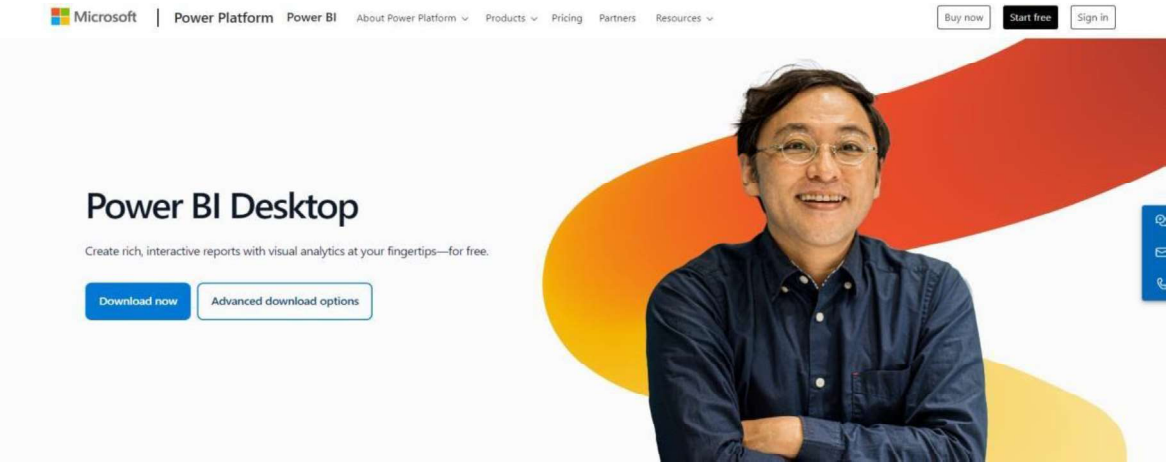
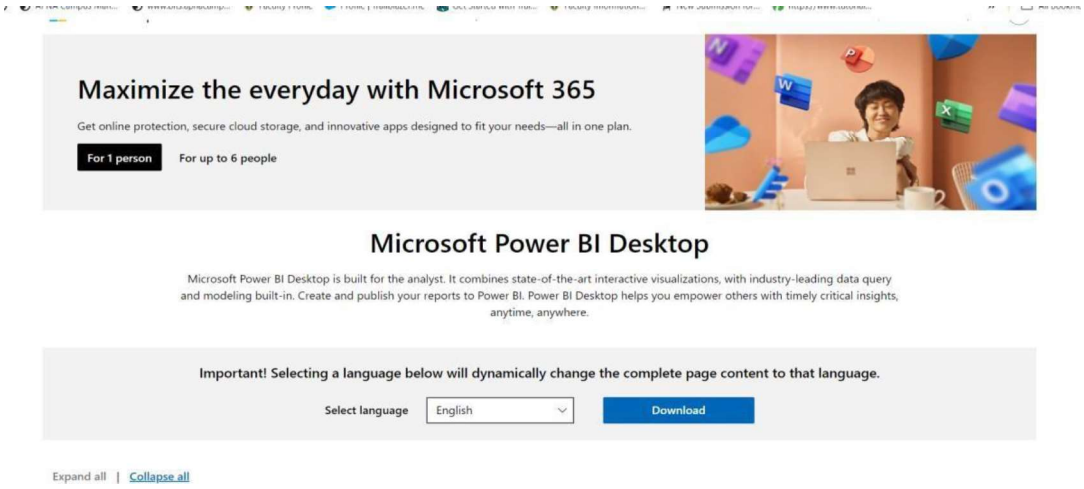
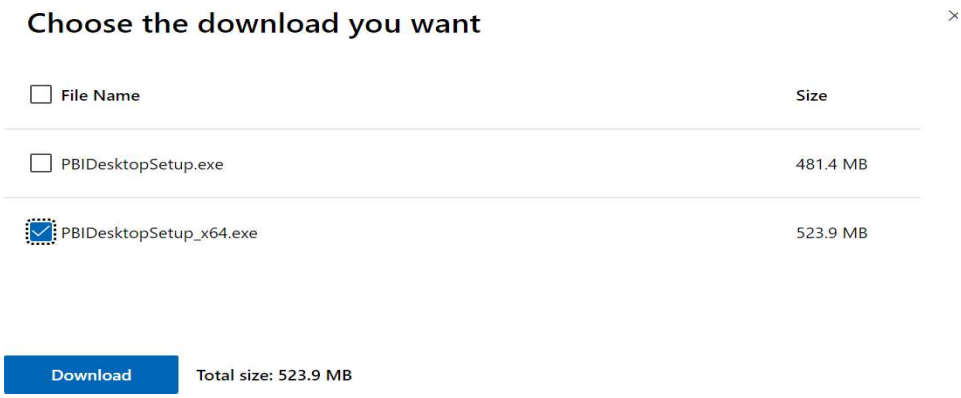
2. **Click on Products-□Power BI--□Desktop**



