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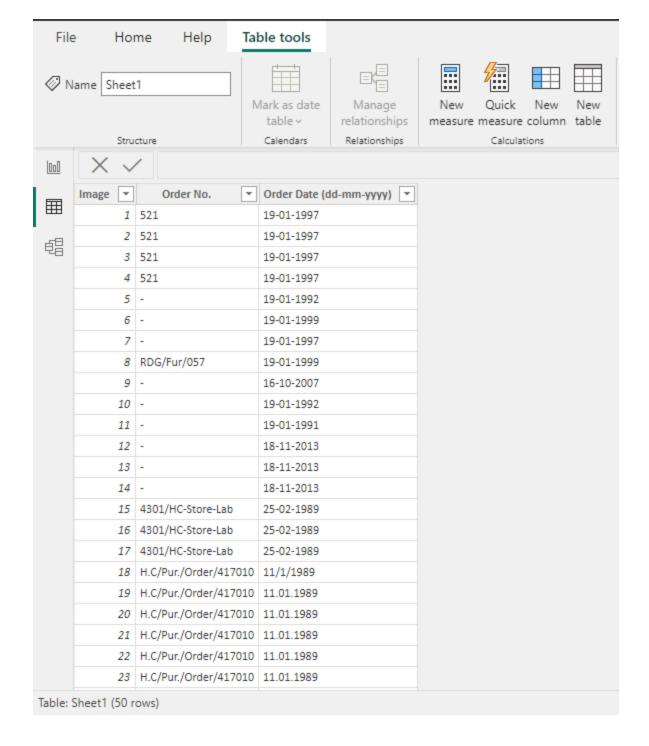
Power BI - DAX Date Functions

Last Updated: 04 Sep, 2025

DAX date functions are built-in functions that help you work with date and time values. These functions allow you to create new columns, calculate differences between dates, extract parts of a date like day, month or year and handle time-based calculations in your reports.

To understand these functions, we'll use a sample dataset containing 50 products sold by a library supply company. The dataset includes a Date column that we'll use to demonstrate each function.

To download click: **Sheet1**



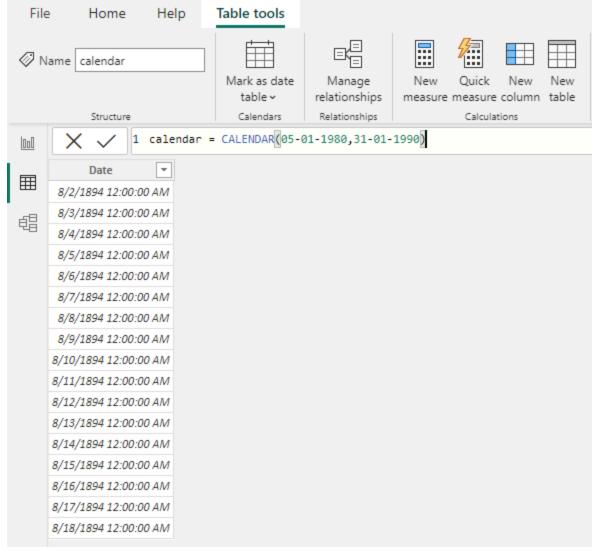
1. Functions for Generating Dates

DAX Calendar

The CALENDAR Function generates a continuous range of dates between a specified start date and end date. This is helpful when you want to create a date table for time-based analysis.

Syntax:

CALENDAR(<start_date>, <end_date>)



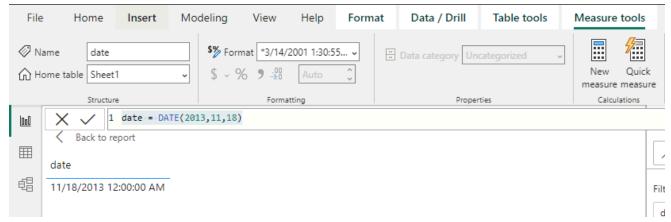
calender Function

DAX Date

The DATE Function returns a date based on the year, month and day you specify. It's useful for creating a date from individual year, month and day values.

Syntax:

DATE(<year>, <month>, <day>)



Date function

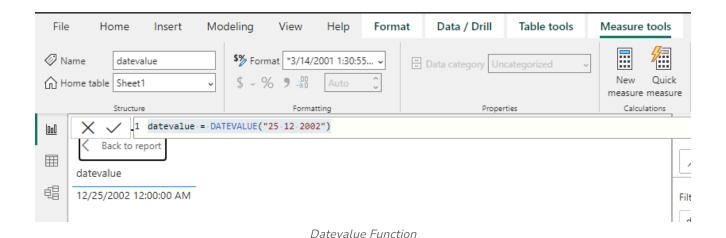
2. Functions for Date Manipulation

DAX Datevalue Function

The DATEVALUE Function converts a date in text format into a date value and allow Power BI to work with dates in text form.

Syntax:

DATEVALUE(date_text)

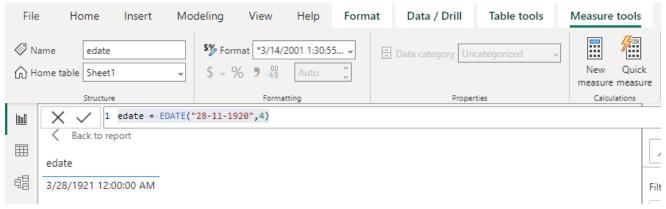


DAX Edate

The EDATE Function returns a date that is a specific number of months before or after a given start date. It's useful for calculating future or past dates such as due dates.

Syntax:

EDATE(<start_date>, <months>)



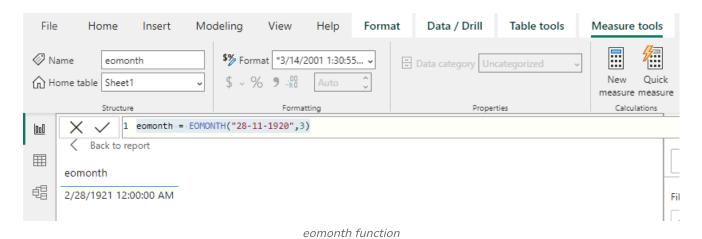
edate function

DAX Eomonth

The EOMONTH Function returns the last day of the month before or after a specified number of months. It's useful for calculating end-of-month dates.

Syntax:

EOMONTH(<start_date>, <months>)



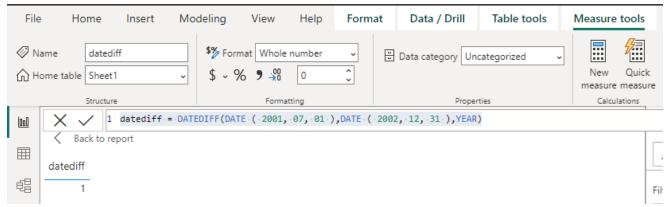
3. Functions for Date Calculations

DAX Datediff Function

The DATEDIFF Function calculates the difference between two dates in a specified time unit like days, months, years.

Syntax:

DATEDIFF(<Date1>, <Date2>, <Interval>)



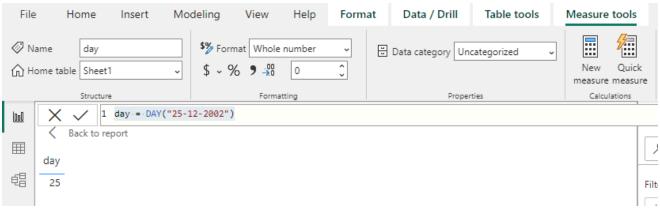
Datediff Function

DAX Day Function

The DAY function extracts the day of the month from a given date. It returns a number between 1 and 31.

Syntax:

DAY(<date>)



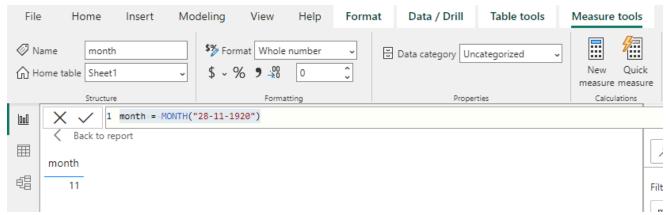
Day Function

DAX Month Function

The MONTH Function extracts the month from a given date and return a number between 1 (January) and 12 (December).

Syntax:

MONTH(<datetime>)



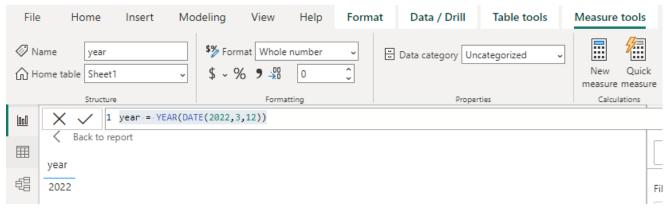
Month Function

DAX Year Function

The YEAR Function extracts the year from a given date and return a 4-digit integer between 1900 and 9999.

Syntax:

YEAR(<date>)



Year Function

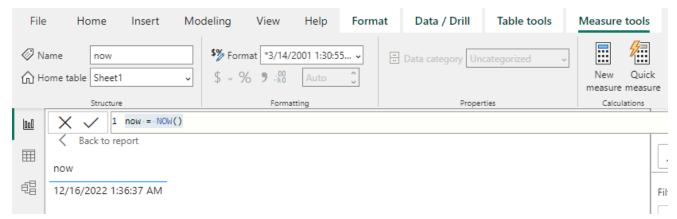
4. Functions for Working with Time

DAX Now Function

Returns the current date and time. It's used for calculating real-time information or dynamically update time-sensitive reports.

Syntax:

NOW()



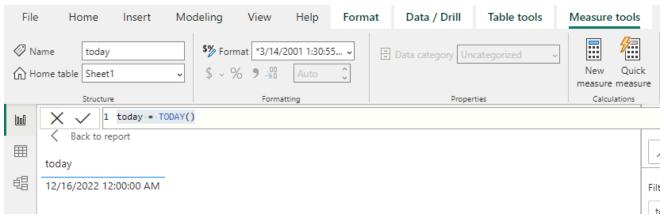
Now Function

DAX Today Function

The TODAY Function gives the current date and updates automatically every time the workbook is opened. It can also be used to calculate intervals by subtracting dates.

Syntax:

TODAY()



Today function

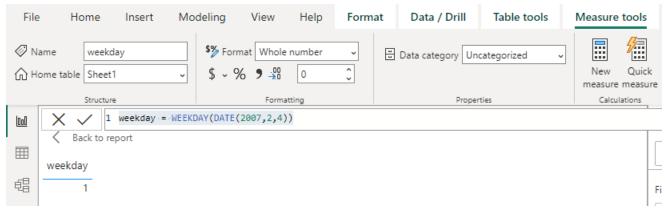
5. Functions for Working with Weeks

DAX Weekday Function

The WEEKDAY Function returns a number between 1 and 7 that represents the day of the week. By default 1 is Sunday and 7 is Saturday.

Syntax:

WEEKDAY(<date>, <return_type>)



Weekday Function

DAX Weeknum Function

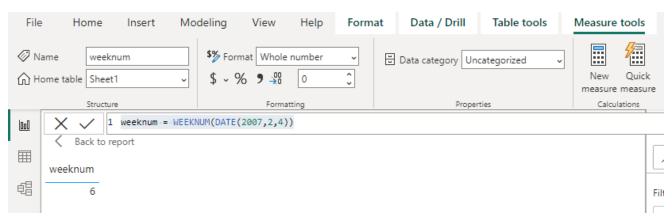
DAX WEEKNUM returns the week number for a given date based on two systems:

- 1. System 1: Week 1 is the first week of the year starting on January 1.
- 2. **System 2**: Week 1 is the week containing the first Thursday of the year based on the ISO 8601 standard (European week numbering).

You can choose which system to use by specifying a return type value.

Syntax:

WEEKNUM(<date>[, <return_type>])



Weeknum Function

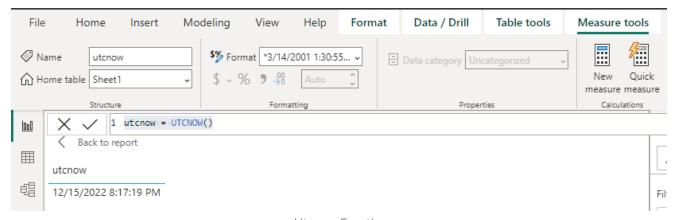
6. Functions for Handling Time Zones

DAX Utcnow Function

Gives the current date and time in UTC. The Utcnow Function output only varies when the formula is updated. It isn't always being updated.

Syntax:

UTCNOW()



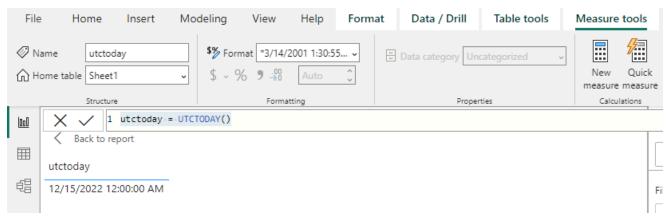
Utcnow Function

DAX UtcToday Function

Gives the current date in UTC.

Syntax:

UTCTODAY()



utc Today Function

With these methods we can easily work and manipulate date datatype in Power BI.

Comment

More info



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Program		CS Core Subjects	DevOps & Cloud		
		Interview	GATE		
		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
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Power BI - How to Add Conditional Columns?

Last Updated: 23 Jul, 2025

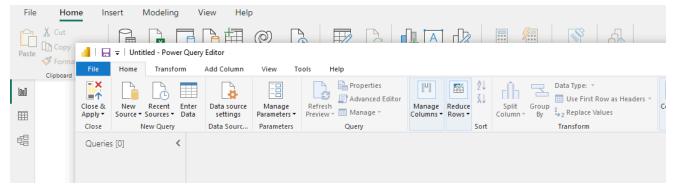
Creating insightful reports often requires data to be organized and categorized based on specific conditions. Conditional columns helps change or add values in a column based on logic you define. In this article, we'll learn how to create conditional columns using Power Query Editor.

Step 1: Open Power Query Editor

To create conditional column, you first need to open the <u>Power Query Editor</u>. Steps include:

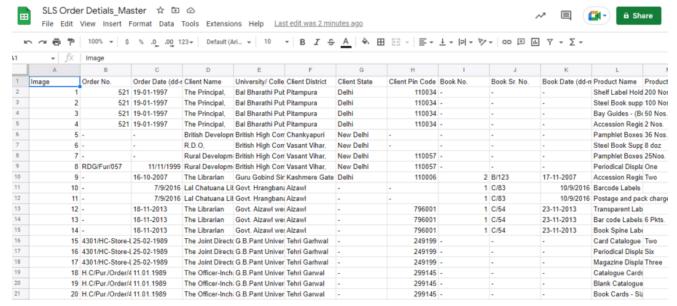
- Open Power BI Desktop.
- Go to the **Home** tab.
- Click on Transform Data.
- A new window called **Power Query Editor** will open.

If you haven't uploaded your data yet you can do it here by clicking on New Source and selecting your dataset.



Power Query Editor

Below is the screenshot of the dataset as well. In this example we are using a dataset which you can download from here, from a Library Supplies company which looks like this:

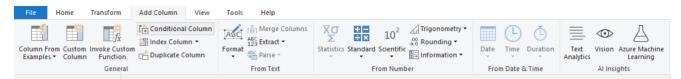


Dataset

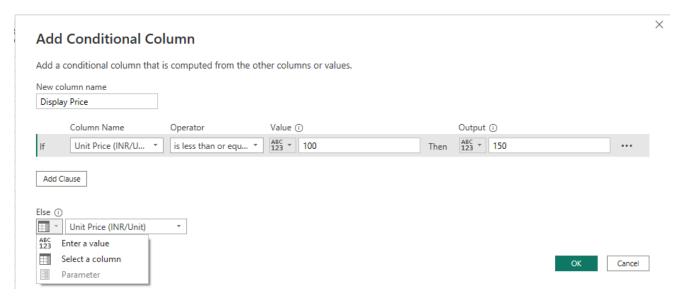
Step 2: Adding a Conditional Column

Now that you are inside the Power Query Editor let's add a **Conditional Column**. Follow the below steps:

- 1. Go to the Add Column tab.
- 2. Click on Conditional Colum

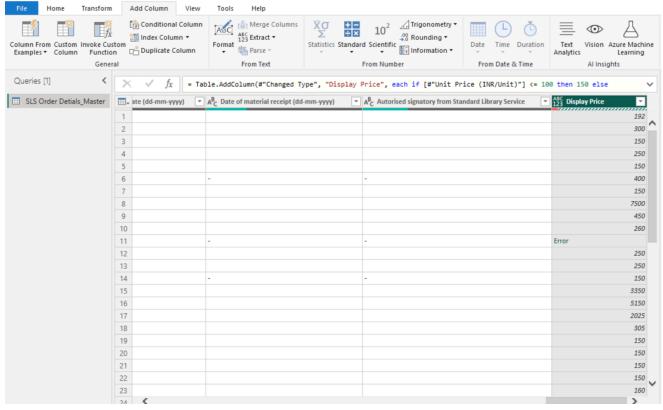


A dialog box will appear where you can set your conditions. Here we are targeting the "Unit Price (INR/Unit)" column from the Data Table to create a conditional column "Display Price". The condition is if the "Unit Price is less than or equal to 100" we will set the Unit Price as 150 else the original price would be unchanged and all the changed or unchanged values would be inserted into the "Display Price" column respectively.



