BI Desktop application window with the 'Navigator' dialog open. The dialog displays a preview of a CSV file named '6\_cust.csv'. The preview shows columns for MEMBER\_NO, ENROLLED\_DATE, BIRTH\_DATE, GENDER, CIVIL\_STATUS, BRANCH\_CODE, BRANCH\_TYPE, and STATE. The data type detection is set to 'Based on first 200 rows'. The right side of the dialog features a 'Visualizations' pane with various chart and report icons, and a 'Fields' pane showing the columns from the preview.

**Load** - loads the data to the data model

**Transform Data** - opens the Query Editor and do the editing

**Cancel** - closes the dialog without loading data

The bottom of the dialog includes buttons for 'Extract Table Using Examples', 'Load' (highlighted in yellow), 'Transform Data', and 'Cancel'. A note at the bottom states: 'The data in the preview has been truncated due to size limits.'

Page 1 of 1

Type here to search

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M06\_demo - Power BI Desktop

File Home Insert Modeling View Help

Search

Cut Copy Format painter

Paste

Clipboard

Get data

Excel workbook

Power BI datasets

SQL Server

Enter data

Data

Transform data

Recent sources

New measure

Quick measure

Sensitivity

Transform data

Measure

Share

Power BI Desktop

TOTAL SALES

Refresh

JP Maulion



Untitled - Power Query Editor

File 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 Use First Row as Headers

Data Type: Text ▾ Merge Queries Append Queries Combine Files Combine

Text Analytics Vision Azure Machine Learning AI Insights

Queries [1]

6\_cust

	GENDER	CIVIL_STATUS	BRANCH_CODE	BRANCH_TYPE	STATE
1	21/10/1995 M	S	1.2	Decimal Number	VIC
2	09/11/1983 F	D	\$	Fixed decimal number	TAS
3	16/03/1985 O	W	1 <sup>2</sup> 3	Whole Number	ACT
4	29/02/1988 M	W	%	Percentage	NSW
5	21/07/1997 M	W	Date/Time	SA	
6	23/05/1995 O	D	Date	ACT	
7	08/04/2001 O	D	Time	WA	
8	27/10/1981 M	S	Date/Time/Timezone	QLD	
9	19/07/1988 M	D	Duration	NSW	
10	12/11/1975 O	W	Text	NT	
11	24/10/1977 M	S	True/False	VIC	
12	15/08/1992 O	S	Binary	SA	
13	09/06/1998 O	S	Using Locale...	ACT	
14	20/12/1998 F	M	MOB	MOBILE	WA
15	10/12/1981 M	M	966	STORE	TAS
16	18/08/1986 O	M	MOB	MOBILE	ACT
17	13/02/1983 M	W	MOB	MOBILE	WA
18	12/08/1970 O	W	MOB	MOBILE	NSW
19	27/12/1976 F	S	079	STORE	QLD
20	28/07/2003 M	M	076	STORE	NSW
21	26/11/1996 O	M	MOB	MOBILE	WA
22	24/03/1970 O	D			
23	31/10/2001 O	M			
24					

8 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 11:00 PM

Properties Advanced Editor

Query Settings

PROPERTIES

Name: 6\_cust  
All Properties

APPLIED STEPS

Source  
Promoted Headers  
Changed Type



Type here to search



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28/10/2021

Untitled - Power Query Editor

**File** **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** **A-Z** **Z-A** **Sort** **Split Column** **Group By** **Use First Row as Headers** **Data Type: Text** **Reduce Rows** **Transform**

**Merge Queries** **Append Queries** **Combine Files** **Combine** **Text Analytics** **Vision** **Azure Machine Learning** **AI Insights**

**Queries [1]**

**6\_cust**

	GENDER	CIVIL_STATUS	BRANCH_CODE	BRANCH_TYPE	STATE
1	21/10/1995	M		STORE	VIC
2	09/11/1983	F		STORE	TAS
3	16/03/1985	O		MOBILE	ACT
4	29/02/1988	M		MOBILE	NSW
5	21/07/1997	M		STORE	SA
6	23/05/1995	O		MOBILE	ACT
7	08/04/2001	O			
8	27/10/1981	M			
9	19/07/1988	M			
10	12/11/1975	O			
11	24/10/1977	M			
12	15/08/1992	O			
13	09/06/1998	O			
14	20/12/1998	F			
15	10/12/1981	M			
16	18/08/1986	O			
17	13/02/1983	M			
18	12/08/1970	O			
19	27/12/1976	F			
20	28/07/2003	M			
21	26/11/1996	O			
22	24/03/1970	O			
23	31/10/2001	O			
24					

= Table.TransformColumnTypes(#"Promoted Headers",{{"MEMBER\_NO", Int64.Type}, {"ENROLLED\_DATE", type date}})

**Query Settings**

**PROPERTIES**

Name: 6\_cust  
All Properties

**APPLIED STEPS**

- Source
- Promoted Headers
- Changed Type

**Text Filters**

Search:

Equals...  A

Does Not Equal...  LD

Begins With...  SW

Does Not Begin With...  T

Ends With...  C

Does Not End With...  N

Contains...  T

Does Not Contain...  C

Load more

**8 COLUMNS, 999+ ROWS** Column profiling based on top 1000 rows

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Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

New Source Recent Sources Advanced Editor Properties Data Type: Text Merge Queries Append Queries

Close & Apply Close New Query

Queries [1]

6\_cust

Advanced Editor

6\_cust

Display Options ?

```
let
    Source = Csv.Document(File.Contents("C:\Users\JP\Documents\1_QBE\for_demo\6_cust.csv"),[Delimiter=",", Columns=8, Encoding=1252, QuoteStyle="Promoted Headers"]的文化),
    #"Promoted Headers" = Table.PromoteHeaders(Source, [PromoteAllScalars=true]),
    #"Changed Type" = Table.TransformColumnTypes(#"Promoted Headers",{{"MEMBER_NO", Int64.Type}, {"ENROLLED_DATE", type date}, {"BIRTH_DATE", type date}})
in
    #"Changed Type"
```

✓ No syntax errors have been detected.