3. **Click on Advanced Download option**



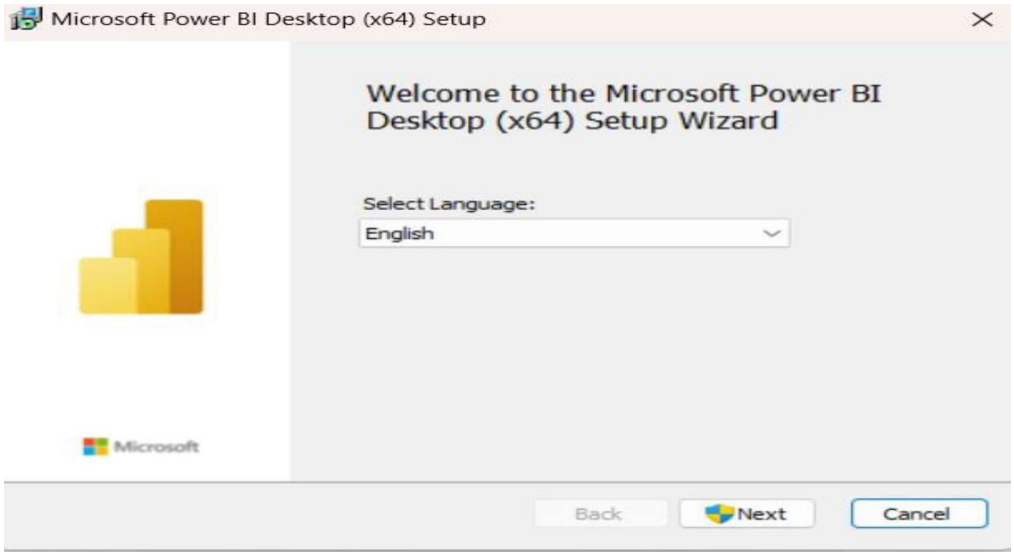
4. **Select the Language as English and Click on download , choose PBIDEsktopSetup_x64.exe**



5. Download Begins and you will get exe file which will be downloaded in your downloads folder

PBIDesktopSetup_x64 (2).exe

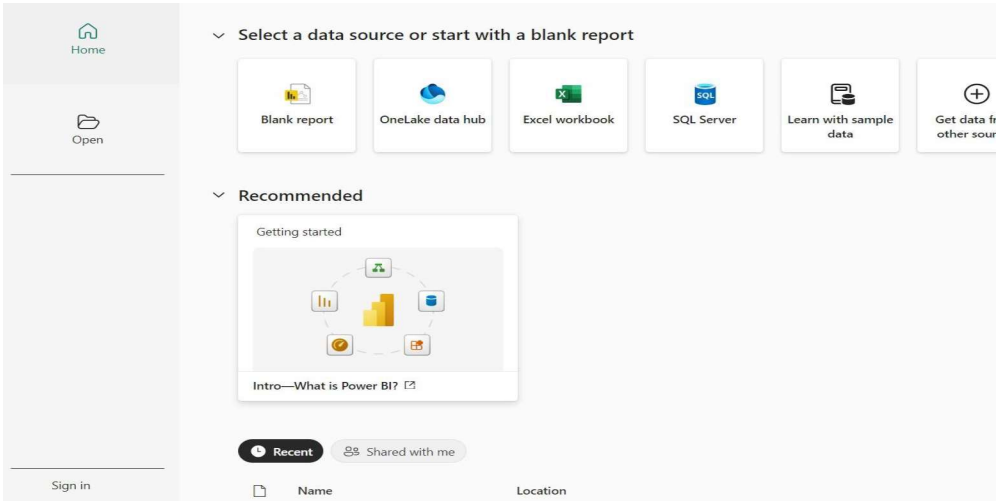
6. Double click on the .exe file ,to get the installation wizard