Conditional Column Settings

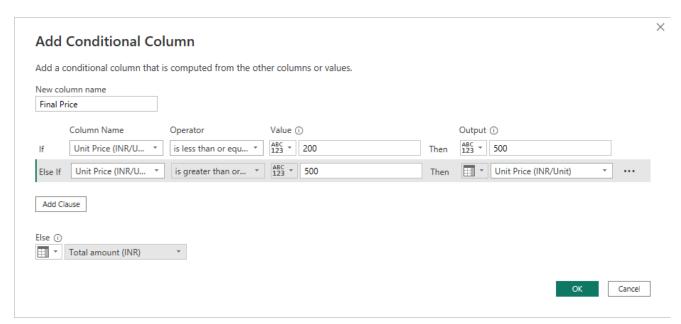
The output of the query will add the conditional column.



Query Output

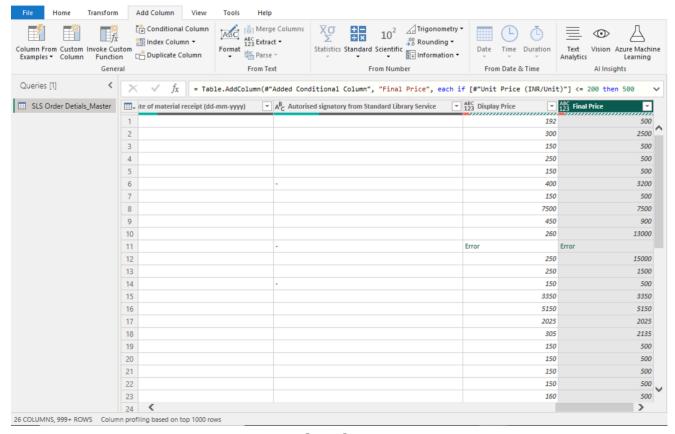
Adding a Column Using Multiple Conditions

Now let's add another conditional column named "Final Price" that will contain the "Unit Price (INR/Unit)" column value if it is less than or equal to 200 set it to 500. Else if it is greater than or equal to 500 Store the Unit Price. However the figure from the "Total Price (INR)" column will be the Output if none of the earlier tests returned a positive result.



Column with Multiple Conditions

The output of the query will add the conditional column.



Query Output

Creating conditional columns in Power BI is very easy once you understand the steps. It helps you control how your data looks without writing complex formulas. This makes your reports more dynamic and meaningful.





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Corporate Solution	Nation Skill Up	Science	Programming		System Design
Campus Training		DevOps	Languages		
Program		CS Core Subjects	DevOps & Cloud		
		Interview	GATE		
		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
		Software and Tools			

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DAX Aggregate Functions in Power BI

Last Updated: 05 Sep, 2025

Aggregating data means performing mathematical operations such as adding, averaging, finding the maximum or minimum or counting values. These operations help summarize data to make it easier to analyze. Power BI can automatically calculate aggregates like sum, average, count, maximum and minimum.

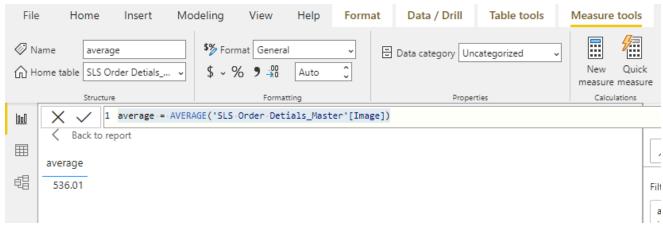
We will learn about them using various example and the dataset we are going to use can be downloaded from here: [SLS Order Details_Master, SLS Order Details_Product Master, Sheet1]

1. DAX Average Function

One of the common aggregate functions in Power BI is the **Average** function. This function calculates the average of all the numbers in a specified column. It adds up all the values in that column and divides the sum by the number of rows.

Syntax: AVERAGE(<column>)

Let's see the below aggregation example to find the average number of orders received per day.



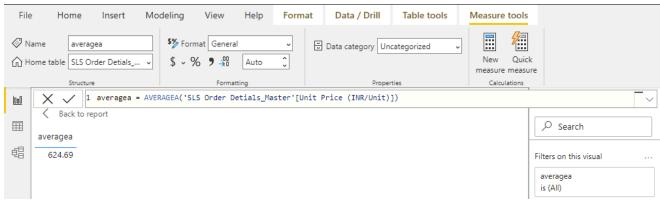
2. DAX AverageA Function

The AVERAGEA function in DAX is similar to the AVERAGE function but with one key difference. it handles non-numeric values in a special way. While AVERAGE only considers numeric data AVERAGEA can also calculate averages with data that isn't purely numeric. The AVERAGEA function works with different types of data:

- TRUE values are counted as 1.
- FALSE values are counted as 0.
- Empty text ("") is treated as 0.
- Any non-numeric text values are also treated as 0.

Syntax: AVERAGEA(<column>)

The below image example shows a DAX measure in Power BI that calculates the average unit price (in INR per unit) from the 'SLS Order Details_Master' table.



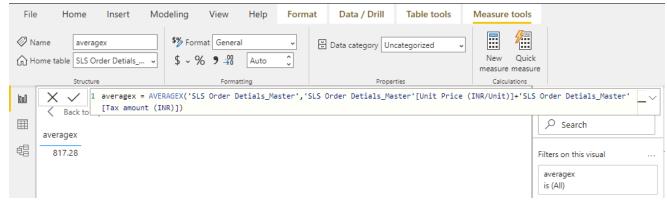
AverageA

3. DAX AverageX Function

It calculates the average (arithmetic mean) of a set of expressions evaluated over a table.

Syntax: AVERAGEX(,<expression>)

The below image example shows a DAX measure in Power BI that calculates the average of the product of Unit Price and Tax Amount for each record in the 'SLS Order Details_Master' table using the AVERAGEX function.



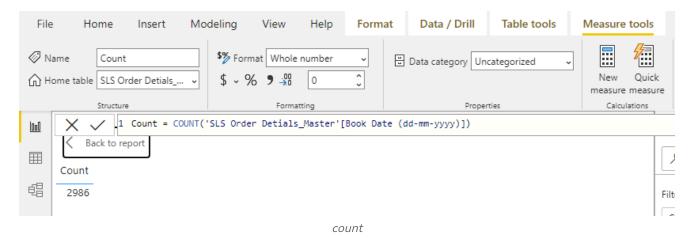
averagex

4. DAX Count Function

The **COUNT** function in Power BI counts the number of rows with values in a specified column. It works with **numbers**, **dates** and **strings** but ignores empty or null values.

Syntax: COUNT(<column>)

The below image shows a DAX measure in Power BI that counts the number of non-blank entries in the [Book Date (dd-mm-yyyy)] column of the 'SLS Order Details_Master' table using the COUNT function.

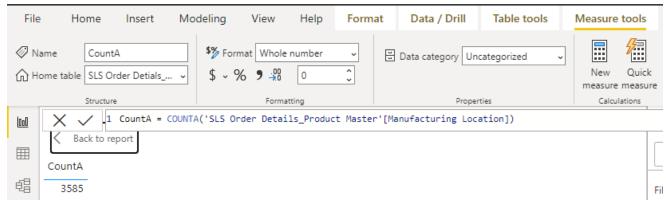


5. DAX CountA Function

It determines how many rows in the chosen column have non-blank values. The function returns a blank if it cannot locate any rows to count.

Syntax: COUNTA(<column>)

Below image example show count the number of products that have manufacturing locations specified on them.



countA

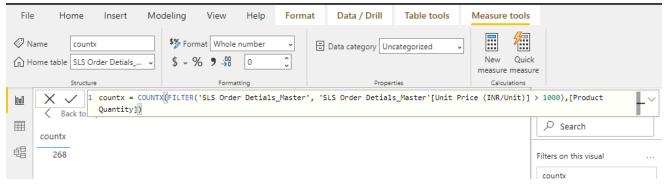
6. DAX CountX Function

The **COUNTX** function in DAX counts the rows in a table where a given expression evaluates to a number. It requires two arguments: the first is the table or expression returning a table and the second is the column or expression to evaluate.

Syntax:

COUNTX(<table, expression>)
COUNTX(FILTER(<table, expression>, [column of which counts needs to be returned]))

The image below shows a DAX measure in Power BI that counts the number of non-blank [Product Quantity] entries where the [Unit Price (INR/Unit)] is greater than 1000, using COUNTX and FILTER functions.



countX

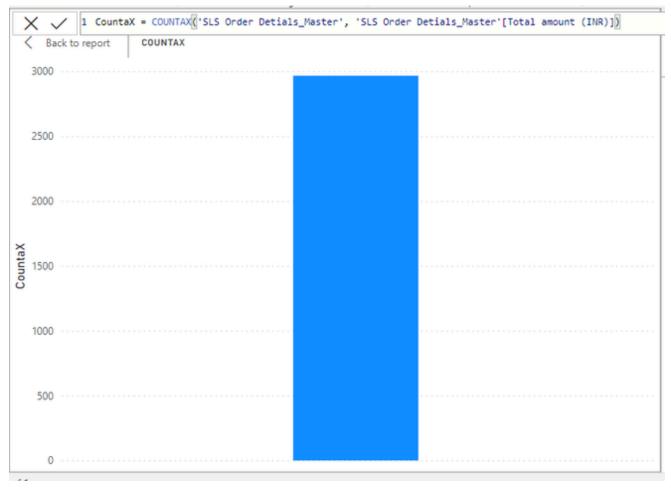
7. DAX CountAX Function

Counts non-blank results when evaluating the result of an expression over a table.

When determining the outcome of an expression over a table, the COUNTAX function counts results that are not blank. In other words, it functions just like

the COUNTA function but is used to loop across table rows and count the rows where the supplied expressions return a result that is not blank.

Syntax: COUNTAX(<table, expression>)



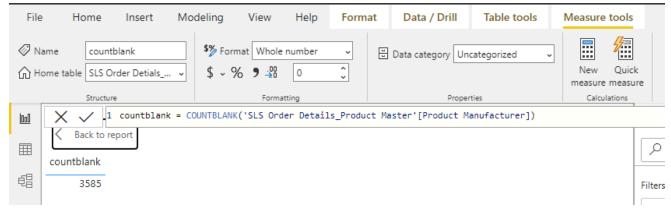
CountAX Function

8. DAX CountBlank Function

The **COUNTBLANK** function in DAX counts the number of blank cells in a column. It only accepts a single argument which is the column you want to check. This function treats cells with no value as blank but does not count cells with a zero value since zero is a valid numeric value. If you want to know how many empty cells are in a column use COUNTBLANK.

Syntax: COUNTBLANK(<column>)

The image below shows a DAX measure in Power BI that counts the number of blank (empty) entries in the [Product Manufacturer] column of the 'SLS Order Details_Product Master' table using the COUNTBLANK function.



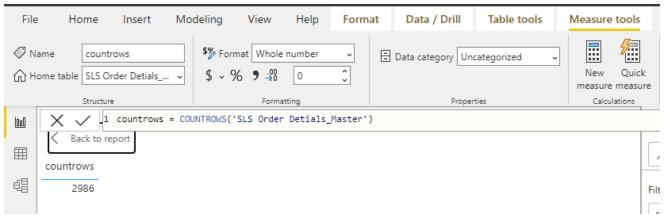
count blank

9. DAX CountRows Function

It determines how many rows there are in the supplied table or a table that has been defined using an expression.

Syntax: COUNTROWS([])

The below image shows a DAX measure in Power BI where COUNTROWS is used to count the total number of rows present in the 'SLS Order Details_Master' table resulting in a count of **2986** rows.

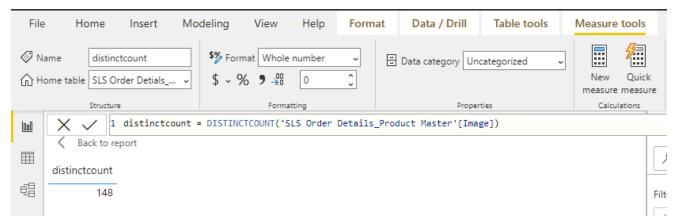


count rows

10. DAX DistinctCount Function

The **DISTINCTCOUNT** function in DAX counts how many different values are in a column. It only works with one column at a time. If there are no values in the column, it will return a blank. Otherwise, it gives the total number of unique values in the column.

Syntax: DISTINCTCOUNT(<column>)

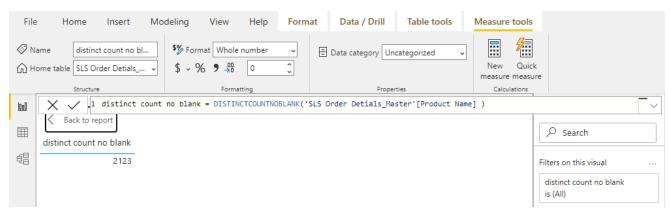


distinct count

11. DAX DistinctCountNoBlank

It counts the number of distinct values in a column.

Syntax: DISTICTCOUNTNOBLANK(<column>)



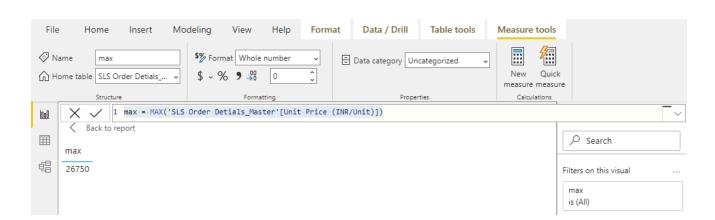
distinct count no blank

12. DAX Max Function

It returns the largest numeric value in a column or between two scalar expressions.

Syntax:

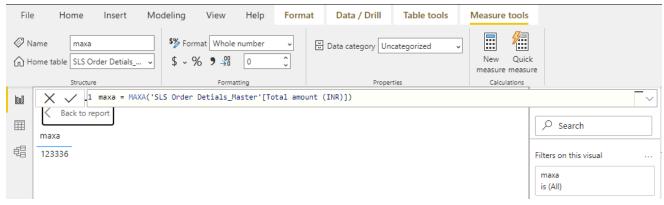
MAX(<column>) /
MAX(<expression1, expression2>)



13. DAX MaxA Function

It returns the largest value in a column.

Syntax: MAXA(<column>)

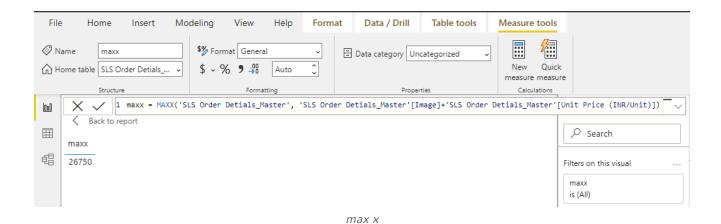


max a

14. DAX Maxx Function

It evaluates an expression for each row of a table and return the largest numeric value.

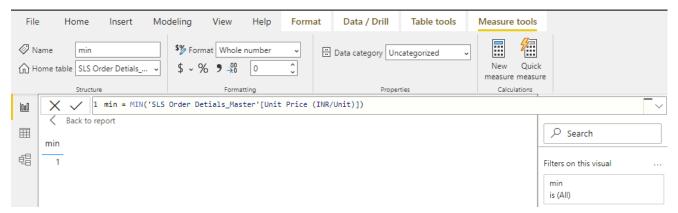
Syntax: MAXX(<table, expression>)



15. DAX Min Function

It returns the smallest numeric value in a column or between two scalar expressions.

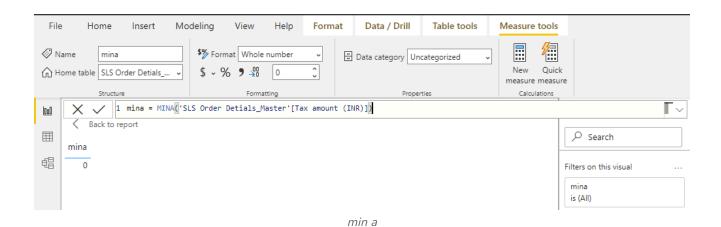
Syntax: MIN(<column>)



16. DAX MinA Function

It returns the smallest value in a column, including any logical values and numbers represented as text.

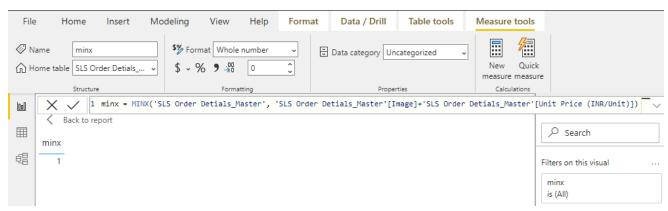
Syntax: MINA(<column>)



17. DAX MinX Function

It returns the smallest numeric value that results from evaluating an expression for each row of a table.

Syntax: MINX(<table, expression>)

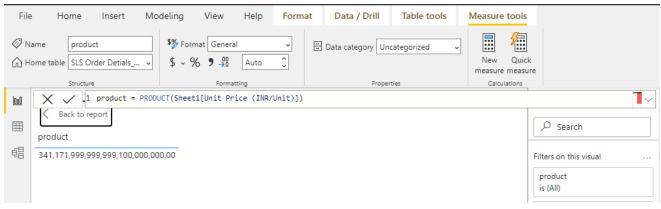


min x

18. DAX Product Function

It returns the product of the numbers in a column.

Syntax: PRODUCT(<column>)

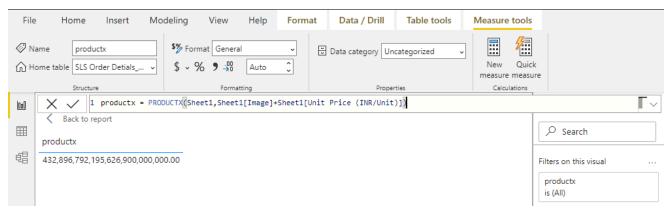


product

19. DAX ProductX Function

It returns the product of an expression evaluated for each row in a table.