Done Cancel

21	26/11/1996	O	M	079	STORE	QLD
22	24/03/1970	O	D	076	STORE	NSW
23	31/10/2001	O	M	MOB	MOBILE	WA
24						

8 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows PREVIEW DOWNLOADED AT 11:00 PM

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Untitled - Power Query Editor

**File** **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** **Reduce Rows** **Sort** **Split Column** **Data Type: Date** **Merge Queries** **Text Analytics** **Recent Sources** **Append Queries** **Vision** **Enter Data** **Combine Files** **Azure Machine Learning** **Combine** **AI Insights**

**Queries [1]** **6\_cust**

= Table.TransformColumnTypes(#"Promoted Headers",{{"MEMBER\_NO", Int64.Type}, {"ENROLLED\_DATE", Date.Type}, {"BIRTH\_DATE", Date.Type}, {"GENDER", Text.Type}, {"CIVIL\_STATUS", Text.Type}})

	ENROLLED_DATE	BIRTH_DATE	GENDER	CIVIL_STATUS
1	10374	04/01/2018	21/10/1995	M
2	180921	20/04/2019	09/11/1983	F
3	30840	02/03/2019	16/03/1985	O
4	81135	08/06/2018	29/02/1988	M
5	134841	01/06/2018	21/07/1997	M
6	199774	25/09/2017	23/05/1995	O
7	177520	02/02/2018	08/04/2001	O
8	83236	29/04/2019	27/10/1981	M
9	100351	30/04/2018	19/07/1988	M
10	193488	18/01/2017	12/11/1975	O
11	125171	07/05/2018	24/10/1977	M
12	18930	22/02/2017	15/08/1992	O
13	185156	05/06/2019	09/06/1998	O
14	51888	27/08/2017	20/12/1998	F
15	197553	27/02/2017	10/12/1981	M
16	75244	16/09/2019	18/08/1986	O
17	112065	20/05/2019	13/02/1983	M
18	107028	03/07/2018	12/08/1970	O
19	18770	11/03/2017	27/12/1976	F
20	168100	01/03/2017	28/07/2003	M
21	10014	28/08/2019	26/11/1996	O
22	151155	14/06/2018	24/03/1970	O
23	59635	16/10/2017	31/10/2001	O
24				

**By Number of Characters** **Split Column by Delimiter** **By Position** **Split values in the selected column based on the specified delimiter.** **By Lowercase** **STOR** **By Uppercase to Lowercase** **STOR** **By Digit to Non-Digit** **MOB** **By Non-Digit to Digit** **MOB**

**Query Settings**

**PROPERTIES** **Name** 6\_cust **All Properties**

**APPLIED STEPS** **Source** **Promoted Headers** **Changed Type**

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8 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

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Sign in

File Home Insert Modeling View Help

Cut Copy Format painter

Get data v workbook Power BI SQL Enter data Dataverse Recent sources v Transform Refresh data v New visual Text box More visuals v New measure Quick measure

Sensitivity Share

Clipboard Data Queries Insert Calculations Sensitivity Share

### CUSTOMER BASE PER MONTH

This bar chart displays the monthly customer base. The x-axis lists months from February 2017 to December 2019. The y-axis represents the count of customers, ranging from 251 to 309. The data shows a general upward trend with some fluctuations.

Month	Customer Base
2017 Feb	276
2017 March	272
2017 April	295
2017 May	307
2017 June	309
2017 July	262
2017 August	279
2017 September	263
2017 October	272
2017 November	285
2017 December	260
2018 January	286
2018 February	251
2018 March	288
2018 April	249
2018 May	273
2018 June	255
2018 July	286
2018 August	293
2018 September	287
2018 October	256
2018 November	287
2018 December	288
2019 January	271
2019 February	284
2019 March	261
2019 April	288
2019 May	262
2019 June	266
2019 July	309
2019 August	251
2019 September	252
2019 October	294
2019 November	266
2019 December	266

### MONTH-YEAR

All

Fields

Filters

Visualizations

add QBE/QUINTEGRAL logo

### GENDER DISTRIBUTION

This pie chart illustrates the gender distribution. The segments represent Male (M), Female (F), and Other (O). The percentages are approximately 33.6% for M, 33.3% for F, and 33.05% for O.

Gender	Percentage
M	33.6K (33.6%)
F	33.3K (33.33%)
O	33.05K (33.05%)

### CIVIL STATUS DISTRIBUTION

This pie chart shows the civil status distribution. The segments are labeled W, M, D, and S. The percentages are approximately 25.66% for W, 24.92% for D, 25.07% for M, and 24.35% for S.