7. Click on Next button until you get Finish button and finally installation will be done.

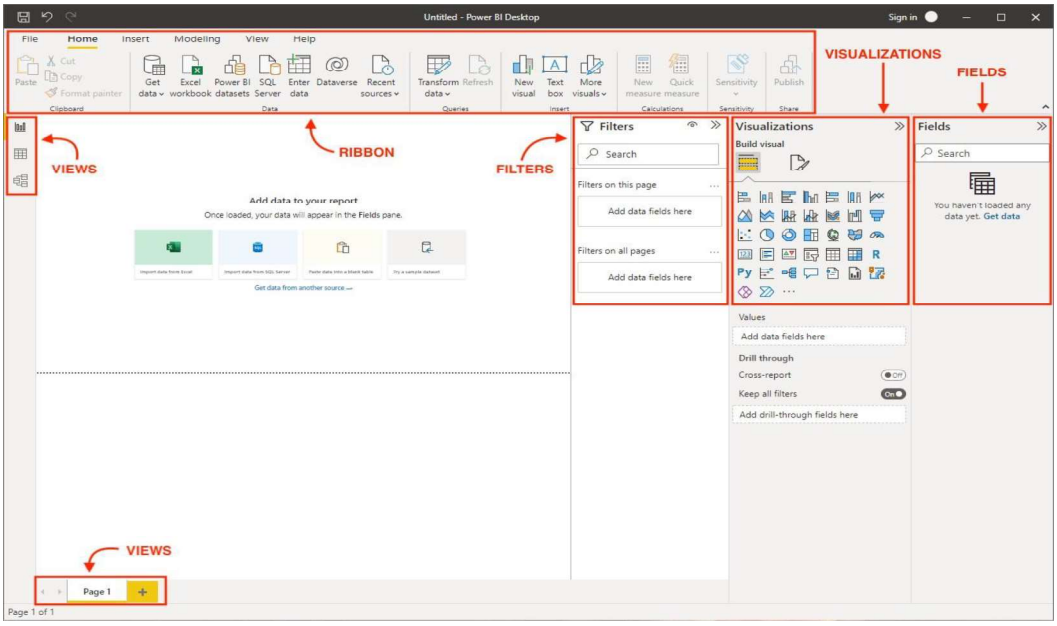
8. Once the Installation is done ,double click on Power BI App.

The screen appears as below



9. When you launch the application, Power BI Desktop will start with a blank report. Let'sgo over the components of the Power BI Desktop Interface

- **Ribbon** - the top ribbon contains most of the controls and options needed for building the report.
- **Views** - this is made up of the report view, the data view, and the model view.
- **Canvas** - this is the main design area where visualizations and other elements are added.
- **Page selector** - for navigation to other pages in the report.
- **Filters** - fields can be added here to filter the data.
- **Visualizations** - this contains the list of available visualizations.
- **Fields** - this section contains the tables and fields that are available in the data model.



The Major Components of Power BI Desktop Interface are

Power Query Editor

It is the process of cleansing and transforming data and permits users to access datasetsconnecting from multiple sources. It is included on the Power BI desktop. Business users may view the data from distinct databases like MySQL, SQL servers, DB2, and many more.

Power View

It is a data visualization tool that assists users in developing stunning charts, and colourful maps, that turn data into a story.

Power Map

It is a 3D map visualization tool to identify geospatial data on Map visuals. It helps organizations to examine the maximum sales production geographically, visualizing the demographic populations of specific regions.

Power Pivot

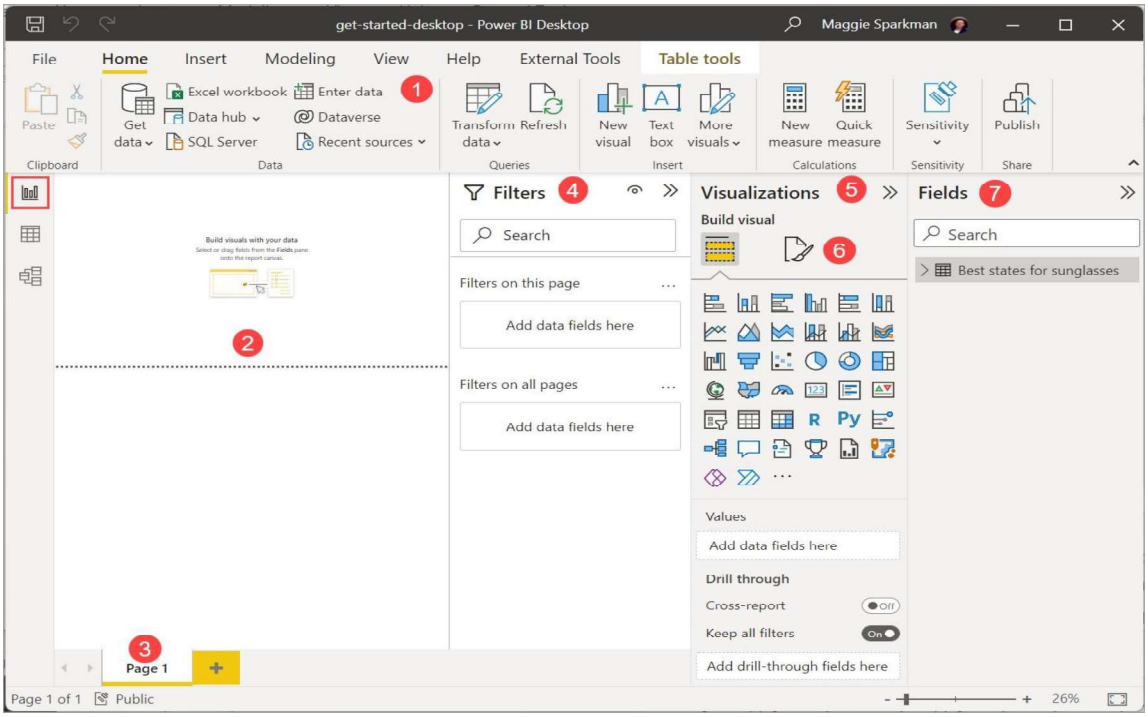
It is a Data Modelling technique that is used to create relationships between datasets. It performs complex computations by utilizing DAX functions.