Syntax: PRODUCTX(<table, expression>)

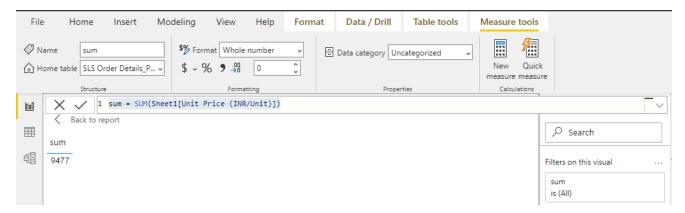


product x

20. DAX Sum Function

It adds all the numbers in a column.

Syntax: SUM(<column>)

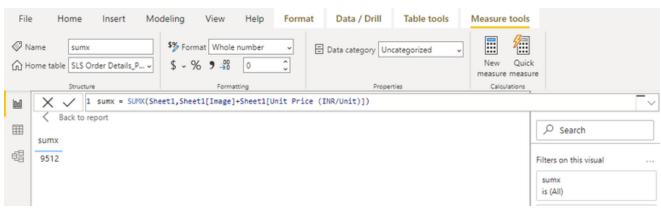


sum

21. DAX SumX Function

It returns sum of an expression evaluated for each row in a table.

Syntax: SUMX(<table, expression>)



sum x

With these aggregate functions we can perform analysis on our data in PowerBI.





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		Interview	GATE		
		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
		Software and Tools			

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Power BI - Excel Integration

Last Updated: 23 Jul, 2025

Power BI and Excel integration combine the data visualization and reporting capabilities of Power BI with the spreadsheet functionality of Excel. By linking the two users can analyze and manipulate Power BI data directly within Excel. This is vey useful tool for those who prefer working in Excel but still want the benefits of Power BI's interactive visuals and data analysis.

Why Integrate Power BI with Excel?

- Easy Data Access: You can pull your Power BI data into Excel at any time, so it's simpler to analyze and manipulate.
- Improved Customization: Excel gives you more flexibility with formulas and pivot tables, which may be helpful for deeper analysis or reporting.
- **Current Data:** You don't have to update your Excel reports manually once connected, the Power BI data remains current.

Steps for Power BI and Excel Integration

Step 1: Open Power BI Workspace

Open Power BI Workspace where you are looking to integrate your data. Click on "Create Data" to begin inserting data from a source such as an Excel file or other data source that you're utilizing. You may also paste or insert your data manually.

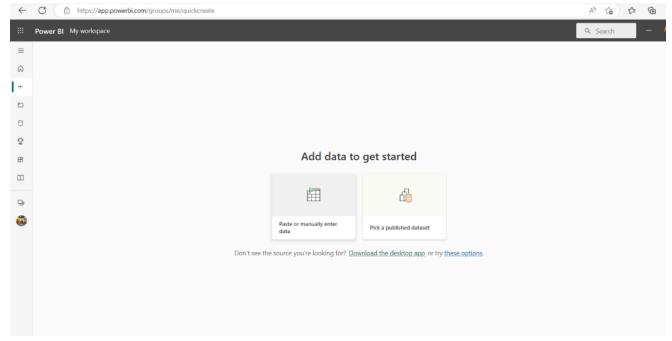


Figure-01 : Create data

Step 2: Enter Data into Power BI

When you've select "Create Data" you'll see a new interface where you can enter your data in rows and columns. Input your data as required and then click the "Create a Report" button to start visualizing the data within Power BI.

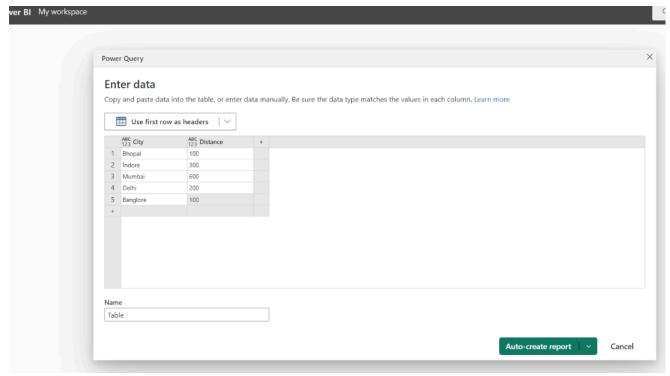


Figure-02 : Enter Data

Step 3: Review the Created Report

Power BI will process your data and generate an interactive report consist of visuals such as charts, graphs and summaries that help you spot trends and analyze data patterns. Review your created report to ensure it meets your analysis needs.

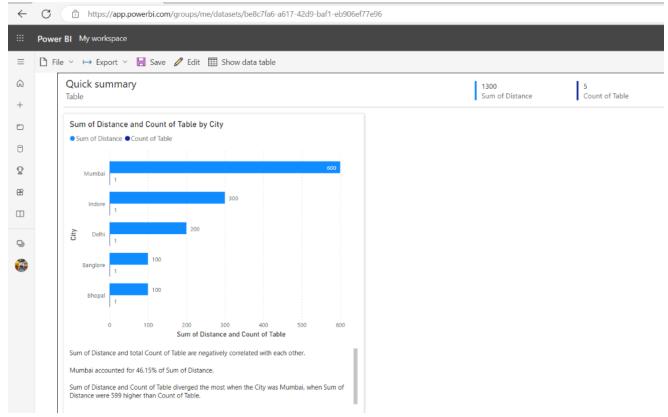


Figure-03: Quick Summary

Step 4: Export to Excel

When you're satisfied with the report, you can export the data to Excel for further analysis. Click on the "Export" button and select the "Analyze in Excel" option. This will allow you to download the data and open it in Excel for additional analysis.

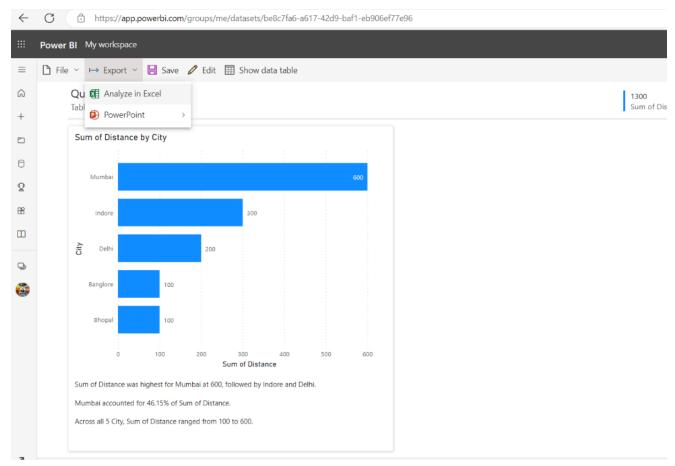


Figure-04: Analyze in Excel

Step 5: Open in Excel

After the export process is complete it will show that your data is ready for use in Excel. You can then click on "Open in Excel for the Web," and the data will automatically load into an Excel workbook.

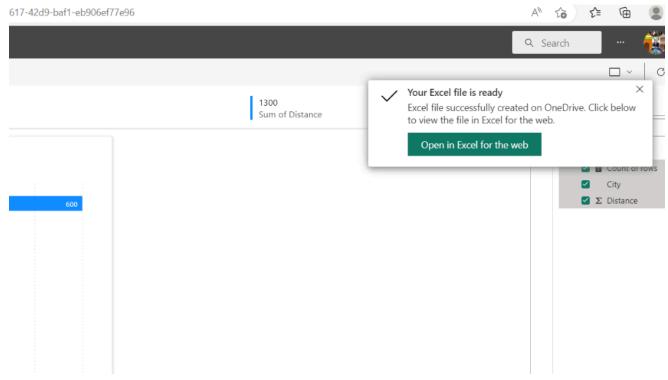


Figure-05: Ready excel

Step 6: Refresh Queries

When the data is loaded into Excel you see a prompt to refresh the queries. Simply click "Yes" to allow <u>Excel</u> to connect to the Power BI dataset and ensure that you have the up to date information.

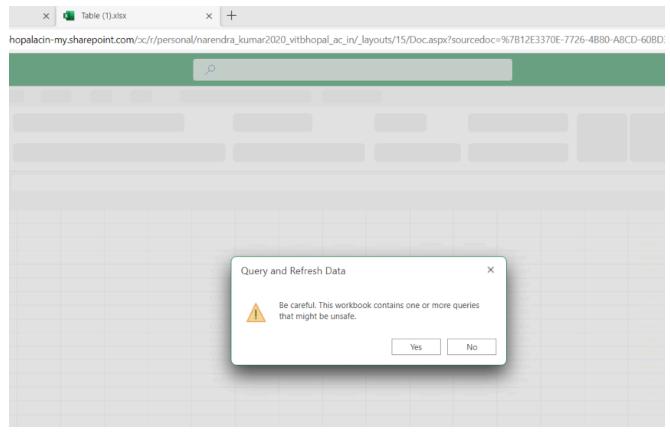


Figure-06: Refresh Query

Step 7: Analyzing Data in Excel

Now that <u>Power BI</u> data is integrated into Excel you can begin analyzing it within the familiar Excel environment. For example by selecting a column like "City," you can view all the relevant data for that column and perform your analysis using Excel's features like sort, filter and create pivot tables.

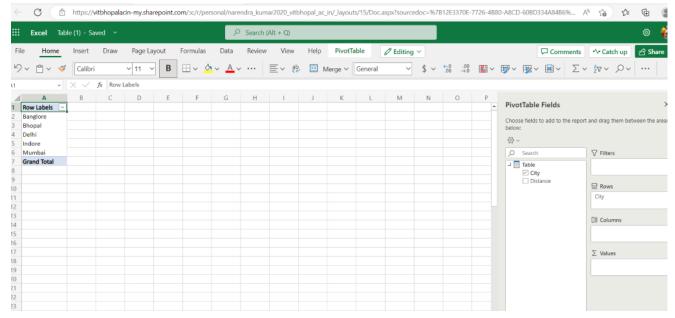


Figure-07: Column data

Step 8: Transform Data (Optional)

If you need to adjust how the data is displayed for example changing rows into columns you can use Excel's features to rearrange the data. By selecting and entering the column names in the appropriate box you can reorganize the data for clear analysis or reporting.

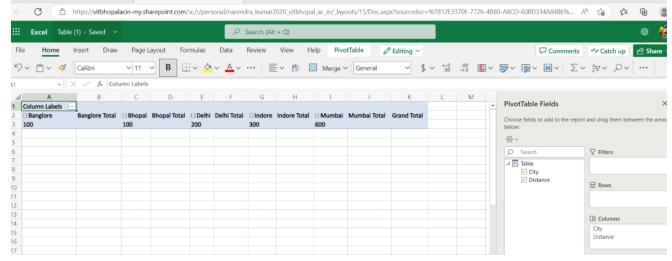


Figure-08: Row to column

In this above way we can do Integration of Power BI and Excel.

Comment

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		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
		Software and Tools			

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Power BI - Dashboard Introduction

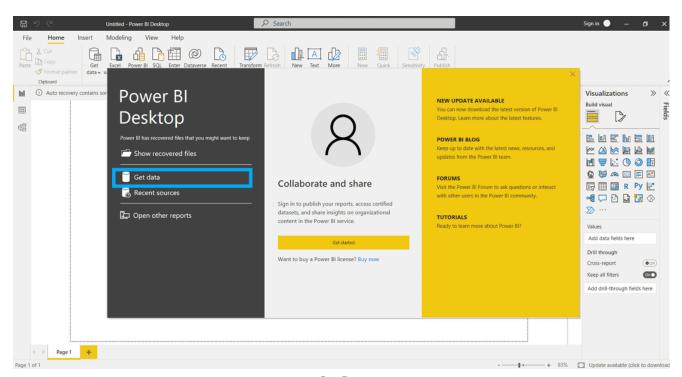
Last Updated: 23 Jul, 2025

<u>Power BI</u> allows users to convert data into visuals and graphics to explore and analyze data, collaborate on interactive dashboards and reports. A <u>Power BI</u> dashboard is one page that shows different charts and visuals all designed to explore and interact with your data easily.

How to Create a Simple Dashboard?

Step 1: Importing data.

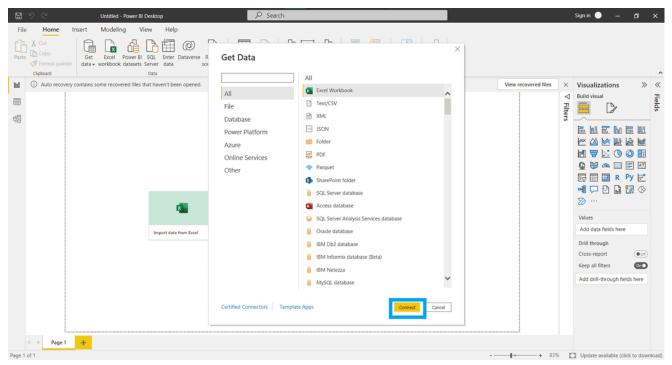
The first step after opening the Power BI application is to gain access to your data. You can easily import your dataset from any format. Then click on the **Get Data** button located at the middle left corner of the screen. You can download the dataset from here



Get Data

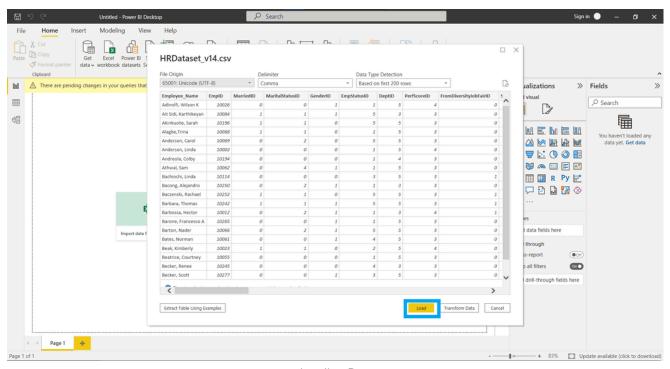
The navigation pane shows the option of Files. Click on Files and browse to the location where your Excel Workbook or any other format is located. Choose

your file and then click on the **Connect** button.



Connecting to Data

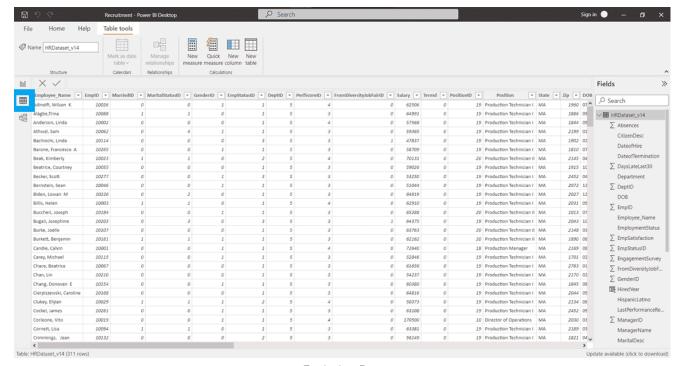
It takes a little time to process which depends on the file size. Make sure the data is extracted and load the data by clicking the **Load** button.



Loading Data

Step 2: Explore Your Data.

From the **Data** tab you can view the tabular form of data. On the right you'll find a list of fields within those tables.

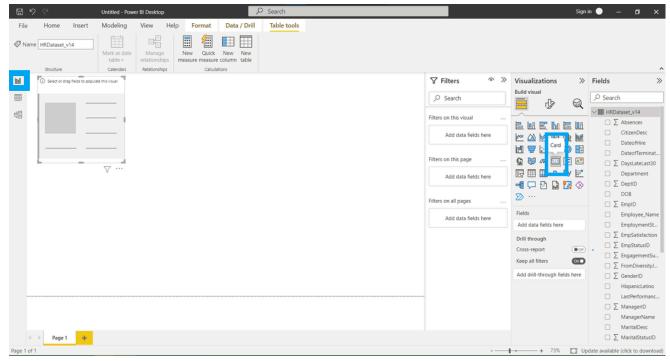


Exploring Data

You can select a table or field to perform formatting actions on them. If you have fields such as date, time, city, state, percentage value, currency, etc. You can change the datatype or format from the **Modeling** tab.

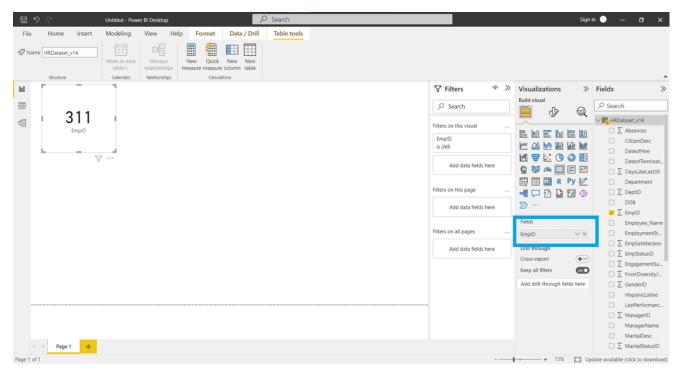
Step 3: Choose the Right Chart.

So for our dashboard we decided to work on five fields: Hiredyear, RecruitmentSource, Position, EmployerId and male-female employment. The first visualization that we'll make is a Card. Select **Card** from the visualizations section.