Civil Status	Percentage
W	2.57K (25.66%)
M	2.51K (25.07%)
D	2.49K (24.92%)
S	2.44K (24.35%)

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Page 1 of 3

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File Home Insert Modeling View Help

CUSTOMER BASE PER MONTH

Month	Customer Count
2017 Feb	216
2017 Mar	216
2017 Apr	212
2017 May	217
2017 Jun	208
2017 Jul	216
2017 Aug	202
2017 Sep	201
2017 Oct	210
2017 Nov	212
2017 Dec	203
2018 Jan	212
2018 Feb	219
2018 Mar	206
2018 Apr	209
2018 May	212
2018 Jun	206
2018 Jul	209
2018 Aug	240
2018 Sep	285
2018 Oct	269
2018 Nov	256
2018 Dec	287
2019 Jan	265
2019 Feb	270
2019 Mar	261
2019 Apr	268
2019 May	284
2019 Jun	261
2019 Jul	288
2019 Aug	259
2019 Sep	287
2019 Oct	262
2019 Nov	266
2019 Dec	251
2020 Jan	252
2020 Feb	252
2020 Mar	294
2020 Apr	266
2020 May	266

A MONTH-YEAR  
All

QI add  
QBE/QUINTEGRAL logo

GENDER DISTRIBUTION

Gender	Count	Percentage
M	3.38K	33.6%
F	3.33K	33.33%
O	3.31K	33.05%

CIVIL STATUS DISTRIBUTION

Civil Status	Count	Percentage
W	2.44K	24.33%
M	2.51K	25.07%
D	2.48K	24.92%
S	2.57K	25.68%

LIVE (( ))

Page 1 of 3

CUST INSU CSR +

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**Contents** come first before aesthetics.



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File Home Insert Modeling View Help

CUSTOMER BASE PER MONTH

Month-Year	Customer Base
2017 Feb	276
2017 March	272
2017 April	295
2017 May	307
2017 June	309
2017 July	262
2017 August	279
2017 September	263
2017 October	272
2017 November	285
2017 December	260
2018 January	286
2018 February	251
2018 March	248
2018 April	273
2018 May	249
2018 June	255
2018 July	266
2018 August	293
2018 September	287
2018 October	256
2018 November	287
2018 December	271
2019 January	284
2019 February	261
2019 March	288
2019 April	262
2019 May	266
2019 June	262
2019 July	269
2019 August	251
2019 September	252
2019 October	294
2019 November	266
2019 December	266

MONTH-YEAR  
All

add  
QBE/QUINTEGRAL  
logo

GENDER DISTRIBUTION

Gender	Count	Percentage
M	3.36K	(33.6%)
F	3.33K	(33.33%)
O	3.31K	(33.05%)

CIVIL STATUS DISTRIBUTION

Civil Status	Count	Percentage
W	2.57K	(25.66%)
M	2.51K	(25.07%)
D	2.49K	(24.92%)
S	2.44K	(24.35%)

CUST INSU CSR +

Page 1 of 3

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File Home Insert Modeling View Help

Paste Cut Copy Format painter Clipboard Get data Excel Power BI SQL Enter Dataverse Recent sources Transform Refresh data New visual Text box More visuals Insert Calculations Sensitivity Publish Data Queries Insert Calculations Sensitivity Share

CUSTOMER BASE PER MONTH

MONTH-YEAR All

add QBE/QUINTTEGRAL logo

GENDER DISTRIBUTION

CUST

3.31K (33.05%) O  
3.36K (33.6...) M  
3.33K (33.33%) F

CIVIL STATUS DISTRIBUTION

W M D S

2.44K (24.92%) D 2.57K (25.66%) W 2.51K (25.07%) M 2.46K (24.99%) S

Fields Visualizations Filters

LIVE (( ))

Page 1 of 3

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# Exercise

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File Home Insert Modeling View Help

CUSTOMER BASE PER MONTH

Month	Customer Base
2017 Feb	216
2017 March	272
2017 April	204
2017 May	253
2017 June	202
2017 July	279
2017 August	276
2017 September	203
2017 October	272
2017 November	205
2017 December	200
2018 January	286
2018 February	251
2018 March	248
2018 April	273
2018 May	205
2018 June	249
2018 July	276
2018 August	207
2018 September	235
2018 October	287
2018 November	271
2018 December	204
2019 January	261
2019 February	203
2019 March	266
2019 April	251
2019 May	252
2019 June	262
2019 July	262
2019 August	262
2019 September	262
2019 October	262
2019 November	262
2019 December	262

CIVIL STATUS DISTRIBUTION

Civil Status	Count	Percentage
S (Single)	2.44K	(24.35%)
W (Married)	2.57K	(25.66%)
D (Divorced)	2.49K	(24.92%)
M (Married)	2.51K	(25.07%)

GENDER DISTRIBUTION

Gender	Count	Percentage
F (Female)	1.33K	(33.05%)
M (Male)	2.67K	(66.95%)

MONTH-YEAR

add QUINTTEGRAL logo

Fields

Visualizations

Filters

CUST    CSR

Page 1 of 3

Type here to search

6:29 am 28/10/2021

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The screenshot shows the Microsoft Power Query Editor interface. The ribbon menu includes File, Home, Transform, Add Column, View, Tools, and Help. The Home tab is selected. The toolbar contains icons for 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, Group By, Sort, Reduce Rows, and Data Type. The 'Queries [4]' pane lists three queries: 6\_cust, 6\_claims, and Table 3. The main area displays a table with columns: MEMBER\_NO, DATE, BRANCH\_CODE, BRANCH\_TYPE, and AMOUNT. A context menu is open over the table, showing options: Merge Queries, Append Queries, Combine Files, and Combine. The 'Combine' option is highlighted.

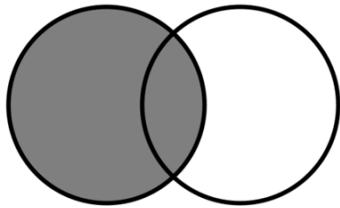
To merge:

1. Determine the **column/s shared** by the two tables
2. Use Merge Queries to do the merging.
3. Select the desired merging method.