Power Q & A

When dealing with giant datasets, it becomes crucial to get to know the in-depth details of the data. Luckily, it is done through natural language where users may ask questions and obtain the answer through Power Q & A.

Build reports :

In Power BI Desktop Report view, you can build visualizations and reports.The Report view has six main areas:



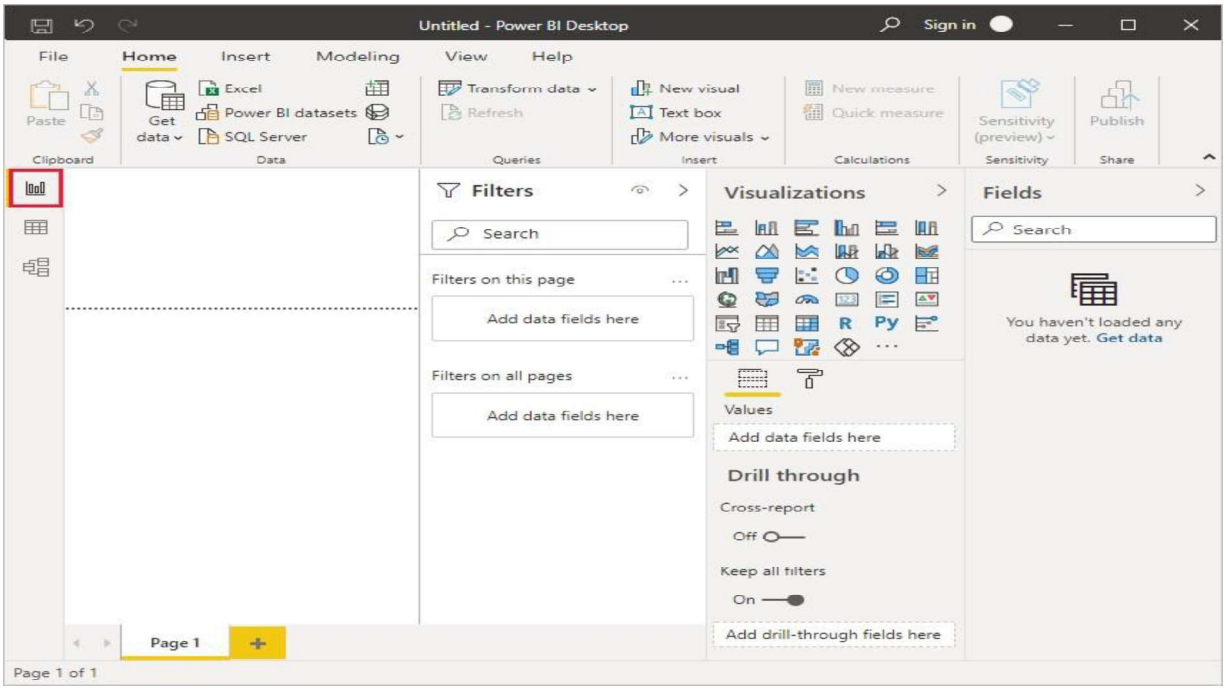
1. The ribbon at the top, which displays common tasks associated with reports and visualizations.
2. The canvas area in the middle, where you create and arrange visualizations.
3. The pages tab area at the bottom, which lets you select or add report pages.
4. The Filters pane, where you can filter data visualizations.
5. The Visualizations pane, where you can add, change, or customize visualizations, and apply drill through.
6. The Format pane, where you design the report and visualizations.
7. The Fields pane, which shows the available fields in your queries. You can drag these fields onto the canvas, the Filters pane, or the Visualizations pane to create or modify visualizations.

PROGRAM 6 :

Question: Querying Data from CSV - Query Editor, Connecting the data from theExcel Source, Clean, Transform the data.

Solution :

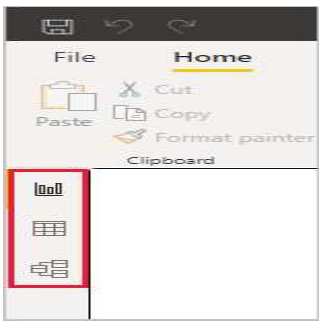
Power BI Desktop also includes the Power Query Editor, which opens in a separate window. In Power Query Editor, you can build queries and transform data, then load the refined data model into Power BI Desktop to create reports**.**



Along the left side of Power BI Desktop are icons for the three Power BI Desktop views:

Report, Data, and Model, from top to bottom. The current view is indicated by the yellow bar along the left, and you can change views by selecting any of the icons.