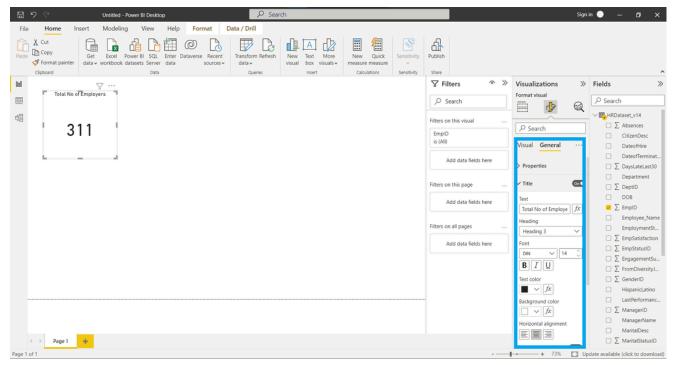
Card

Select the columns you want to add to the visual from the **Fields** section. You can also drag and drop the fields into respective columns indicated by the image below.



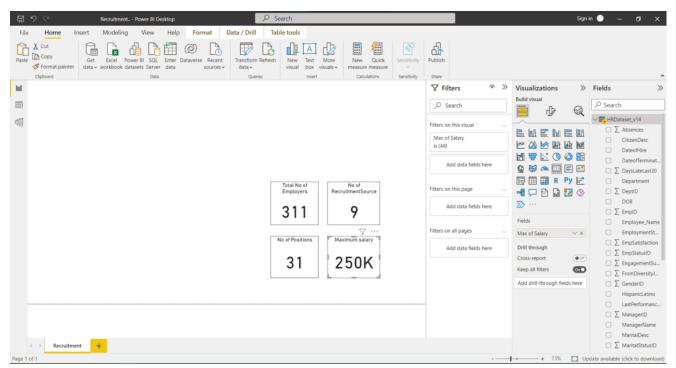
Fields Section

You can select columns, apply filters and format the visual from the Format icon. The first card we prepared shows the Total number of Employers.



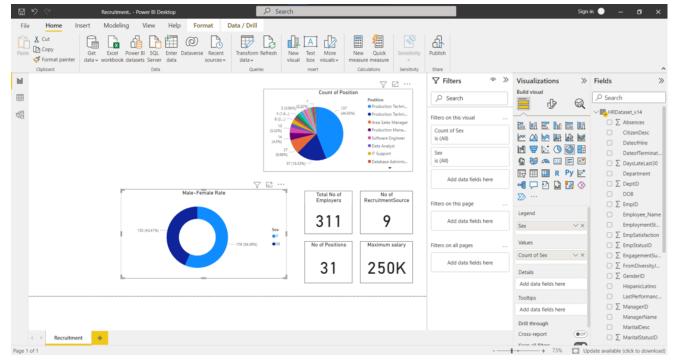
Applying Filter and Formatting

The Same procedures were followed for the remaining cards. The second, third and fourth cards show the Number of Recruitment Sources, Positions and Maximum Salary respectively.



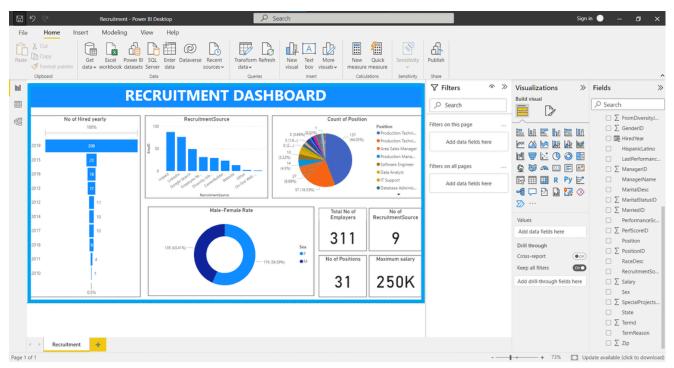
Applying Filter and Formatting

Next we'll create a Pie Chart and a Donut chart which is going to show the Count of positions and Male - female rate respectively. Add this chart from the Visualizations.



Pie and Donut Chart

Finally add Funnel and Stacked Bar Chart to show the Number of Hired yearly and Recruitment source proportionally. Format the title, data labels, legend, axes, plot area, data colors, etc. As you can see in the below image.



Funnel and Stacked Bar Chart

Note: You can also add some interactive colors to make it more attractive.

Power BI Dashboards vs Reports

Here we will see difference between reports and dashboard.

Dashboards	Reports		
The dashboard is an effective business data view from where navigation to reports originates.	Reports are built based on datasets where each dataset can be viewed from different points of view.		
It is a single page that displays the summary of the whole data.	You can create a Multi page in a single Report.		
The dashboard is allowed only in Power BI Service.	The report is allowed in both Desktop & Power BI Services.		
One or more datasets/reports can able to use per dashboard.	A single dataset is used per report.		
Email Data Alerts are possible.	Email Data alerts are not possible.		
It supports only Bookmarks.	Report support many filter options like Bookmarks, Filters & Slicers.		

Both tools are strong and flexible that help you to see the full picture of your data or focus on the tiny details depending on what you need. A good IT manager can use the tools at their disposal according to the needs and demands of the situation. So Both **Dashboards and Reports** are Effective in their own way.

Advantages of Power BI Dashboards

- **Embedded Attributes**: Dashboards can be added directly into websites, apps or other tools. This means users don't need to open Power BI separately.
- **Rich Features:** It offers many built-in tools like charts, maps, slicers and Al visuals. These help users understand their data better and make smart decisions quickly.
- Easy Implementation: Setting up Power BI is simple. You don't need to be a tech expert. With just a few steps you can connect data, create reports and

- share dashboards.
- **Drag and Drop**: It uses a drag-and-drop system. You can easily build charts and visuals by just dragging data fields onto the screen no coding needed.
- No Upfront Cost: You can start using Power BI for free with the basic version. This makes it budget-friendly especially for beginners or small businesses.
- Allows Collaboration: It allows you to share dashboards with team members. Everyone can see the latest data and work together in real time which improves teamwork and decision-making.

Best Practices to make an Effective Dashboard

There are some tips to make your dashboard more interactive and visually attractive:

- **Know your Audience**: Understand who will use the dashboard. Show only the data they care about in a way they can easily understand.
- Tell the Story at First Glance: Your dashboard should give a quick summary of what's happening without needing to deep dive into details. The key message should be clear right away.
- Make Use of Full Screen: Use the full screen space wisely. Spread out your visuals so the dashboard looks clean and easy to read.
- **Highlight the Most Relevant Information**: Make the most important numbers or charts stand out using bold text, colors or size. This helps users focus on what really matters.
- **Use the Right Visualization**: Pick the right chart for your data. For example, use a line chart for trends, bar chart for comparisons and pie chart for parts of a whole.

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Contact Us	Blogs	AI, ML & Data	Data Science	Patna	DSA 360
Corporate Solution	Nation Skill Up	Science	Programming		System Design
Campus Training		DevOps	Languages		,
Program		CS Core Subjects	DevOps & Cloud		
		Interview	GATE		
		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
		Software and Tools			

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Power BI - Dashboard Actions

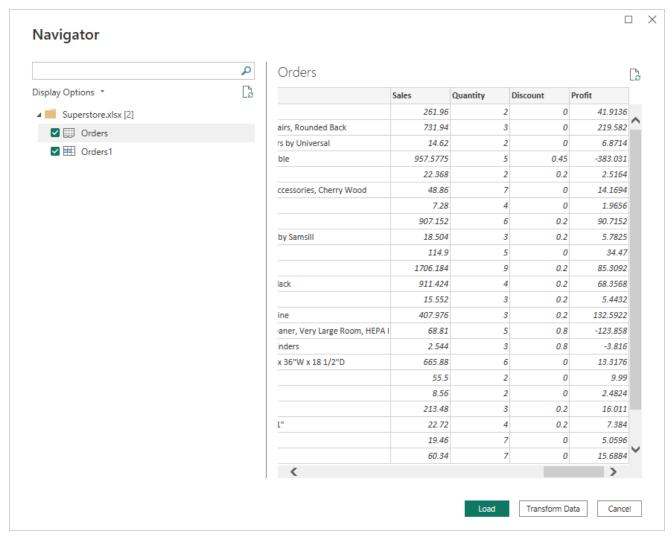
Last Updated: 23 Jan, 2023

A single page, or palette, is what is referred to as a Power BI dashboard and it employs visualizations to convey a story. As it can only fit on one page, a well-designed dashboard delivers only the essentials of the scenario. Dashboards are a feature of the Power BI service. When utilizing Power BI Desktop, they are not available. Mobile devices can be used to view and publish dashboards but not to create them.

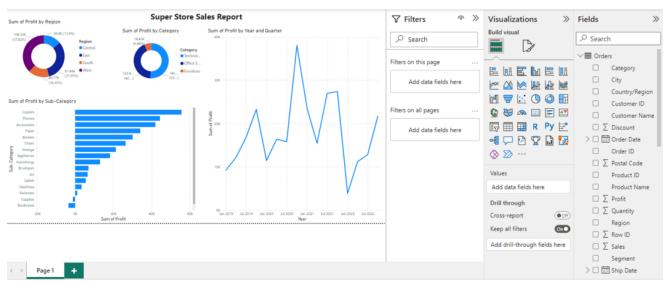
The dashboard's visuals are referred to as tiles. Every report is based on a dataset, and you can pin tiles from those reports to a dashboard. A dashboard serves as an introduction to the reports and datasets that it displays. You can access the report and dataset that the selected visualization is based on by selecting it.

Power BI Dashboards

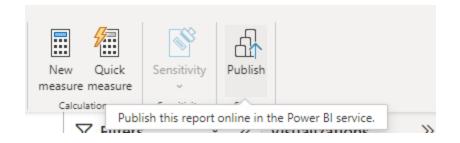
Let's create a Super Store Sales Report and pin it to the dashboard, to explore the Dashboard actions. Dataset Used: Superstore Orders.



Here we have created four visuals viz. Donut charts based on Profit by Region and Profit by Category, a Horizontal Bar Chart of Profit by Sub-category, and a line chart of Profit by Order Date, into which we have a Drill-up to view Profit by Quarter visual.



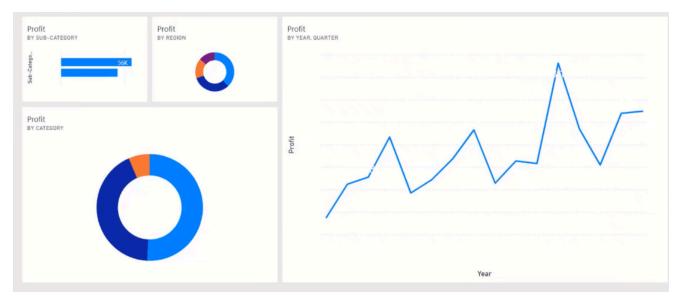
And then Publish the Report.



How to Create a Dashboard?

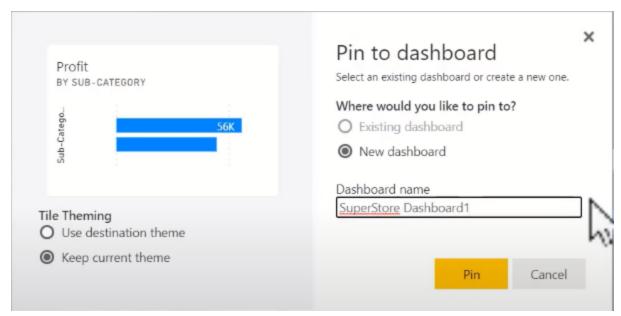
A dashboard can be made in a variety of ways. You can build a dashboard, for instance, from scratch, from a dataset, a report, or by copying an existing dashboard.

To open a report in the editing view, open it and choose More options (...) >
 Edit.

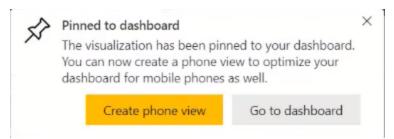


Hover over a visualization to reveal the options that are available. To add a
visualization to a dashboard, select the pin icon. Select whether to pin to an
existing dashboard or a new dashboard.

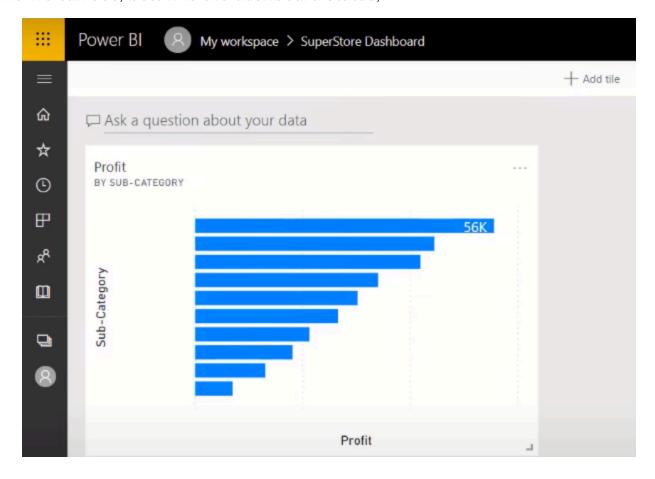
In this instance, we choose the New dashboard option and type in a name.



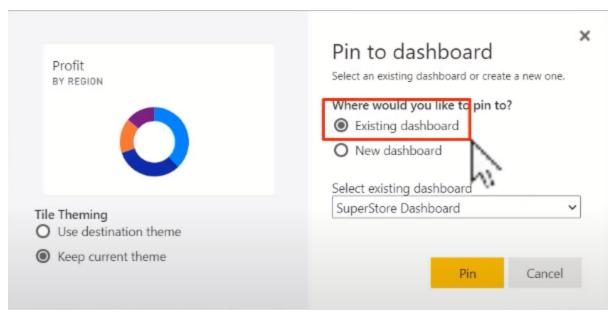
New dashboard: Type the new dashboard's name here, and Pin the visualization.



As we can see, below is the dashboard status,



Existing dashboard: From the selection, choose the dashboard's name. Dashboards that you have been given access to will not show up in the dropdown.



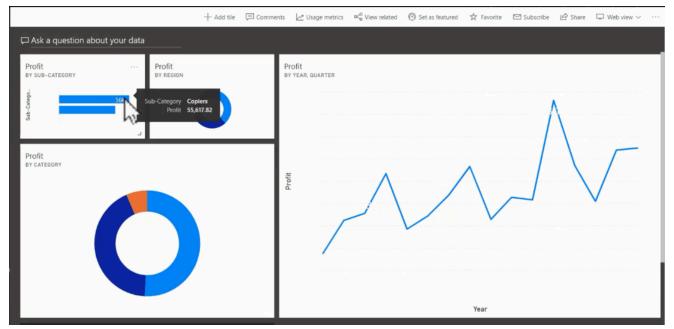
The object you're pinning might already have a theme applied in some circumstances. images pinned from an Excel spreadsheet, as an illustration. If so, decide the theme to use when applying the tile:

Use destination theme: The dashboard's design.

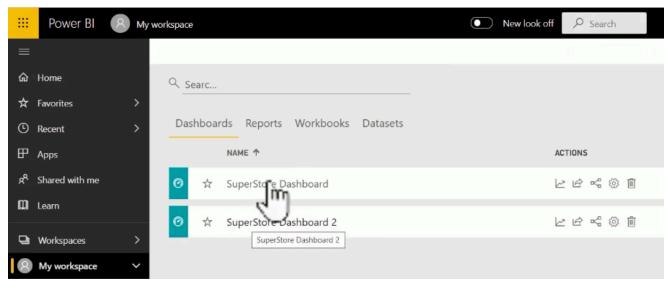
Keep current theme: The report's key idea.

 Power BI produces a new dashboard in the active workspace when you choose Pin.

In this way, we can create the Super Store Sales Report Dashboard.



A user's workspaces are displayed when they connect to the Power BI Service. "My Workspaces" is frequently utilized as a private "scratch patch" for individual projects.



The "Workspaces" section allows users to establish as many workspaces as they need, each one dedicated to a different project or area. This will also display any workspaces that the user has access to. Each workspace consists of the following five divisions:

- **Reports:** Reports are made up of numerous graphics (tables, graphs, etc.) created from a single dataset.
- **Dashboards:** Multiple visualizations (graphs, tables, etc.) from one or more reports—each of which was created using a single dataset—make up dashboards.
- Workbooks: The Power BI service accepts uploads of unformatted Excel workbooks.

Datasets: A dataset is a group of data that you import or connect to. A
dataset can be shared among numerous users and used in one or more
workspaces.

Dashboards Reports Workbooks Datasets

Dataflows: Organizations can mix data from many data sources with the aid of dataflows. Dataflows are optional but are frequently employed in more difficult or substantial projects. They stand for prepared and staged data that datasets can use. They can't be utilized as a direct source for reporting, though.

- Select Go to dashboard when the Pinned to Dashboard notification appears. If asked to save the report, choose Save.
- The visualization you just pinned is the only tile on the new dashboard that Power BI opens.
- To go back to the report, select the tile. More tiles should be pinned to the new dashboard. Choose Existing dashboard when the Pin to dashboard window displays.

When you pin graphics to a dashboard, some report formatting settings or themes aren't applied to them.

Benefits of Dashboard

It offers a means to keep a close watch on your company and see all of your key KPIs at a glance. A dashboard's visualizations may be drawn from a single underlying dataset or several, as well as from a single underlying report or several. A dashboard provides a consolidated view of data by fusing data from on-premises and the cloud. The dashboard is more than simply a lovely image. The tiles update when the underlying data changes, and it is very interactive.

A report's edit rights are necessary in order to be able to create a dashboard, which is regarded as a creator feature. Report creators and co-workers who have been given access by the creator can edit reports.