LIVE ((•))

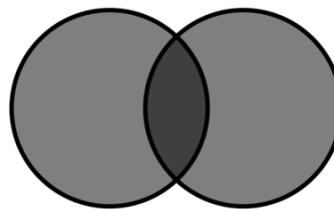


# Merging Types in Power BI



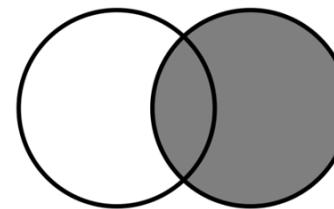
**LEFT OUTER**

all rows from left and matching from right



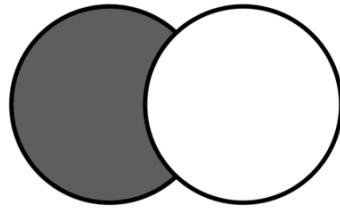
**FULL OUTER**

all rows from both; matching and not matching



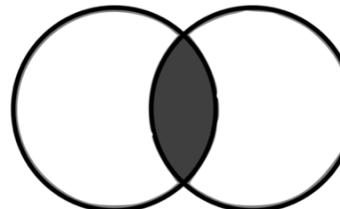
**RIGHT OUTER**

all rows from right and matching from left



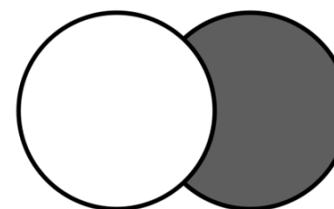
**LEFT ANTI**

not matching rows from left



**INNER**

only matching rows



**RIGHT ANTI**

not matching rows from right



# Data Analysis Expressions (DAX)

- formula language with expressions similar to Excel functions

https://docs.microsoft.com/en-us/dax/dax-function-reference

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NOT ALL DAX FUNCTIONS ARE SUPPORTED OR INCLUDED IN EARLIER VERSIONS OF POWER BI

Desktop, Analysis Services, and Power Pivot in Excel.

Filter by title

Data Analysis Expressions (DAX) Reference

> Learn

› DAX functions

- DAX function reference
- New DAX functions
- > Aggregation functions
- > Date and time functions
- > Filter functions
- > Financial functions
- > Information functions
- > Logical functions
- > Math and trig functions
- > Other functions
- > Parent and child functions
- > Relationship functions
- > Statistical functions

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## In this section

**New DAX functions** - These functions are new or are existing functions that have been significantly updated.

**Aggregation functions** - These functions calculate a (scalar) value such as count, sum, average, minimum, or maximum for all rows in a column or table as defined by the expression.

**Date and time functions** - These functions in DAX are similar to date and time functions in Microsoft Excel. However, DAX functions are based on the datetime data types used by Microsoft SQL Server.

**Filter functions** - These functions help you return specific data types, look up values in related tables, and filter by related values. Lookup functions work by using tables and relationships between them. Filtering functions let you manipulate data context to create dynamic calculations.

**Financial functions** - These functions are used in formulas that perform financial calculations, such as net present value and rate of return.

Is this page helpful?

Yes No

In this article

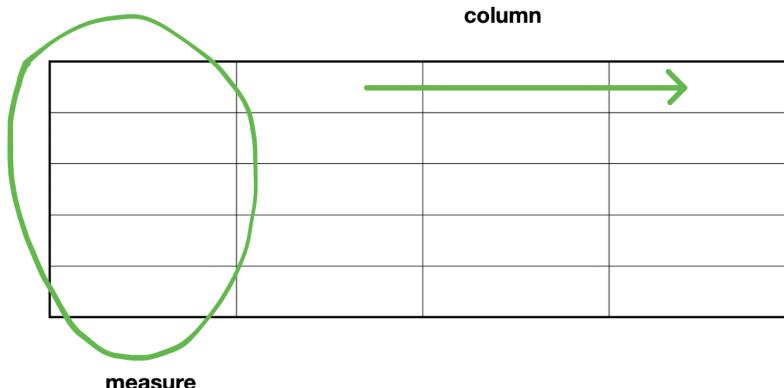
In this section

See also

# Columns and measures

Use calculated **columns** when you want to evaluate each row.

Use **measures** when you need aggregates.



	MEMBER_NO,ENROLLED_DATE,BIRTH_DATE,GENDER,CIVIL_STATUS,BRANCH_CODE,BRANCH_TYPE,STATE
1	9946910374,2018-01-04,1995-10-21,M,S,443,STORE,VIC
2	5218880921,2019-04-20,1983-11-09,F,D,119,STORE,TAS
3	1231130840,2019-03-02,1985-03-16,O,W,MOB,MOBILE,ACT
4	6417181135,2018-06-08,1988-02-29,M,W,MOB,MOBILE,NSW
5	4457034841,2018-06-01,1997-07-21,M,W,431,STORE,SA
6	4161099774,2017-09-25,1995-05-23,O,D,MOB,MOBILE,ACT
7	2797877520,2018-02-02,2001-04-08,O,D,646,STORE,WA
8	2690183236,2019-04-29,1981-10-27,M,S,MOB,MOBILE,QLD
9	9213400351,2018-04-30,1988-07-19,M,D,MOB,MOBILE,NSW
10	7118793488,2017-01-18,1975-11-12,O,W,517,STORE,NT
11	5385825171,2018-05-07,1977-10-24,M,S,477,STORE,VIC
12	4114118930,2017-02-22,1992-08-15,O,S,657,STORE,SA
13	3494985156,2019-06-05,1998-06-09,O,S,MOB,MOBILE,ACT
14	

1. How many distinct customers do the company have?
2. What is the total sales?
3. Find the current age of each customer, then find the average age of the customer pool.