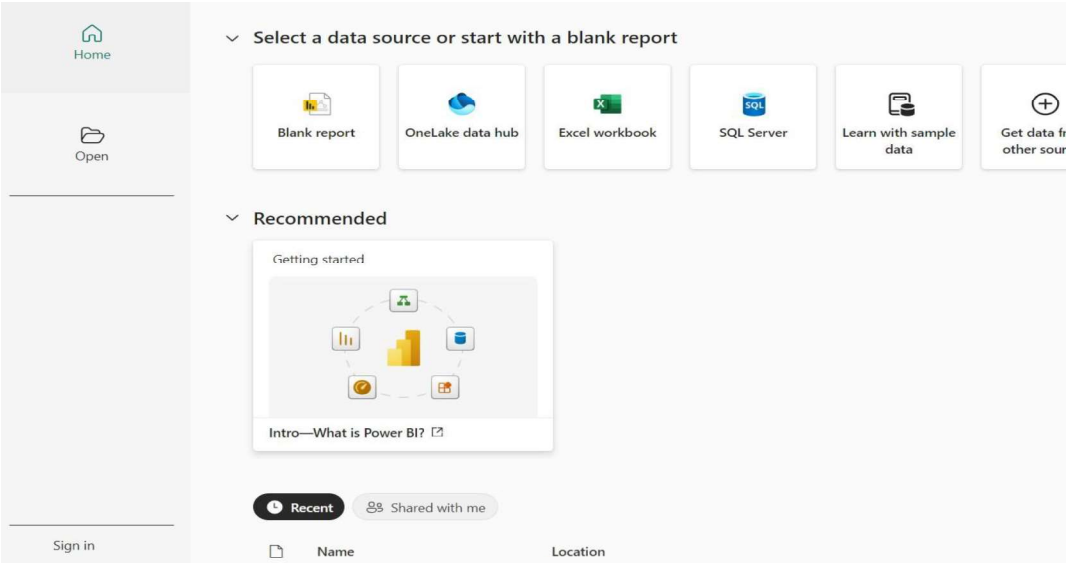
Report view is the default view.



Connect to data(Get Data from different Sources)

With Power BI Desktop installed, we can connect to the world of data. To see the many types of data sources available,