Difference between Dashboard and Reports

Features	Report	Dashboard	
Pages	One or more pages	One page	
Data Sources	A single dataset per report	One or more reports and one or more datasets per dashboard can be a Report, Different dashboard, Excel sheet, image, videos, etc.	
Drill Up ad Drill Down Filters	Yes. There are numerous methods for filtering, highlighting, and slicing data.	No. A dashboard cannot be cut or filtered. In focus mode, a dashboard tile can be filtered, however, the filter cannot be saved.	
Accessible in Power BI Desktop	Yes. You can build and view reports in Power BI Desktop.	No	
See underlying dataset tables and fields	Yes	No. Tables and fields are hidden in the dashboard itself, however, data can be exported.	

Confinements of a Dashboard

- The pinned tile disregards the settings for the border, shadow, and background.
- Dashboards for card visuals use the 'DIN' font family and black lettering to display the text used for the value. By designing a unique dashboard theme, you can alter the text color for each tile on the dashboard.
- There is no conditional formatting used.
- The size of the visuals will change to meet the size of the tile. This may lead to layout variations that appear as though the report's visual had been resized.

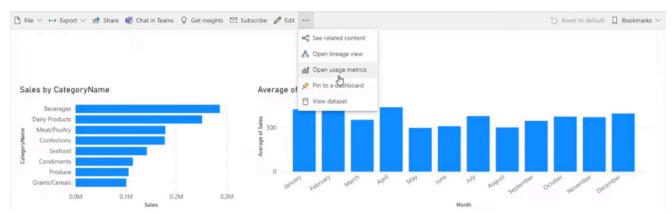
 Pinning might not function if the backdrop image is too large because certain visualizations use them as backgrounds. Consider utilizing image compression or lowering the image size.

Dashboard Actions

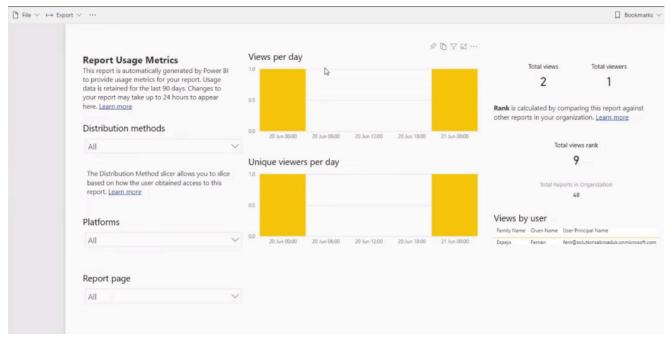
In the Power BI service, you can keep track of who is using your reports. I'll demonstrate how simple it is to locate and create this report utilizing the power bi service, as well as how to connect, obtain this data on your own, and adapt it for your own needs.

View Usage Metrics Report of a Power BI Dashboard

This feature enables you to access a Power BI dashboard's traffic data in report format. Let's use analyzing sales reports as an example.



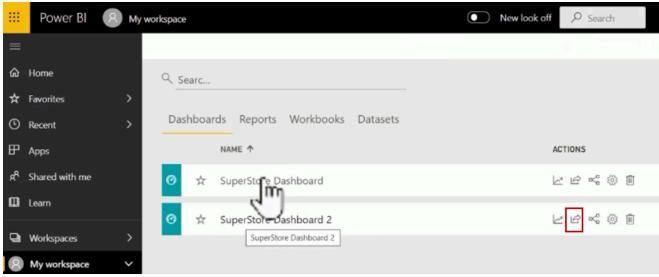
This is a very straightforward report that does nothing more than analyze sales for a hypothetical company. If you want to find out how many users actually access this report, all you have to do is click more options and select usage metrics. If you've never opened usage metrics for a report before, this will generate first, but once it does, it will take you to the page shown below:



As a result, you'll notice that this report's design and layout are familiar because it is essentially an internal Power BI report that provides you with some useful information, such as the number of views your reports receive each day, the demographics of the viewers, and whether they access your reports via mobile or desktop. You can even view distribution channels or frequently utilized report pages.

Share Power BI Dashboard

To distribute this dashboard around the company, use this feature.

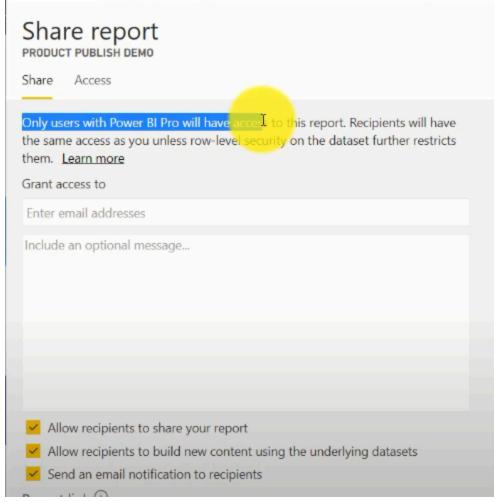


Open the report from Dashboard and select "Share".



When working with power bi reports, sharing them within the service would typically require at least a pro license, not just for you who is sharing the report

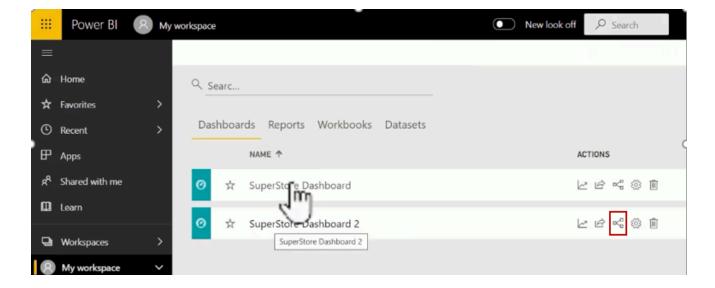
but also for the people with that you are sharing the reports. This means that if you or your organization does not already have power bi licenses, building and publishing reports is simple, but sharing them within the organization can be a little bit challenging.



The simplest way to share a report with your team is to take a screenshot of it. You can do this with any snipping tool, like this one from Windows, by simply dragging and selecting the page you want to capture. The image you create is essentially a static version of your report, but it makes it simple to save and send to your coworkers. The next method is to export your report to PowerPoint.

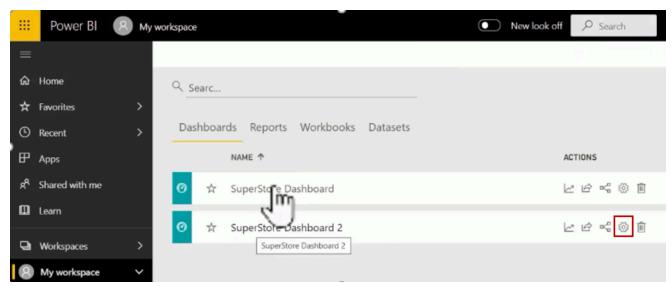
View Related Items of a Power BI Dashboard

You can use this feature to see the items that are connected to the dashboard that we utilized to develop it. Click on the below-shown icon and view the related items.

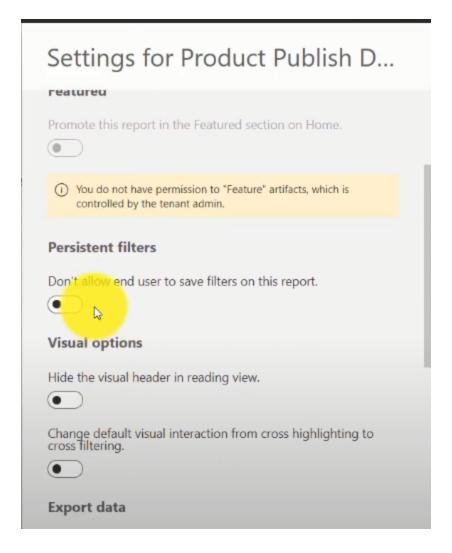


Power BI Dashboard Settings

You can change the Power BI dashboard settings like Dashboard Name, Q&A, Dashboard tile flow, etc. by using this option.

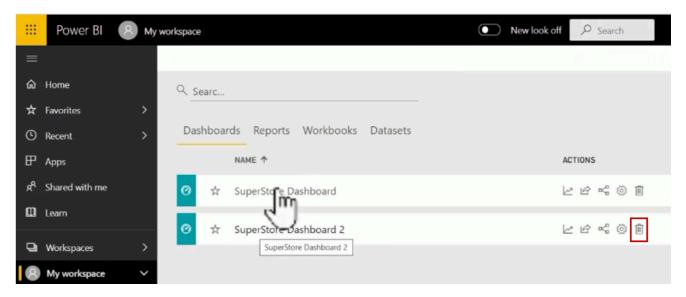


Select the gear icon you will see settings that you can do for example if you don't if you want to hide the visual header or if you don't want the end user to save the filter on this report then you can enable this and so that the end user will not be able to save their filters.



Delete Power BI Dashboard

This feature lets you delete the not-in-need Power BI dashboard from the workspace.



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Careers	Community	Web Technology	Web Development	Hyderabad	GfG 160
Contact Us	Blogs	AI, ML & Data	Data Science	Patna	DSA 360
Corporate Solution	Nation Skill Up	Science	Programming		System Design
Campus Training		DevOps	Languages		
Program		CS Core Subjects	DevOps & Cloud		
		Interview	GATE		
		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
		Software and Tools			

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Power BI - Create a Stacked Bar Chart

Last Updated: 16 Jan, 2023

Sometimes there is a range of scenarios where it is hard to convey the information in a table and written format. Under such situations, Bar charts make things easier and more understandable.

What are Stacked Charts & Bar Charts?

Stacked charts are a sort of bar chart which are multiple-series in nature where related values are placed atop one another. This feature allows comparing the contribution of worth to a total, either in absolute or percentage terms, and comparing multiple categories and category totals simultaneously.

Bar Charts are a summary of categorical data and display data using several bars, each representing a particular category. The height of each bar is equal to the sum of the values in the category it represents. It is also possible to color or split each bar into another categorical row in the data, which enables you to see the contribution from different categories to each bar or group of bars in the bar chart.

Types Of Bar Charts

There are mainly two variations of Bar Chats. Depending on the situation charts are used.

- Clustered Bar Charts: This is a default Bar chart where all the categories are displayed against the same value category.
- Stacked Bar Charts: These are the basic typed charts that allow the comparison of one category to another category.

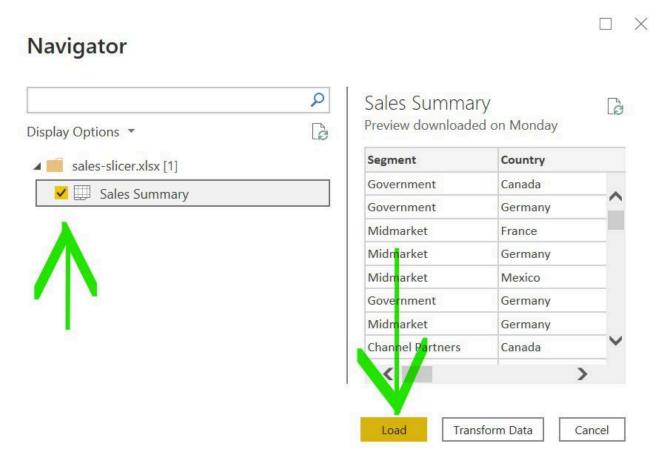
Main Parts of Stacked Bar Charts

- Title: It denotes the information about the chart
- X-axis: It is the individual entry for the category to be presented
- Legend: It is the different category that will contribute to the charts
- Y-axis: It is for the value against each type of category
- Bars: These heights represent the total value of all the legend

Creation of Stacked Bar Charts

Import data from Your Excel to Power BI. To develop this tutorial we have used this dataset.

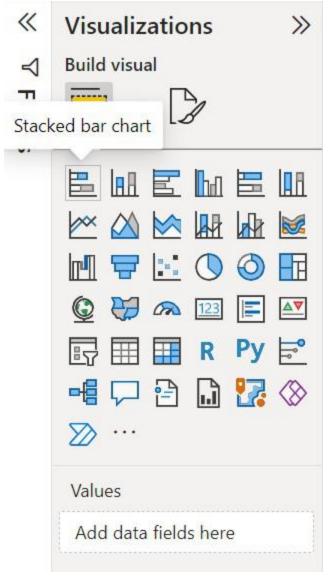
Home Tab-> Get Data -> Choose Data which you want Example Excel -> Select the file and Open -> Select The sheet and Load



Loading the dataset

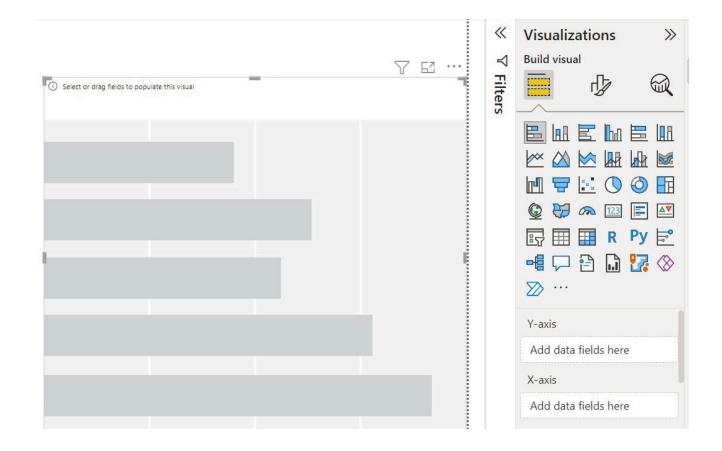
Load Bar chart

Under visualization click on the 'stacked bar chart' icon.



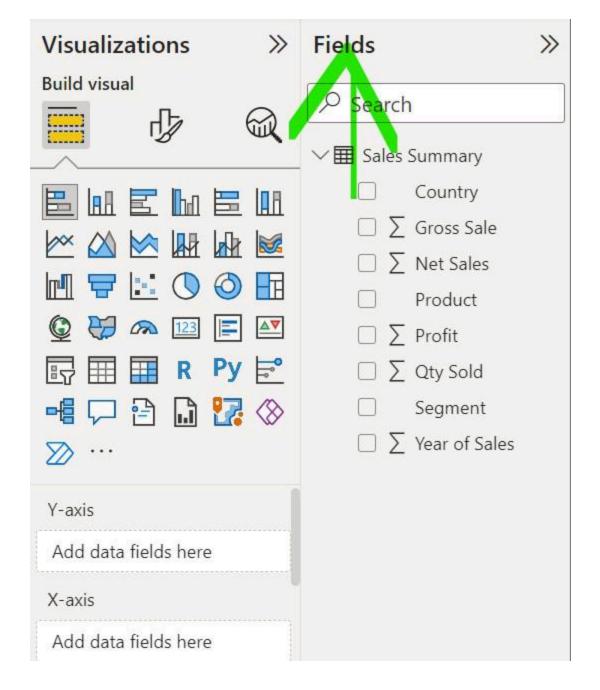
Selecting the desired chart

The chart will be loaded on the screen and can be resized if required.

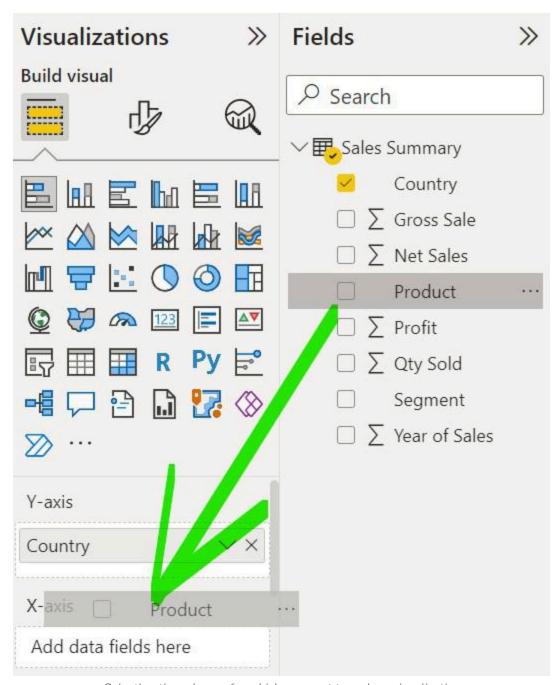


Creating a sample Chart to demonstrate the creation of a stacked Bar Chart

To start creating a bar chart click on the fields which is to be used in a bar chart

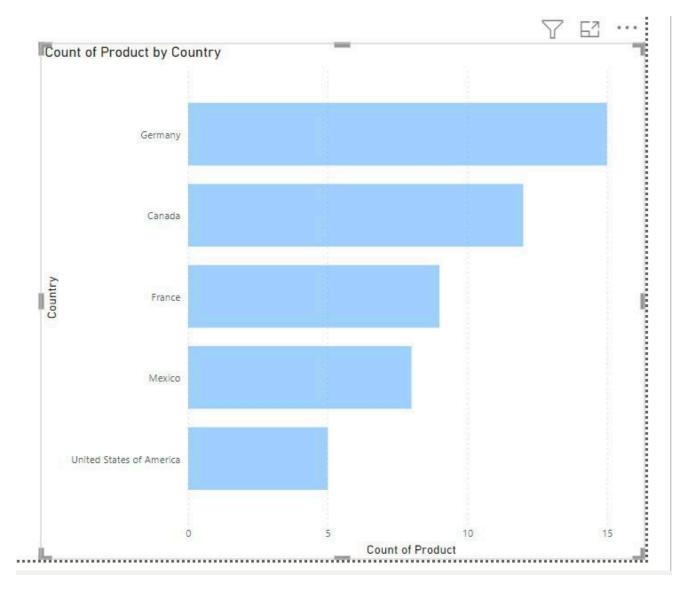


Drag and drops the fields that are to be placed on the X-axis and Y-axis of the chart respectively