LIVE ((•))



	MEMBER_NO,ENROLLED_DATE,BIRTH_DATE,GENDER,CIVIL_STATUS,BRANCH_CODE,BRANCH_TYPE,STATE
1	9946910374,2018-01-04,1995-10-21,M,S,443,STORE,VIC
2	5218880921,2019-04-20,1983-11-09,F,D,119,STORE,TAS
3	1231130840,2019-03-02,1985-03-16,O,W,MOB,MOBILE,ACT
4	6417181135,2018-06-08,1988-02-29,M,W,MOB,MOBILE,NSW
5	4457034841,2018-06-01,1997-07-21,M,W,431,STORE,SA
6	4161099774,2017-09-25,1995-05-23,O,D,MOB,MOBILE,ACT
7	2797877520,2018-02-02,2001-04-08,O,D,646,STORE,WA
8	2690183236,2019-04-29,1981-10-27,M,S,MOB,MOBILE,QLD
9	9213400351,2018-04-30,1988-07-19,M,D,MOB,MOBILE,NSW
10	7118793488,2017-01-18,1975-11-12,O,W,517,STORE,NT
11	5385825171,2018-05-07,1977-10-24,M,S,477,STORE,VIC
12	4114118930,2017-02-22,1992-08-15,O,S,657,STORE,SA
13	3494985156,2019-06-05,1998-06-09,O,S,MOB,MOBILE,ACT
14	

1. How many distinct customers do the company have? **MEASURE**
2. What is the total sales? **MEASURE**
3. Find the current age of each customer, then find the average age of the customer pool. **COLUMN** (for current age), then **MEASURE** (average age)

LIVE ((•))



# Filtering

Filters ⚙️ ⌂ ⌂

🔍 Search

Filters on this visual ⌂

BRANCH\_TYPE  
is (All)

Filter type ⓘ

Basic filtering

Advanced filtering

Basic filtering

Top N

STORE 5061

Require single selection

DATE - Month  
is (All)

Filters ⚙️ ⌂ ⌂

🔍 Search

DATE - Month  
is (All)

TRAN\_CODE  
is (All)

Unique customers  
is (All)

Add data fields here

Filters on this page ⌂

Add data fields here

Filters on all pages ⌂

Add data fields here



# Exercise

1. What is the total amount for Sep & Oct combined?  
*(HINT: Use SUM() and a filter)*

LIVE ((•))



# (Calculated) columns

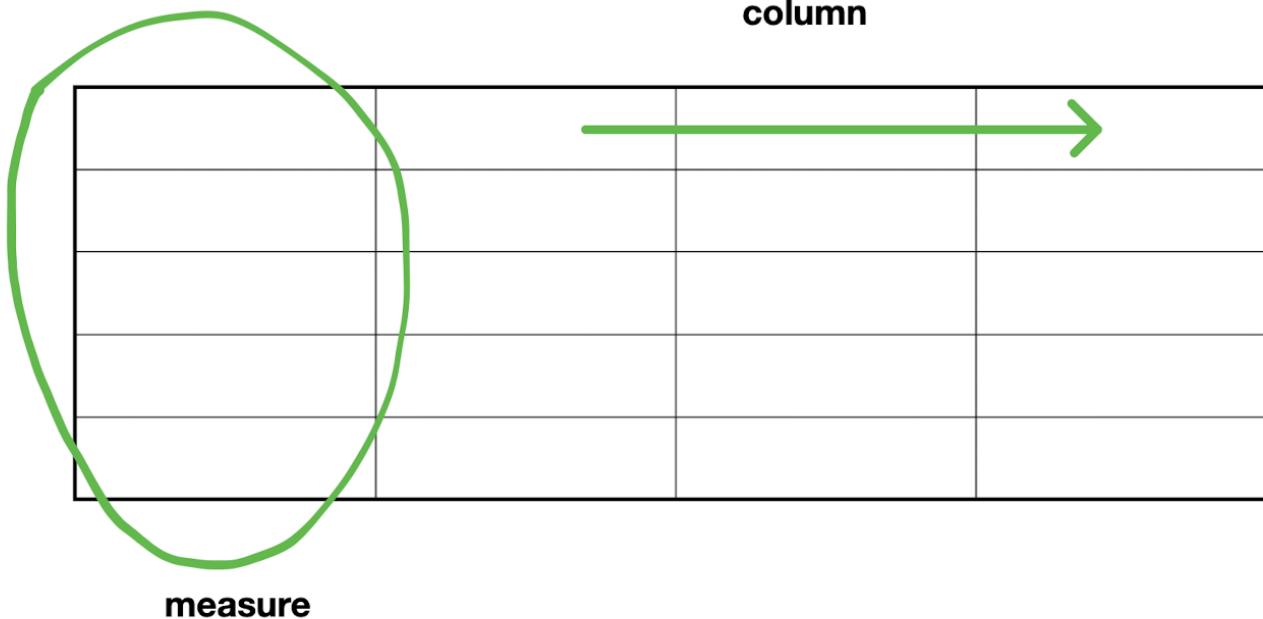
	MEMBER_NO,DATE,BRANCH_CODE,BRANCH_TYPE,AMOUNT,CURRENCY,TRAN_CODE,TRAN_DESC
1	0773806167,2020-12-06,MOB,MOBILE,9831.75,PHP,IN1003,TYPE3
2	8666135657,2020-09-20,963,STORE,1369.25,PHP,IN1005,TYPE5
3	5509330826,2020-10-28,MOB,MOBILE,3539.00,PHP,IN1002,TYPE2
4	3064271133,2020-10-20,826,STORE,153.75,PHP,IN1001,TYPE1
5	0443118051,2020-02-02,MOB,MOBILE,2043.25,PHP,IN1001,TYPE1
6	9559647049,2020-09-22,447,STORE,6436.25,PHP,IN1003,TYPE3
7	9959931848,2020-12-12,MOB,MOBILE,3889.50,PHP,IN1002,TYPE2
8	6365985243,2020-02-26,MOB,MOBILE,2160.25,PHP,IN1004,TYPE4
9	8700231322,2020-07-02,MOB,MOBILE,5330.50,PHP,IN1003,TYPE3
10	7011759861,2020-02-26,520,STORE,8742.75,PHP,IN1001,TYPE1
11	9102619148,2020-04-21,300,STORE,7341.00,PHP,IN1005,TYPE5
12	9806062431,2020-03-11,MOB,MOBILE,861.25,PHP,IN1001,TYPE1
13	0695049755,2020-07-06,MOB,MOBILE,6559.50,PHP,IN1003,TYPE3
14	5345946297,2020-01-17,782,STORE,9082.00,PHP,IN1005,TYPE5
15	0136694797,2020-10-31,MOB,MOBILE,6499.25,PHP,IN1005,TYPE5
16	4251479882,2020-07-22,849,STORE,379.00,PHP,IN1004,TYPE4
17	6530320511,2020-09-19,893,STORE,3182.50,PHP,IN1002,TYPE2
18	9446539303,2020-11-21,319,STORE,5437.75,PHP,IN1002,TYPE2
19	