Once Power BI screen is seen click on blank Report

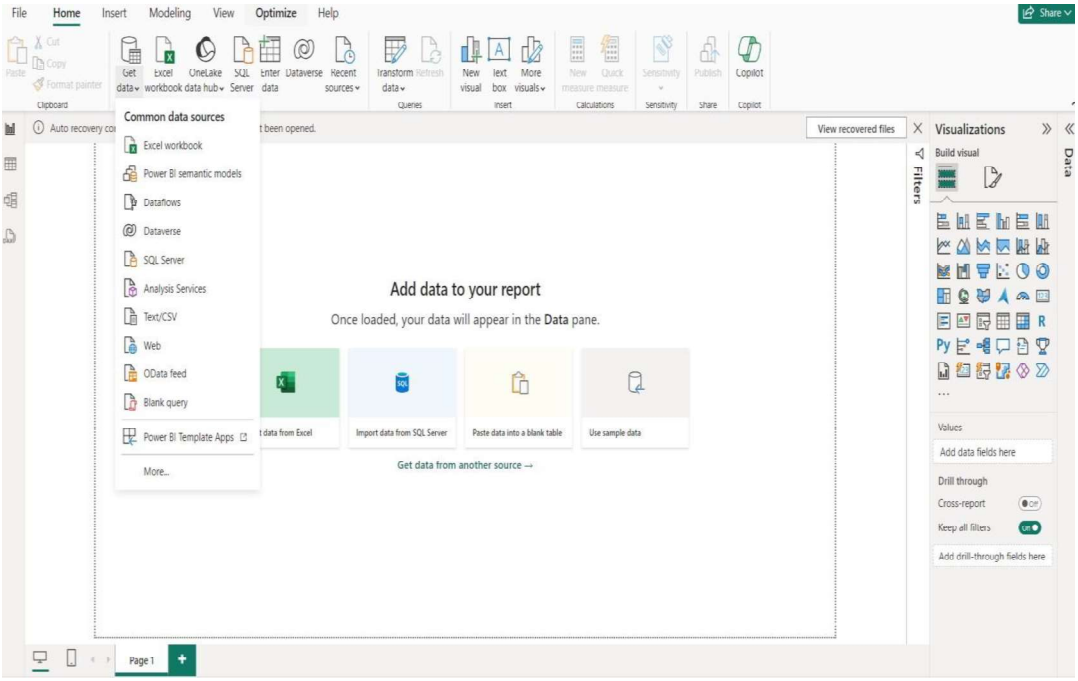


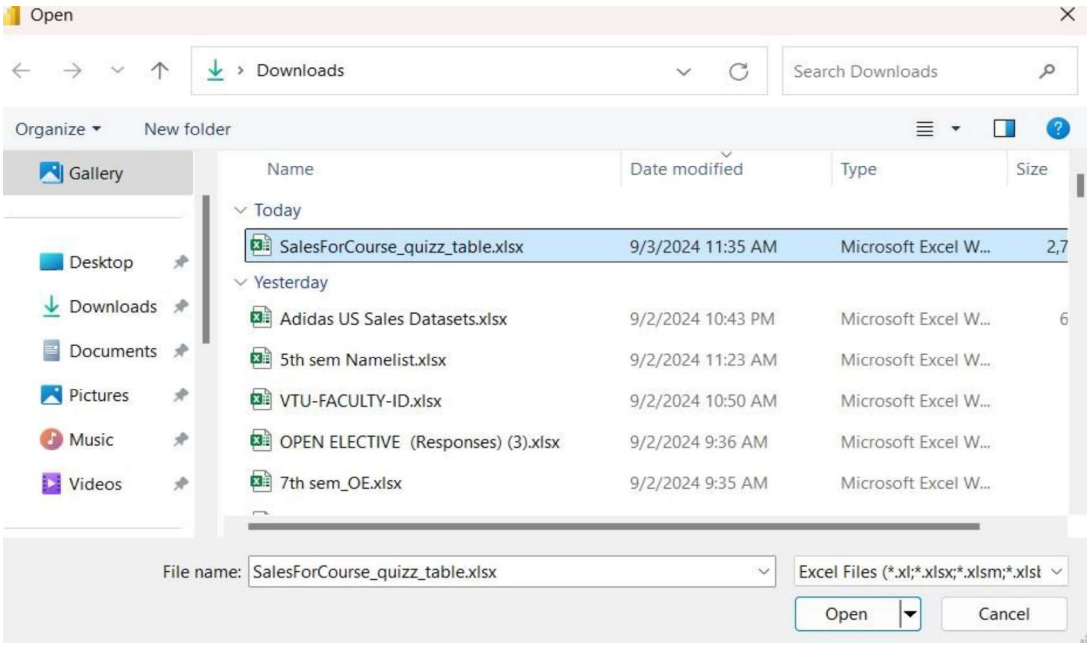
After clicking on blank Report the below screen appears .

NOW TO GET DATA FROM DIFFERENT SOURCES ---------- The steps

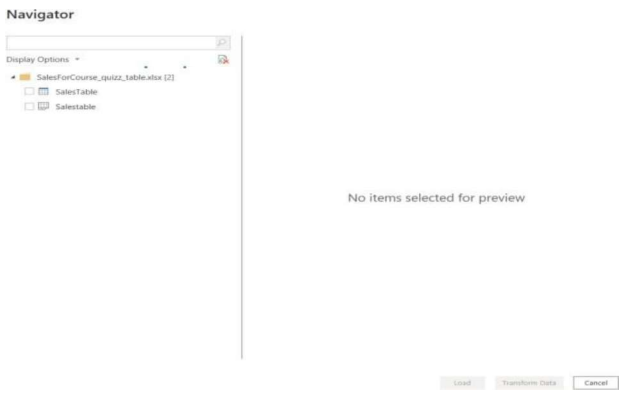
Step 1 : Select **Get Data** in the Power BI Desktop Home tab, and in the GetData window, scroll through the list of All data sources.(like Excel,CSV,Oracle….)