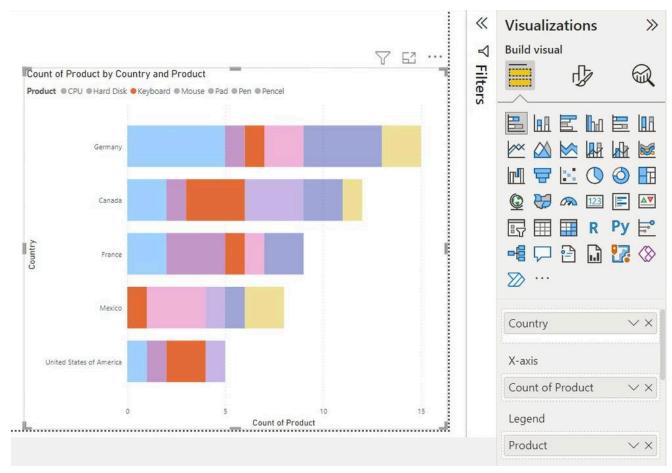


Selecting the columns for which we want to make a visualization

A simple Bar chart has been created

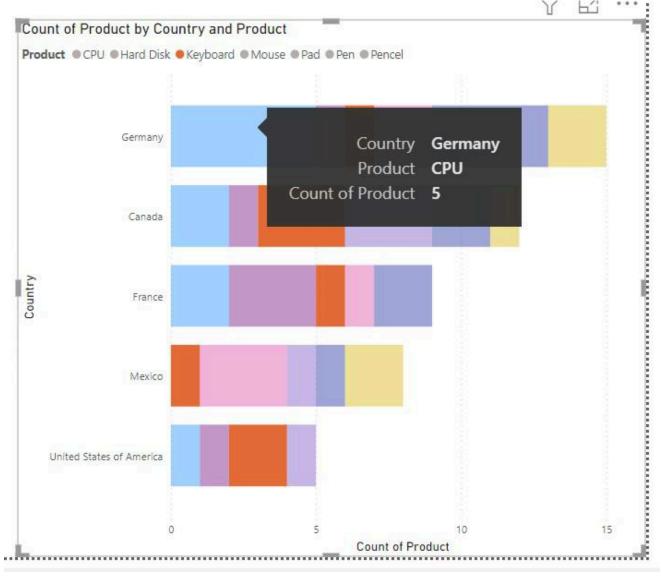


To show the category in different colors use 'Legend', drag and drop the category which is to be shown in color



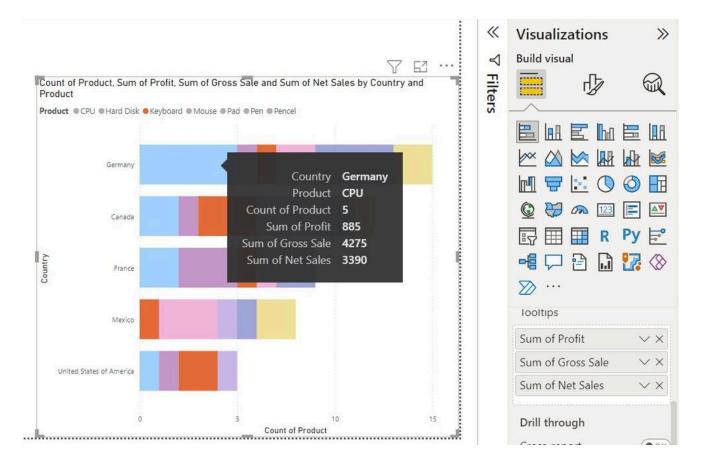
Stacked Bar Chart for the desired columns of the dataset

On hovering on certain visuals Little information is shown

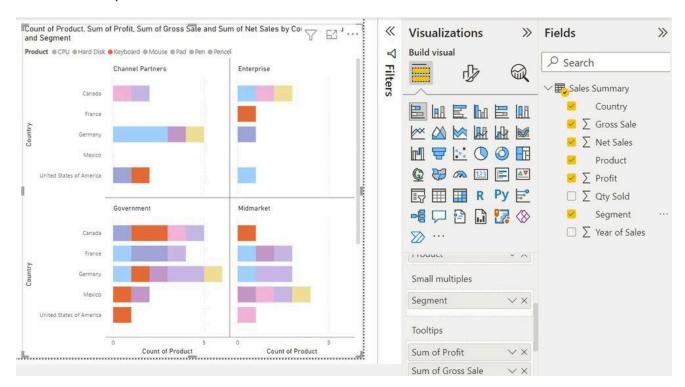


Tooltips to get info on hovering

To add more information on the data field drag and drop the category under 'ToolTips'



To split the visuals into multiple versions of itself drag the category under 'Small Multiples'



The disadvantage of using a stacked bar chart

- Error in estimations can cause false interpretations.
- Bar charts are difficult to read.

- It may confuse if the stack has 4-5 layers.
- They are also difficult to read when there are too many bars.

Comment

More info



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Corporate Solution	Nation Skill Up	Science	Programming		System Design
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		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
		Software and Tools			

S

E" Data visualization Pandas Seaborn Matplotlib Plotly Altair Bokeh Pygal Exploratory Data Analysis

Power BI - How to add Reports to Dashboards?

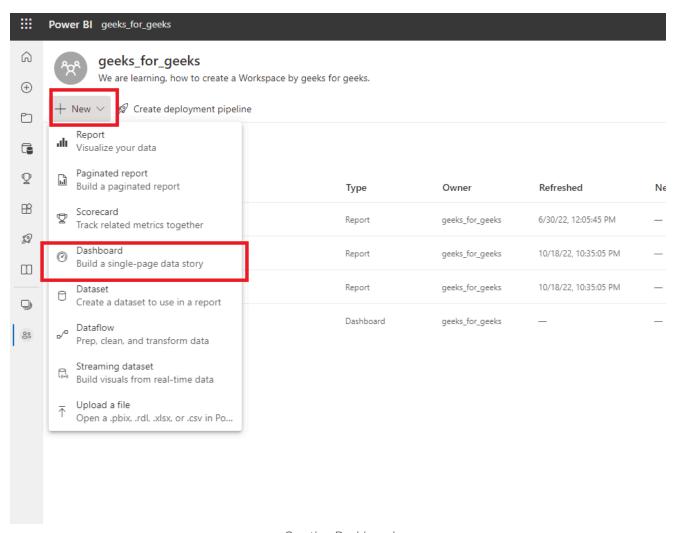
Last Updated: 08 Sep, 2025

Power BI Dashboards help you to view and summarize important information from your reports in one place. You can add an entire report or just specific parts like charts, cards or tables to a dashboard. You can also mix multiple reports into one dashboard.

Creating a Dashboard in Power BI

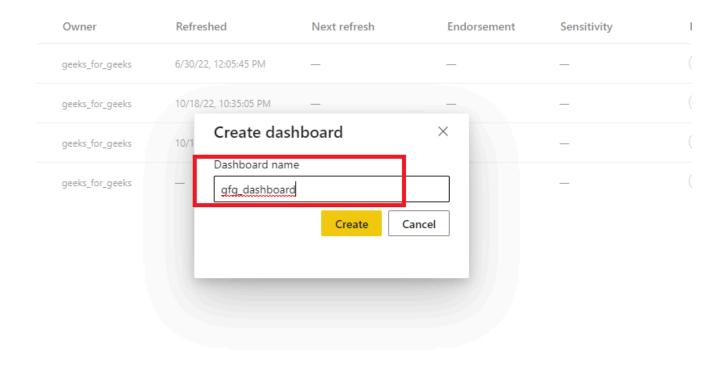
You can create a dashboard from your workspace. Let's say your workspace is called **geeks_for_geeks** and you want to create a dashboard named **gfg_dashboard**. The following are the steps:

Step 1: Go to the required workspace. Click on **New** button. A drop-down list appears. Click on the **Dashboard** to create a new dashboard.



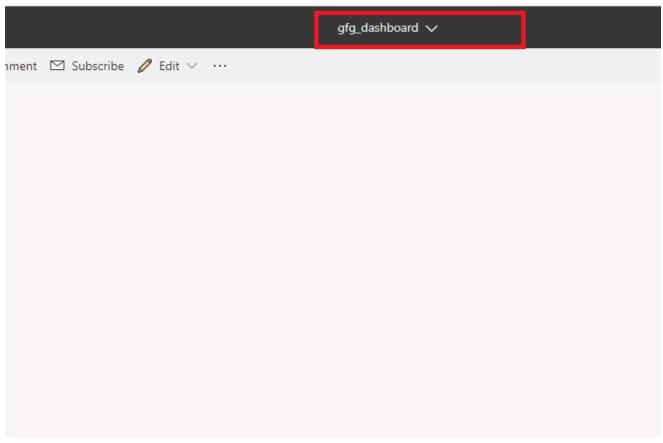
Creating Dashboard

Step 2: A box titled **Create dashboard** will appear. Type a name for your dashboard i.e gfg_dashboard here and click **Create**.



Creating Dashboard

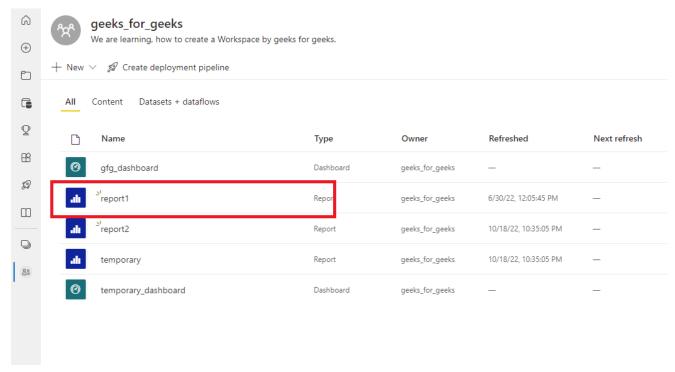
Step 3: You'll now see a blank dashboard screen. It will also appear listed in your workspace.



Adding a Complete Report to a Dashboard in Power BI

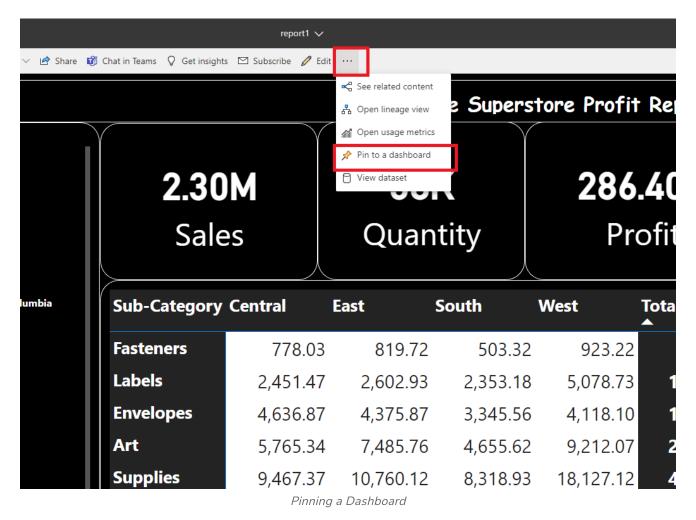
As we have created a dashboard successfully. Now we can add an entire report to the dashboard. For example you are given a report **report1** and you want to add this report to a dashboard. Following are the steps:

Step 1: Go to the required workspace. Click on the report for which you want to pin it to the dashboard. For example **report1**.

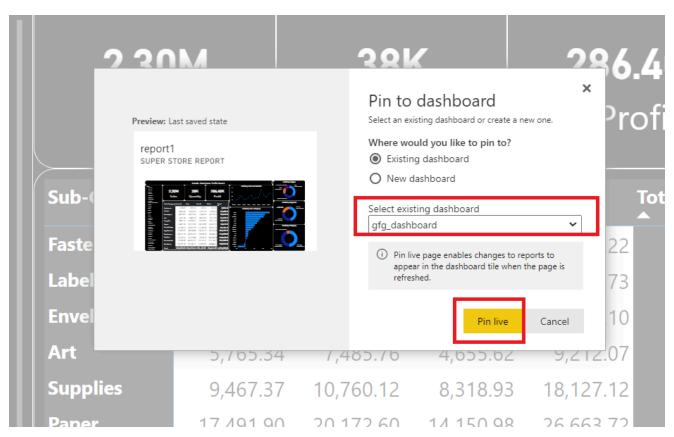


Report 1

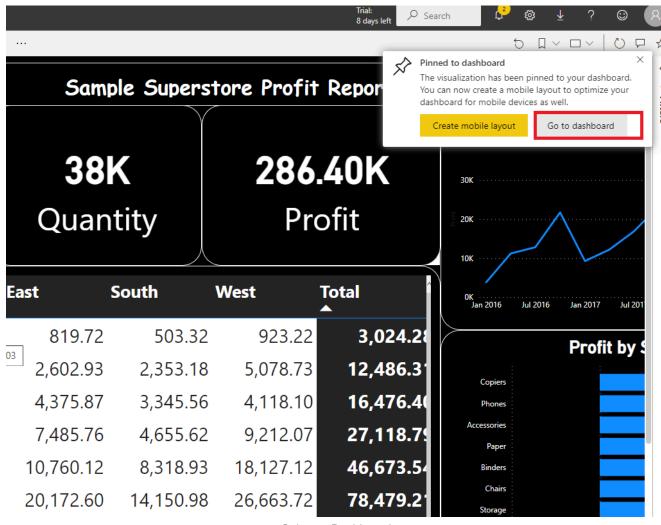
Step 2: In the top navigation bar we can see **three dots**. Click on it. A drop-down list appears. Click on the **Pin to a dashboard**.



Step 3: A new dialogue box name **Pin to dashboard** is opened. Click on the **existing dashboard** radio button. Select the dashboard. For example **gfg_dashboard**. Click on the **Pin live** button.

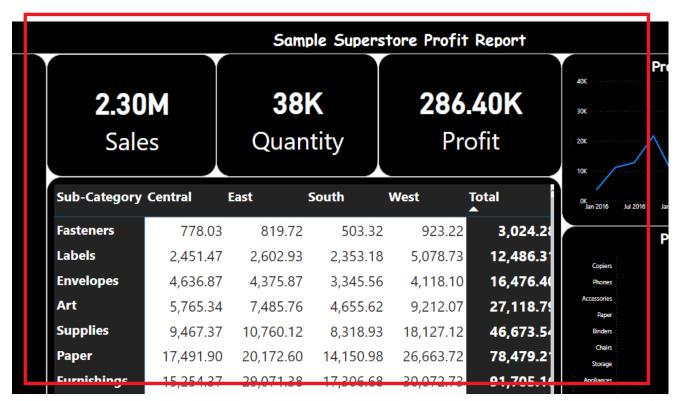


Step 4: On the right side of the page a new dialogue box name **Pinned to dashboard** appears. Click on **Go to dashboard**.



Going to Dashboard

Step 5: An entire report is added in the gfg_dashboard successfully.

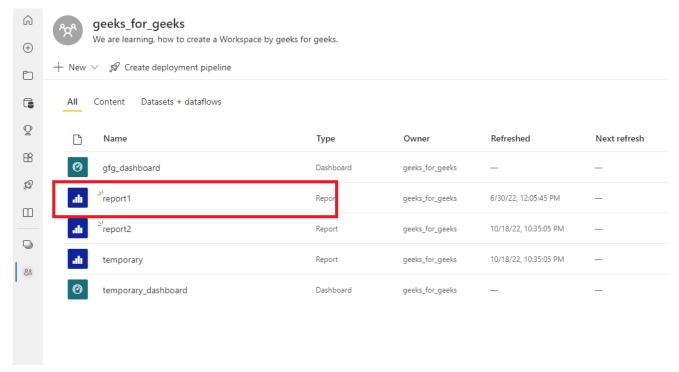


Report added to Dashboard

Adding Components of Multiple Reports in a Dashboard

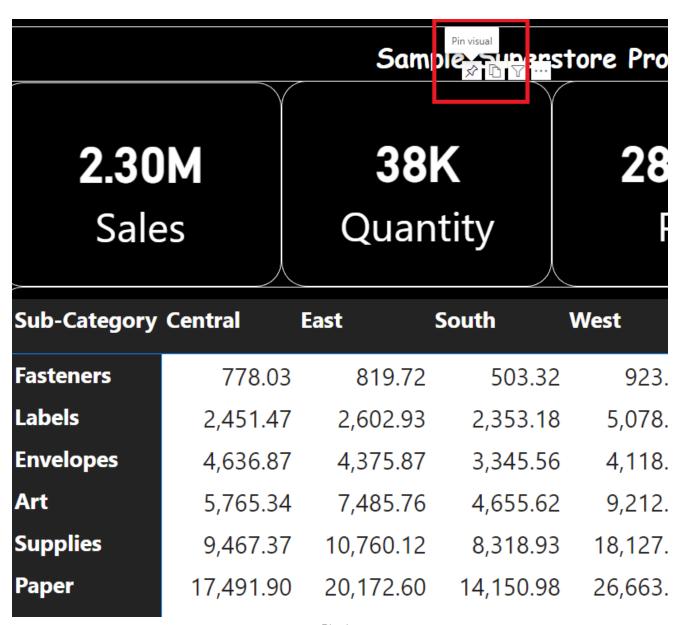
We can also add multiple reports and their components in a single dashboard. For example if we want to add a **card** from **report1** and a **graph** from **report2** in a dashboard name **gfg_dashboard**. Following are the steps:

Step 1: Go to the required workspace. Now we have 2 reports available. Click on the **repor1**.