	TRAN_CODE,REV_RATE
1	IN1001,0.01
2	IN1002,0.10
3	IN1003,0.25
4	IN1004,0.3
5	IN1005,0.5
6	

Introduce variable

**NET PROFIT = AMOUNT \* REV\_RATE**

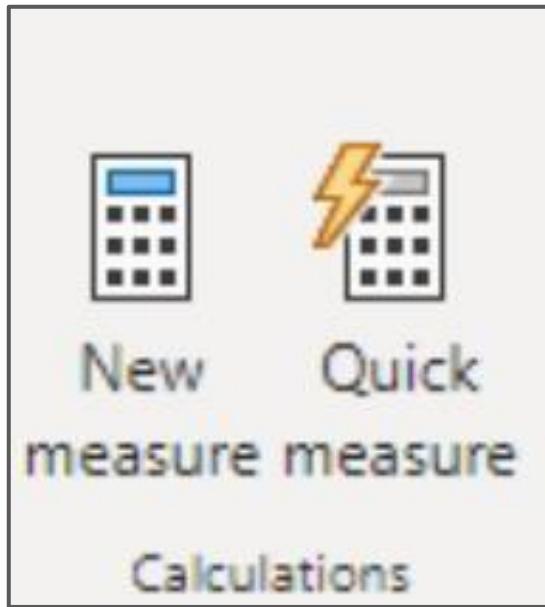




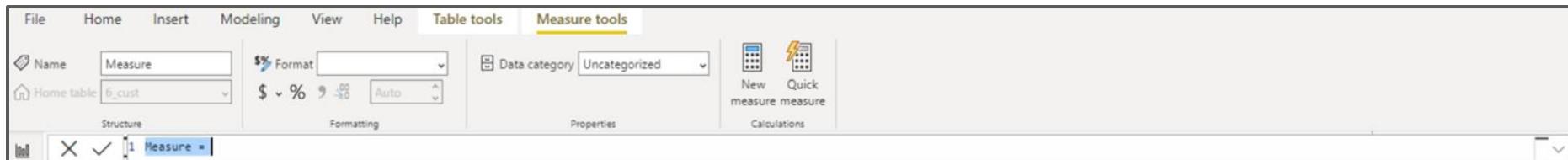
LIVE ((•))



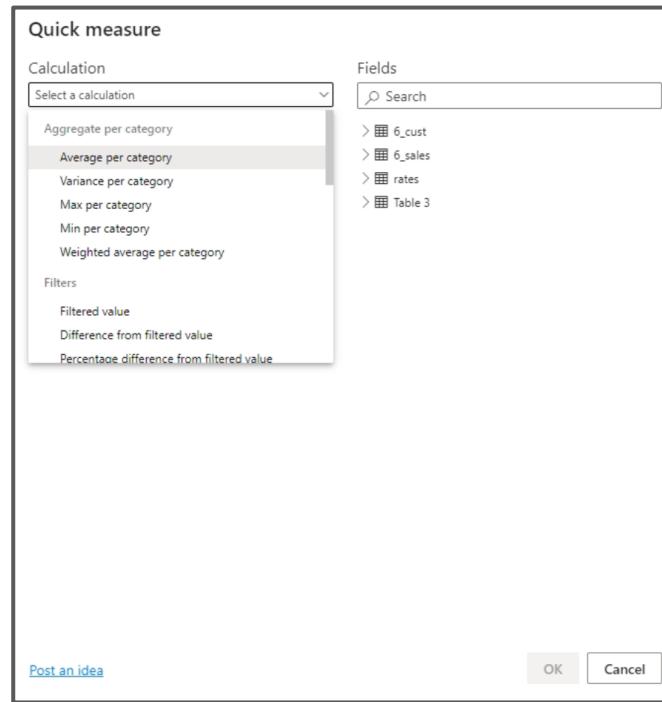
# Quick? Measure?



# New Measure



# Quick Measure



M06\_withCSR - Copy--UPDATED - Power BI Desktop

Home Insert Modeling View Help

Clipboard Data Queries Insert Calculations Sensitivity Share

**CUSTOMER BASE PER MONTH**

Month-Year	Customer Base
2017 Feb	276
2017 March	272
2017 April	295
2017 May	307
2017 June	309
2017 July	282
2017 August	279
2017 September	263
2017 October	272
2017 November	285
2017 December	260
2018 January	286
2018 February	251
2018 March	248
2018 April	273
2018 May	249
2018 June	295
2018 July	286
2018 August	293
2018 September	287
2018 October	256
2018 November	287
2018 December	288
2019 January	271
2019 February	261
2019 March	284
2019 April	284
2019 May	268
2019 June	262
2019 July	266
2019 August	309
2019 September	251
2019 October	252
2019 November	294
2019 December	266