On the Power BI Desktop Home tab, select Get Data > Excel workbook



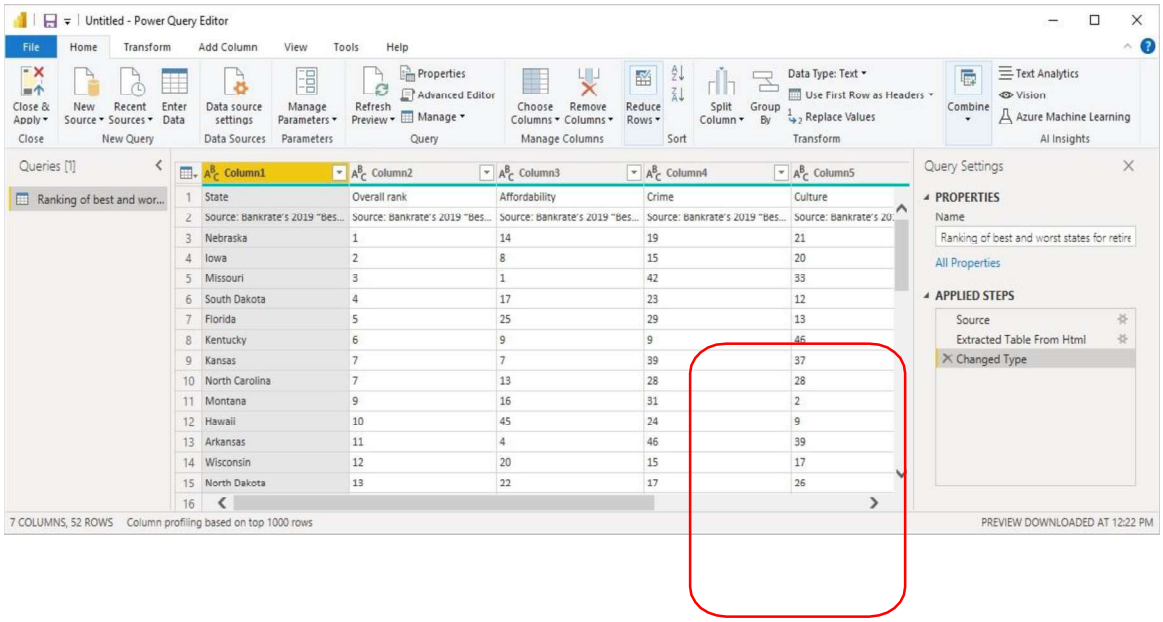


2. Click on the file you need and open the file ,once you open the file below window withnavigator appears ,select the file (2nd option to see the contents of the file)



3. At this point you can select Load to load the table, or Transform data to make changesin the table before you load it.

4. When you select Transform data, Power Query Editor launches, with a representative view of the table. The Query Settings pane is on the right, or you can always show it by selecting Query Settings on the View tab of Power Query Editor.



Transforming the data

Once connected to a data source, you can adjust the data to meet your needs.

To transform the data, you provide Power Query Editor with step-by-step instructions for adjusting the data while loading and presenting it. Transforming doesn't affect the original data source, only this particular view of the data.

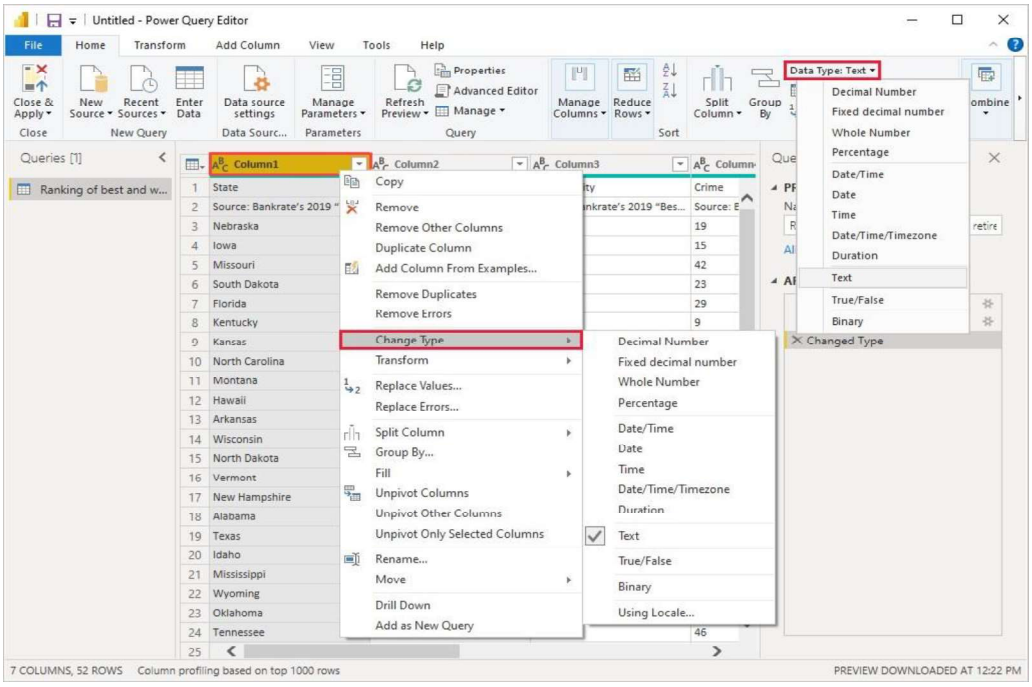
Transforming the data, includes **renaming columns or tables, removing rows or columns, or changing data types.**

Power Query Editor captures these steps sequentially under Applied Steps in the Query Settings pane.