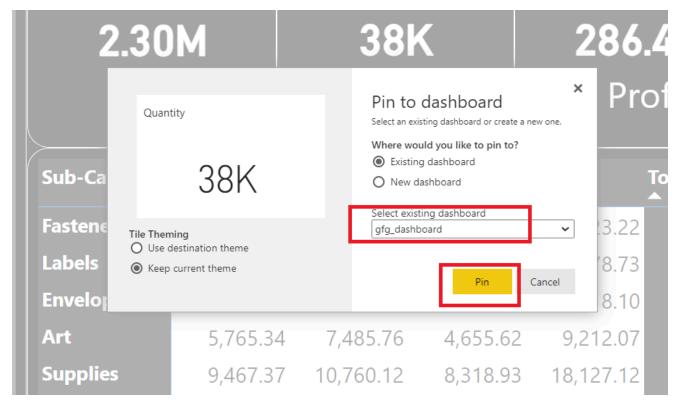
Selecting Report 1

Step 2: Our task is to add a card name **Quantity** to the dashboard. Hover on the card. Now click on the **Pin visual** button.



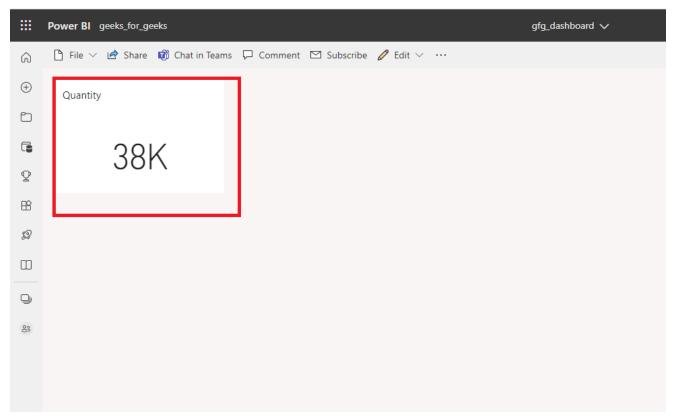
Pinning

Step 3: A dialogue box name Pin to dashboard appears. As we want to add this card in **gfg_dashboard** so click on the **Pin** button.



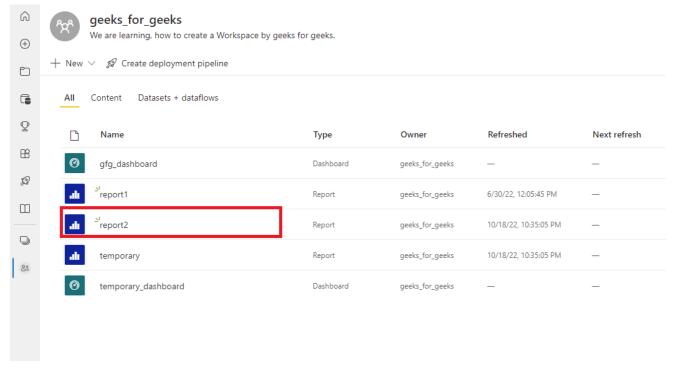
Pinning to Dashboard

Step 4: A card name Quantity is successfully added to the dashboard.



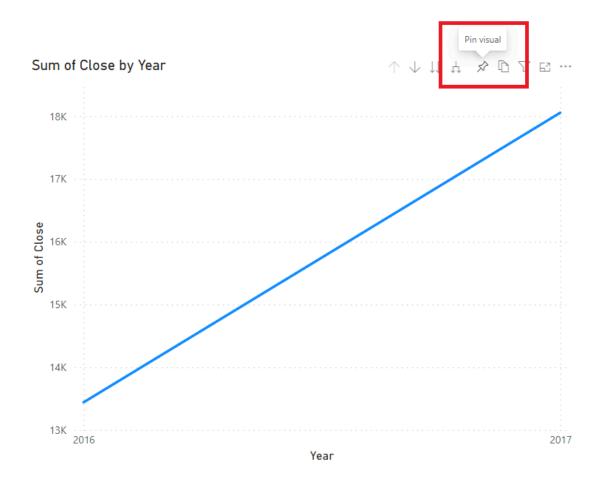
Card Name added to Dashboard

Step 5: Revert back to your workspace. Select report2.



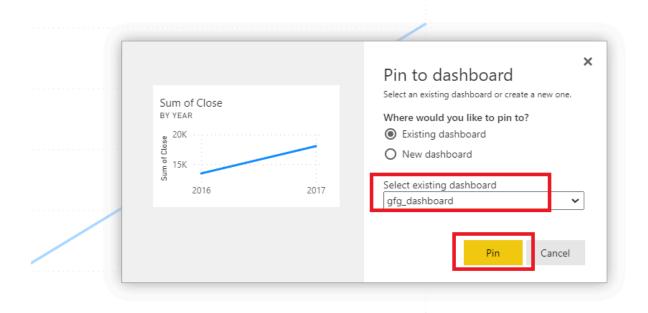
Selecting Report 2

Step 6: Our task is to add the below-shown graph to our dashboard. **Hover** over the graph. Click on the **Pin visual** button.



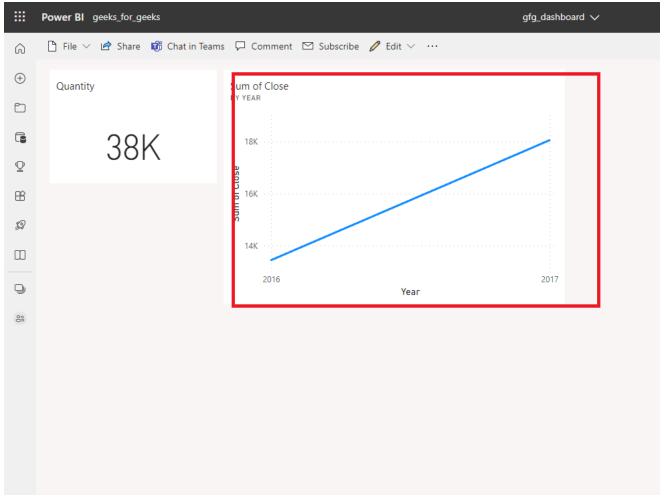
Step 7: A new dialogue box name **Pin to dashboard** appears. As we want to add this graph in **gfg_dashboard**. Click on the **Pin** button.

Pinning



Pinning to Dashboard

Step 8: A new **graph** is added to the same dashboard. We have successfully added a card and a graph from different reports in a dashboard.



This helps you build a single view that shows only the most important data even if it's from different reports.

Comment

More info



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Corporate Solution	Nation Skill Up	Science	Programming		System Design
Campus Training		DevOps	Languages		
Program		CS Core Subjects	DevOps & Cloud		
		Interview	GATE		
		Preparation	Trending		
		GATE	Technologies		
		School Subjects			
		Software and Tools			

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Power BI - Report Level Filters

Last Updated: 14 Feb, 2023

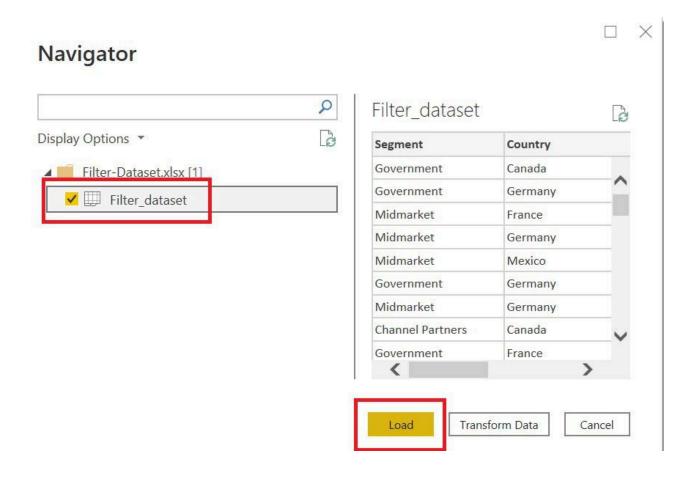
Filters in Power BI sort data and knowledge based on some selected criteria. That is, you'll select particular fields or values within fields and view only the information related to them. as an example, you've got a dataset related to a store's sales. Now, using the filters you'll filter out unnecessary information. you'll view a report having only the data for the selected aspects.

Report Level Filters

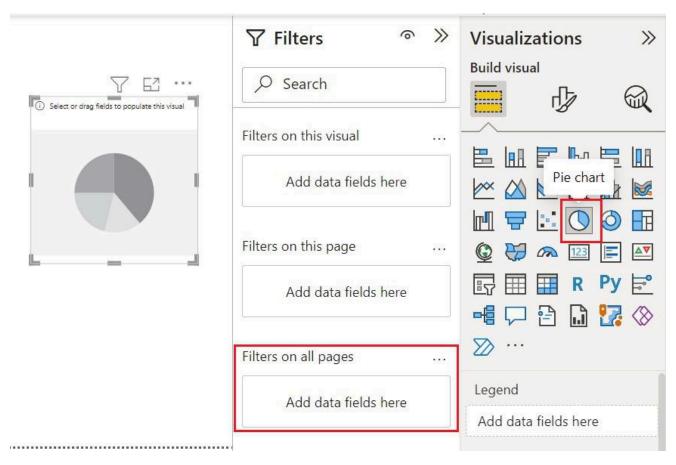
The report-level filters are the filters that you simply use to apply a filter condition on the entire report. The report-level filter will get applied to each visualization and page of a report. Thus, report-level filters are different from visual-level and page-level filters, report-level filters are generalized filters.

Application of report-level filters

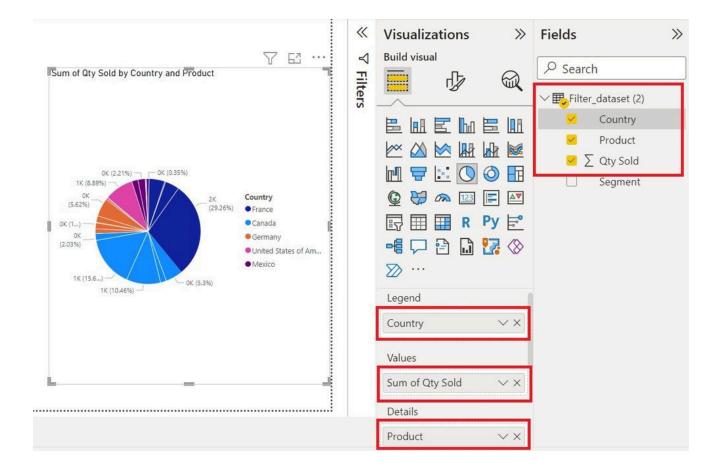
Import data from Your Excel to Power BI: Home Tab-> Get Data -> Choose Data which you want Example Excel -> Select the file and Open -> Select The sheet and Load



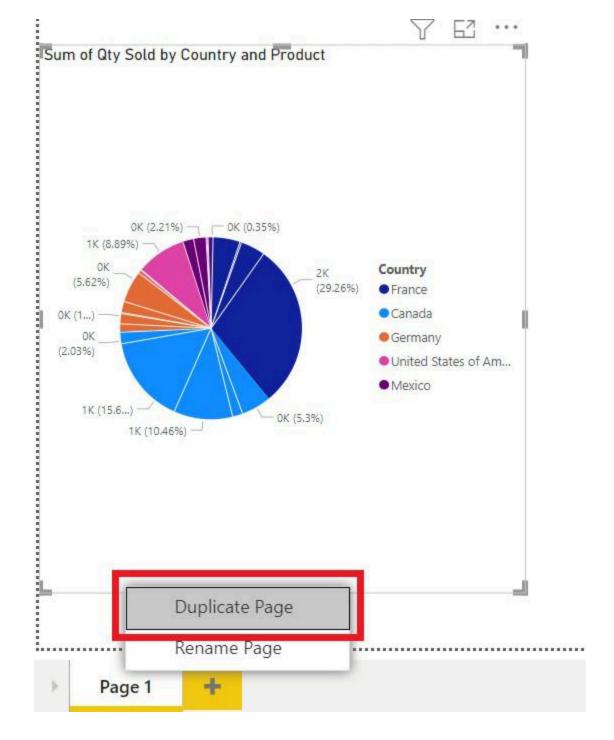
To use a filter create a visual on the page example: Pie chart



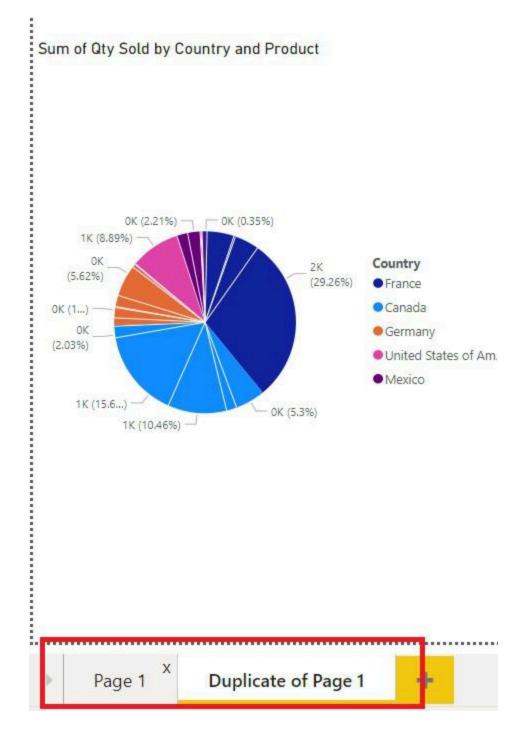
To create a 'Pie Chart' drag and drop the data under respective fields



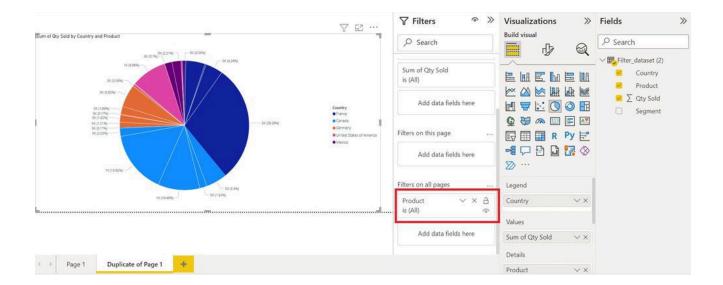
To demonstrate the report level filter we duplicate the pie chart on a new page Right-click on page $1 \rightarrow$ then select a duplicate page



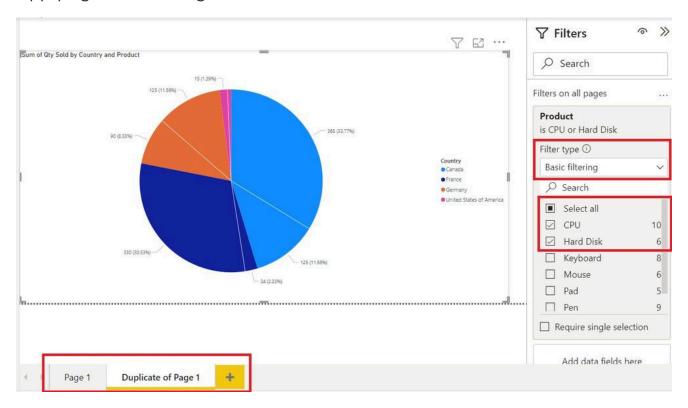
A duplicate page with the same visuals created



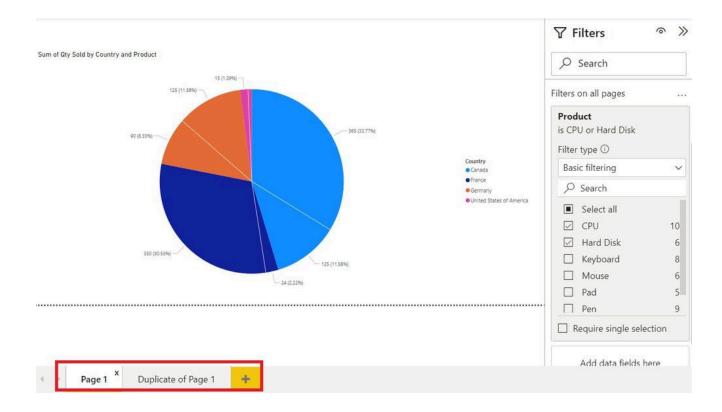
Drag the product field into the filter



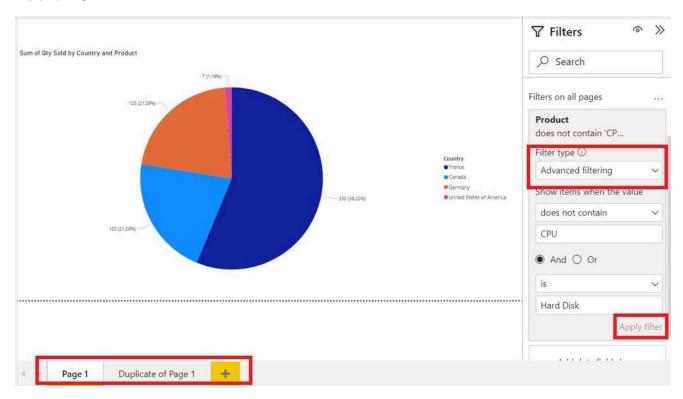
Applying basic filtering on visuals



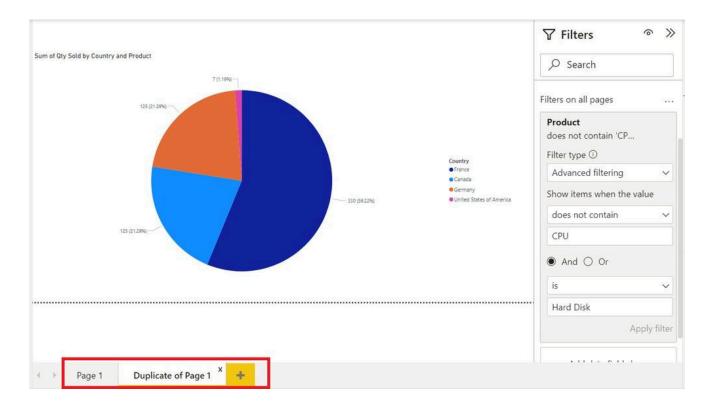
Same filter will be applied automatically to page1



Applying advance filter



The same Filter automatically applied to the 'duplicate page'



Lastly, Talking about the report-level filters, they're the filters that you simply use to use a filter condition on the entire report. Report-level Filters are those that affect all data in this report, regardless of what you are looking at. consider them as global filters.