**MONTH-YEAR**  
All

**GENDER DISTRIBUTION**

Gender	Count	Percentage
M	3.36K	(33.6%)
F	3.33K	(33.33%)
O	3.31K	(33.05%)

**CIVIL STATUS DISTRIBUTION**

Civil Status	Count	Percentage
S	2.44K	(24.35%)
M	2.51K	(25.07%)
D	2.49K	(24.92%)
W	2.57K	(25.66%)

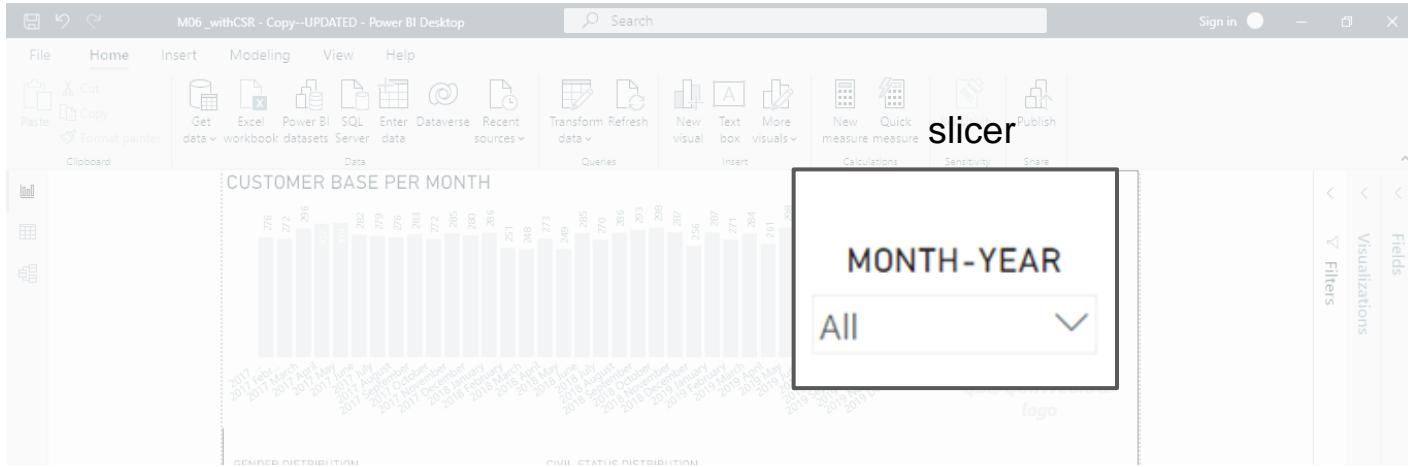
CUST INSU CSR +

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**MYE = FORMAT(ENROLLED\_DATE, “YYYY-MM”)**



# IF Function

	MEMBER_NO,DATE,BRANCH_CODE,BRANCH_TYPE,AMOUNT,CURRENCY,TRAN_CODE,TRAN_DESC
1	0773806167,2020-12-06,MOB,MOBILE,9831.75,PHP,IN1003,TYPE3
2	8666135657,2020-09-20,963,STORE,1369.25,PHP,IN1005,TYPE5
3	5509330826,2020-10-28,MOB,MOBILE,3539.00,PHP,IN1002,TYPE2
4	3064271133,2020-10-20,826,STORE,153.75,PHP,IN1001,TYPE1
5	0443118051,2020-02-02,MOB,MOBILE,2043.25,PHP,IN1001,TYPE1
6	9559647049,2020-09-22,447,STORE,6436.25,PHP,IN1003,TYPE3
7	9959931848,2020-12-12,MOB,MOBILE,3889.50,PHP,IN1002,TYPE2
8	6365985243,2020-02-26,MOB,MOBILE,2160.25,PHP,IN1004,TYPE4
9	8700231322,2020-07-02,MOB,MOBILE,5330.50,PHP,IN1003,TYPE3
10	7011759861,2020-02-26,520,STORE,8742.75,PHP,IN1001,TYPE1
11	9102619148,2020-04-21,300,STORE,7341.00,PHP,IN1005,TYPE5
12	9806062431,2020-03-11,MOB,MOBILE,861.25,PHP,IN1001,TYPE1
13	0695049755,2020-07-06,MOB,MOBILE,6559.50,PHP,IN1003,TYPE3
14	5345946297,2020-01-17,782,STORE,9082.00,PHP,IN1005,TYPE5
15	0136694797,2020-10-31,MOB,MOBILE,6499.25,PHP,IN1005,TYPE5
16	4251479882,2020-07-22,849,STORE,379.00,PHP,IN1004,TYPE4
17	6530320511,2020-09-19,893,STORE,3182.50,PHP,IN1002,TYPE2
18	9446539303,2020-11-21,319,STORE,5437.75,PHP,IN1002,TYPE2
19	

How do we check if the AMOUNT transacted is > 5000 PHP?

Question that involves per-row evaluation → use a **column**

LIVE ((•))



**IF(LogicalTest, ResultIfTrue, [ResultIfFalse])**

Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE.

How do we check if the AMOUNT transacted is > 5000 PHP?

**IF('AMOUNT' > 5000, 1, 0)**

returns 1 if AMOUNT > 5000, 0 otherwise

# Introduction to CALCULATE

	MEMBER_NO,DATE,BRANCH_CODE,BRANCH_TYPE,AMOUNT,CURRENCY,TRAN_CODE,TRAN_DESC
1	0773806167,2020-12-06,MOB,MOBILE,9831.75,PHP,IN1003,TYPE3
2	8666135657,2020-09-20,963,STORE,1369.25,PHP,IN1005,TYPE5
3	5509330826,2020-10-28,MOB,MOBILE,3539.00,PHP,IN1002,TYPE2
4	3064271133,2020-10-20,826,STORE,153.75,PHP,IN1001,TYPE1
5	0443118051,2020-02-02,MOB,MOBILE,2043.25,PHP,IN1001,TYPE1
6	9559647049,2020-09-22,447,STORE,6436.25,PHP,IN1003,TYPE3
7	9959931848,2020-12-12,MOB,MOBILE,3889.50,PHP,IN1002,TYPE2
8	6365985243,2020-02-26,MOB,MOBILE,2160.25,PHP,IN1004,TYPE4
9	8700231322,2020-07-02,MOB,MOBILE,5330.50,PHP,IN1003,TYPE3
10	7011759861,2020-02-26,520,STORE,8742.75,PHP,IN1001,TYPE1
11	9102619148,2020-04-21,300,STORE,7341.00,PHP,IN1005,TYPE5
12	9806062431,2020-03-11,MOB,MOBILE,861.25,PHP,IN1001,TYPE1
13	0695049755,2020-07-06,MOB,MOBILE,6559.50,PHP,IN1003,TYPE3
14	5345946297,2020-01-17,782,STORE,9082.00,PHP,IN1005,TYPE5
15	0136694797,2020-10-31,MOB,MOBILE,6499.25,PHP,IN1005,TYPE5
16	4251479882,2020-07-22,849,STORE,379.00,PHP,IN1004,TYPE4
17	6530320511,2020-09-19,893,STORE,3182.50,PHP,IN1002,TYPE2
18	9446539303,2020-11-21,319,STORE,5437.75,PHP,IN1002,TYPE2
19	

How many unique customers bought IN1003 and paid over 2000 PHP?

Aggregation problem → use a measure

LIVE ((•))

CALCULATE(<expression>, <filter1>, <filter2>, ...)



# Q&A visual

The screenshot shows the Power BI Desktop application window titled "Untitled - Power BI Desktop". The ribbon menu is visible at the top, with the "Home" tab selected. The main workspace contains a "Q&A visual" card. This card has a header with a help message: "Help Q&A understand people's questions better by adding synonyms." It includes a search bar with the placeholder "Ask a question about your data" and a button "Add synonyms now". Below the search bar is a section titled "Try one of these to get started" containing six blue rectangular suggestions:

- top tran desc by sum of insurance claims
- what is the sum of insurance claims by tran desc
- show me sum of insurance claims for the last year
- top 6 claim branch codes by sum of insurance claims
- what is the sum of insurance claims by 6 claim branch type
- what is the calculate unique custIn1003 over 2k by tran desc

At the bottom of the card, there is a link "Show all suggestions". To the right of the card, there are navigation buttons for "Fields", "Visualizations", and "Filters". The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.

LIVE ((•))

Page 5 of 5

Type here to search

File Home Insert Modeling View Help Format Data / Drill

Cut Copy Format painter Paste Get data Excel Power BI SQL Enter data Dataverse Recent sources Transform data New visual Text box More visuals Refresh data New Quick measure measure Calculations Sensitivity Publish

Clipboard Data Queries Insert Calculations Sensitivity Share

Fields Visualizations Filters

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# Exercise

Provide a card that displays the number of unique customers that did transactions of more than 5000 PHP.



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File Home Insert Modeling View Help

Cut Copy Format painter Get data Excel Power BI SQL Server Enter data Dataverse Recent sources Transform Refresh data New visual Text box More visuals New measure Quick measure Sensitivity Publish

Clipboard Data Queries Insert Calculations Sensitivity Share

**CUSTOMER BASE PER MONTH**

A bar chart titled "CUSTOMER BASE PER MONTH" showing the number of customers for each month from 2017 to 2019. The y-axis represents the count of customers, ranging from 276 to 992. The x-axis lists months from 2017-Februar to 2019-December. The data shows a general upward trend over the three-year period.

Month	Customer Base
2017-Februar	276
2017-März	27
2017-April	296
2017-May	307
2017-Juni	630
2017-Juli	282
2017-August	627
2017-September	927
2017-Oktober	127
2017-November	928
2017-Dezember	128
2018-January	982
2018-März	874
2018-April	1277
2018-May	692
2018-Juni	582
2018-Juli	127
2018-August	982
2018-September	152
2018-Oktober	862
2018-November	127
2018-Dezember	952
2019-January	127
2019-März	127
2019-April	982
2019-May	192
2019-Juni	282
2019-Juli	992
2019-August	600
2019-September	127
2019-Oktober	127
2019-November	127
2019-Dezember	292

**MONTH-YEAR**

All

*add QBE/QUINTEGRAL logo*

**GENDER DISTRIBUTION**

A pie chart titled "GENDER DISTRIBUTION" showing the percentage of males (M) and females (F). The data indicates that females (F) make up 33.33% of the population, while males (M) make up 66.67%.

Gender	Percentage
M	3.30K (33.05%)
F	3.33K (33.33%)

**CIVIL STATUS DISTRIBUTION**

A pie chart titled "CIVIL STATUS DISTRIBUTION" showing the percentage of different civil statuses. The data indicates the largest group is Single (S) at 24.35%, followed by Married (M) at 25.07%, Widowed (W) at 25.66%, and Divorced (D) at 24.92%.

Civil Status	Percentage
S	2.44K (24.35%)
W	2.57K (25.66%)
D	2.49K (24.92%)
M	2.51K (25.07%)

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Page 1 of 3

Type here to search

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# Power BI vs. Tableau

	<b>Power BI</b>	<b>Tableau</b>
<b>Interface</b>	<input checked="" type="checkbox"/>	
<b>Ecosystem</b>		<input checked="" type="checkbox"/>
<b>Pricing</b>	<input checked="" type="checkbox"/>	
<b>Privacy</b>	<input checked="" type="checkbox"/>	





# Power BI **Visualization**

Module 6