Comment More info



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Campus Training		DevOps	Languages		, 0
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		Software and Tools			

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Power BI - How to Format Matrix?

Last Updated: 16 Jan, 2023

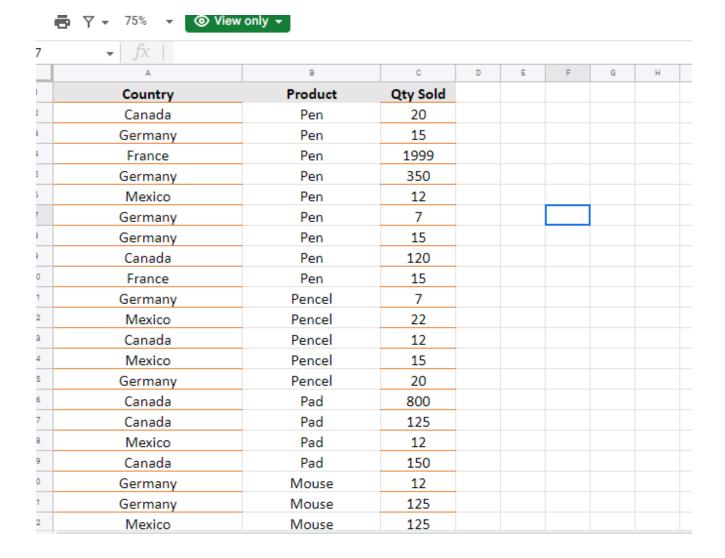
Power Bi is an extensively used operation as it helps in storing, assaying, calculating, etc. data. Power Bi contains numerous functions that are used to maintain and show data in a presentable way. Matrix is one of the Power Bi is handy functions, it's a collection of figures that are arranged into several columns and rows. Matrix could contain complex figures still we won't see those numbers.

Matrix

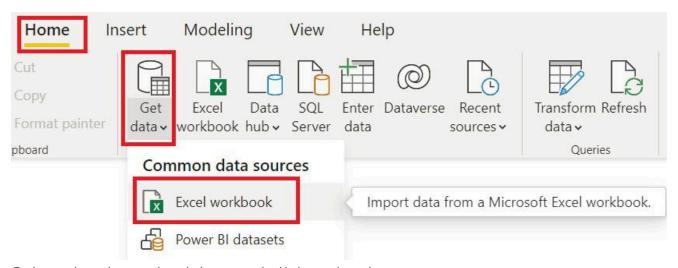
A matrix is a type of visualization that's analogous to a table in that it's made up of rows and columns. still, a matrix can be collapsed and expanded by rows and/ or columns. However, you can drill down/ drill up, If it contains a scale. It can display summations and subtotals by columns and/ or rows. A matrix can display data by removing the repeating values.

Creating a Matrix

To create a Matrix we will import a Data set in the Workspace of power Bi. Steps to import Excel Sheet are given below. The dataset used for the same is given here. Below is the screenshot of the dataset as well:

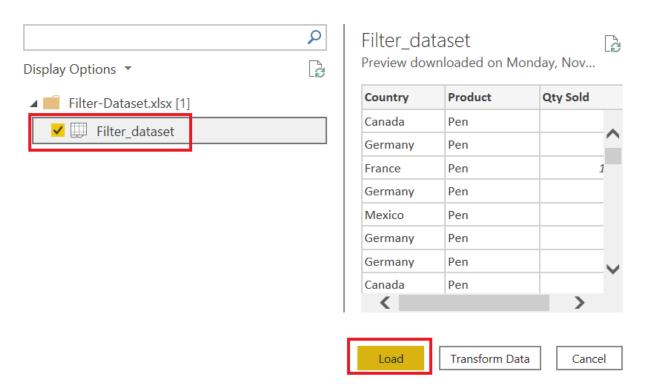


Under HomeTab -> Click on Get data -> Select Excel Workbook -> then select the excel sheet



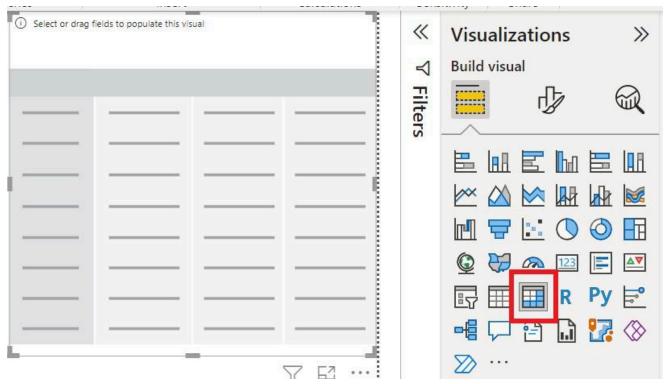
Select the sheet check box and click on load.

Navigator



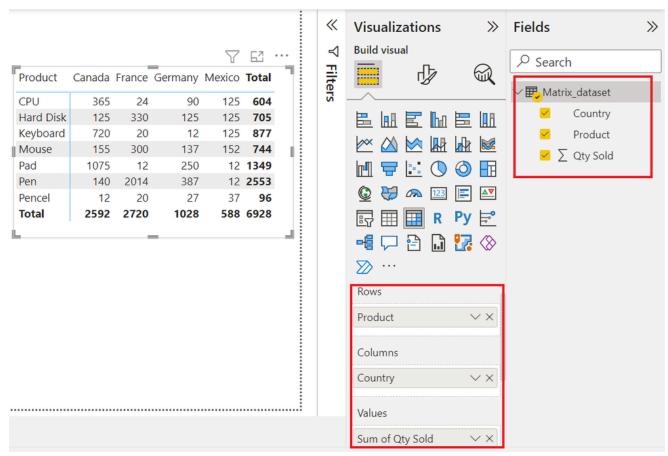
Steps to Create Matrix

Step 1: Click on the Matrix icon under the visualization, Resize it if required.



Step 2: To fill the values in the matrix, there are three fields:

- Row- In this demonstration, we placed 'Product' in this field
- Column- In this demonstration, we placed 'Country' in this field
- Values- In this demonstration, we placed 'Quantity Sold' in this field

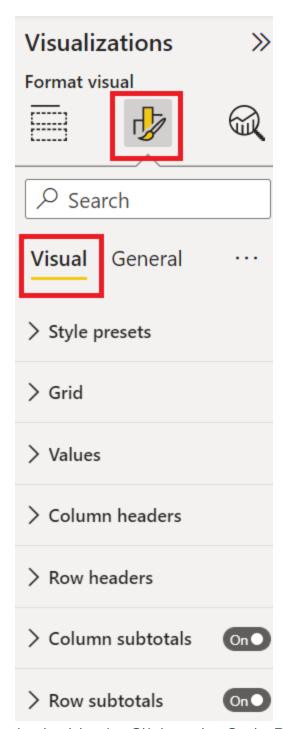


Dragged and Dropped

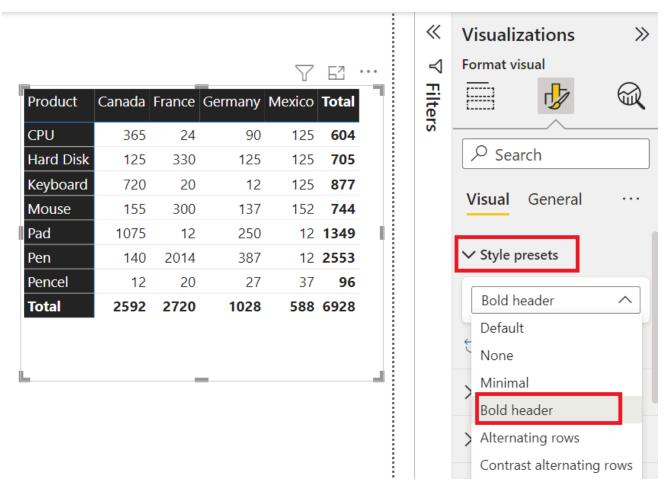
Steps to Format Matrix

To format Matrix Always make sure that Your matrix box is clicked once by the cursor. There are two types of Formating Visual and General

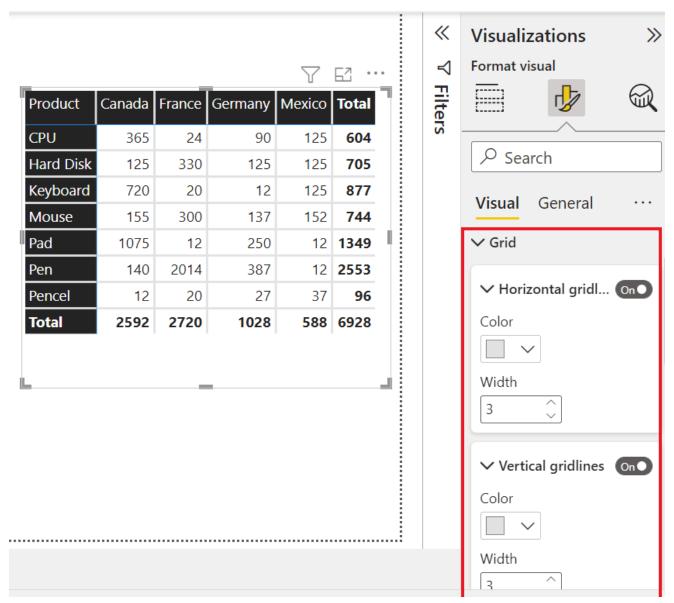
Formatting under Visual



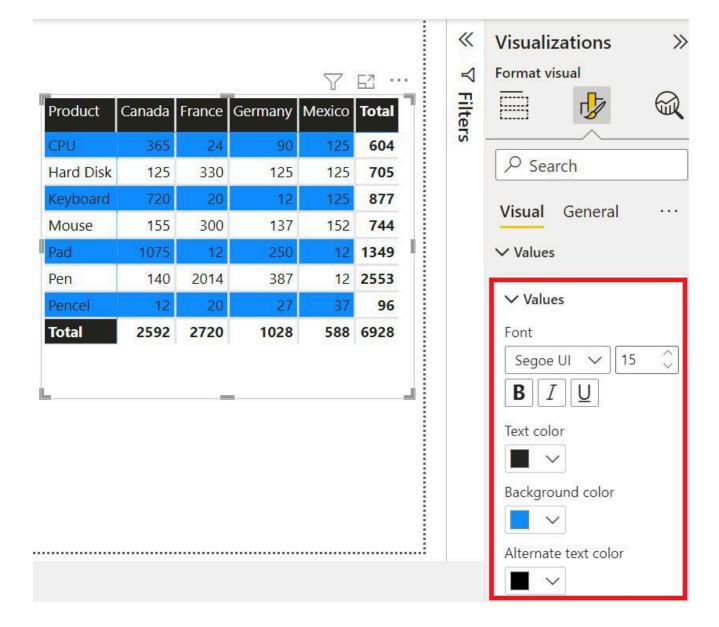
1. To give Bold Headers in the Matrix. Click under Style Present and select Bold Header in the drop-down



2. To show the separation between the row and the column. Click on the grid and 'on' the vertical and horizontal grid lines and increase the font size if required

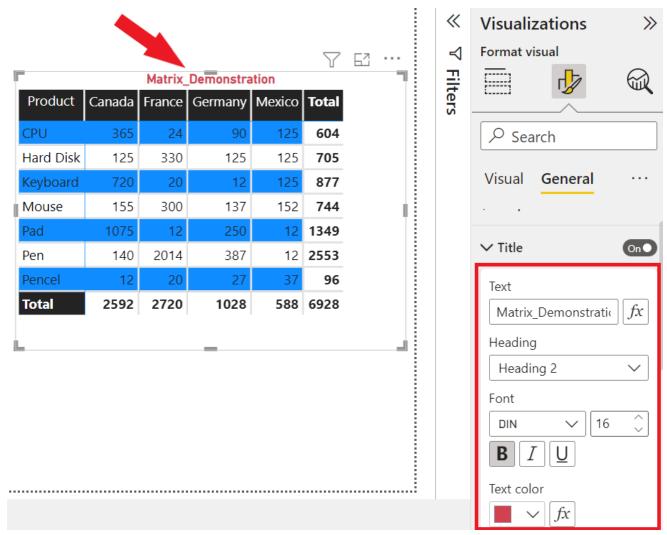


3. To increase readability you can use alternate text colors to the matrix. Click on values and play with the background and alternate text color

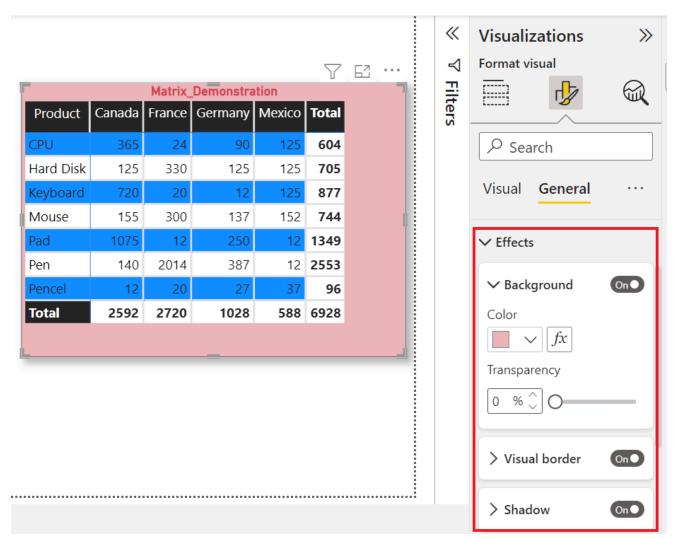


Formatting under General

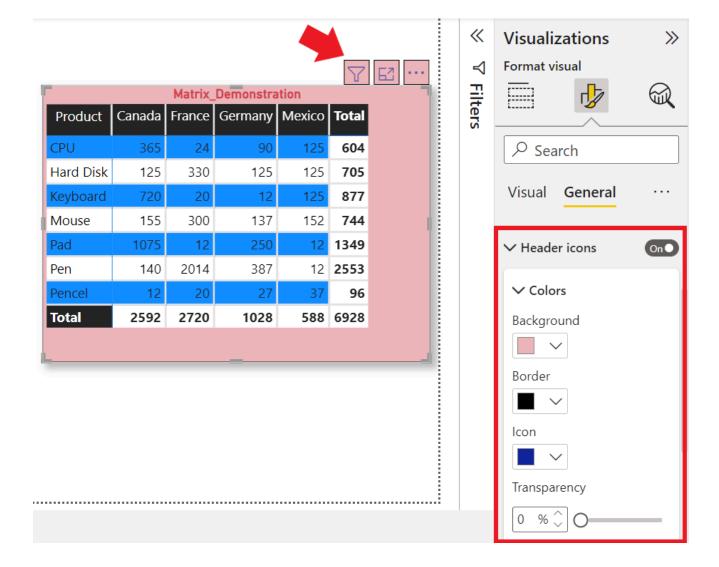
1. To give Title to the Matrix. Click on the Title option and make it 'on' and give Title according to the need.



2. To change the background color of the matrix. Click Effect and make the Background button 'on' and select the background color.



3. To make the header Icon more attractive. Click on the Header icon and make it 'on' also select the color as per the requirement.



Application of Matrix

Matrices have the following uses in our day-to-day life. Some of the uses of matrices in diurnal life are mentioned below:

- **Encryption:** A veritably common use of matrix in diurnal life is during encryption. We use it to scramble data for security purposes and to render and crack this data, we bear matrices. There's a key that helps render and crack data which is generated by matrices.
- Games especially 3D: One operation of matrices is in games. They use the 3d matrix to the 2d matrix to convert it into different objects as per demand.
- **Economics and Business:** To study the trends of a business, shares, etc., and to produce business models.
- **Construction:** Another common operation of matrices in real life is the construction sector. Have you seen some structures that are straight but occasionally engineers try to change the external structure of the structure? This can be done with matrices. Matrix provides an easier way to change the

number of rows and columns within a matrix. Matrices can help support colorful literal structures.

- Cotillion: Contra cotillion It's used to organize complicated group balls.
- Vitality: It can help make robustness more precise and accurate.
- **Geology:** Matrices are used for taking seismic checks.

Power BI Matrix Vs Table

Then we will the difference between the Power bi matrix vs table.

Matrix	Table
The power bi matrix is multi- dimension like an excel pivot table.	Whereas power bi table 2- Dimension visual to represent irregular data.
In the power bi matrix, you have the option to add further confines to rows, columns, and value fields.	In the table, if you want to add a further dimension, also you have to add it to the value field, it'll appear in the new column.
The power bi matrix automatically summations the data and enables you to drill down	But there's no easy way to epitomize the advanced dimension in table visualization and drill down further to the lower dimension.
In the power bi matrix rows and columns aren't fixed.	In the power bi table rows aren't fixed and columns are fixed.

Comment

More info



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