Notice that the Applied Steps in Query Settings already contain a few steps. You can select each step to see its effect in the Power Query Editor

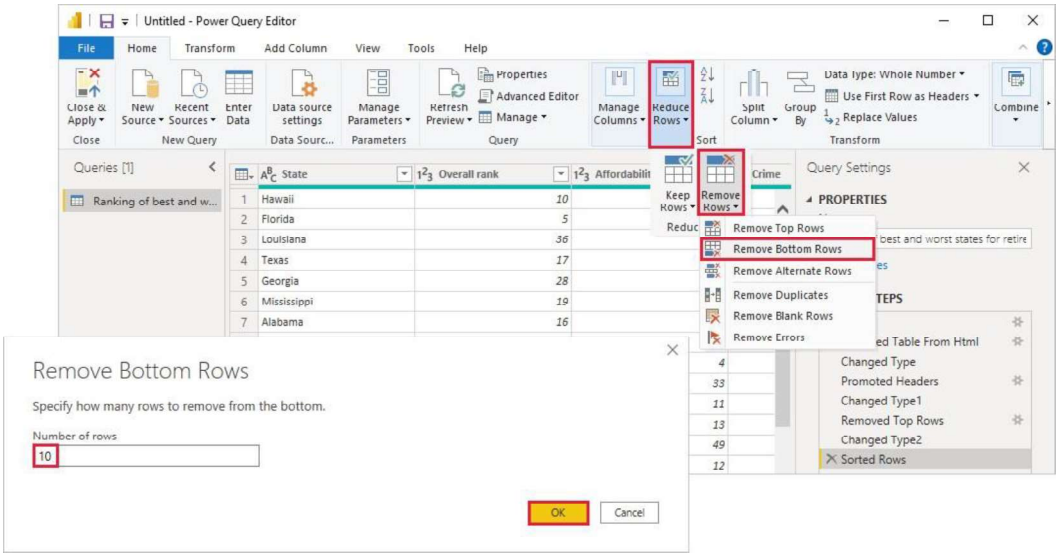
To Change a data type

- Select the column or columns to change.
- Hold down the Shift key to select several adjacent columns, or Ctrl to select non-adjacent columns.
- Either right-click a column header, select Change Type,
- choose a new data type from the menu, or drop down the list next to Data Type in the Transform group of the Home tab,
- select a new data type.



To Reduce/Delete the Rows

- From the Home tab select
- Reduce Rows > Remove Rows > Remove Bottom Rows.
- In the Remove Bottom Rows dialog box, enter *10*, and then select OK.

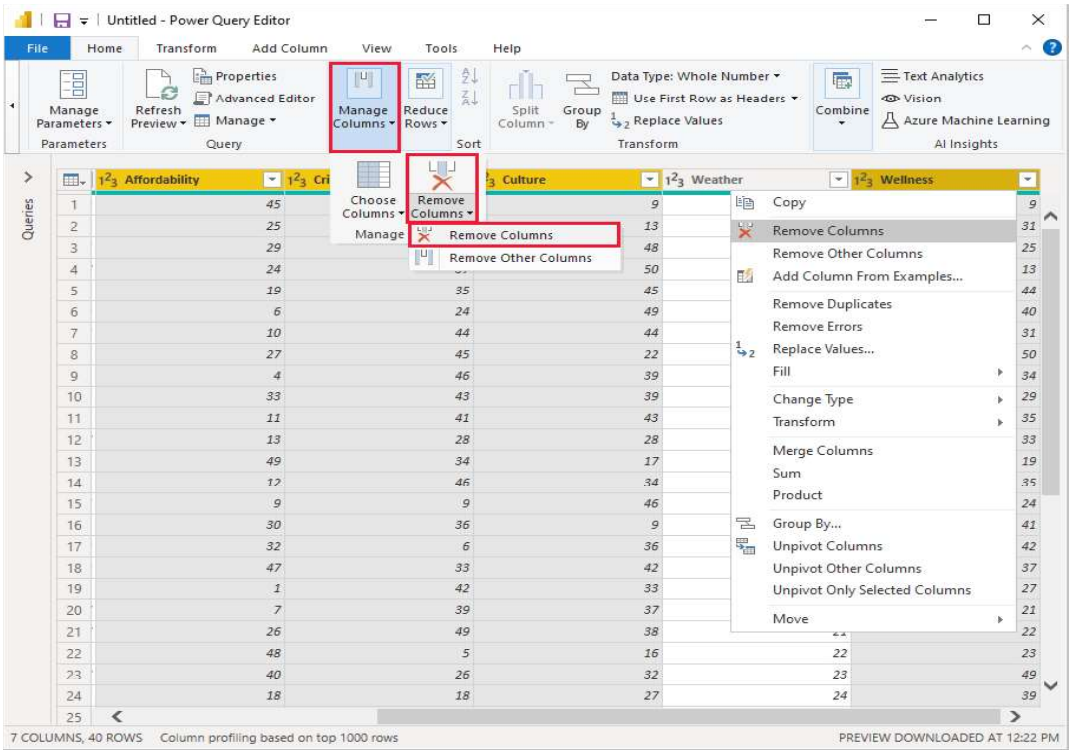


The bottom 10 worst rows are removed from the table, and the step Removed Bottom Rows appears in Applied Steps.

To Remove columns

- From Home Tab Select Manage Columns group select Remove Columns.

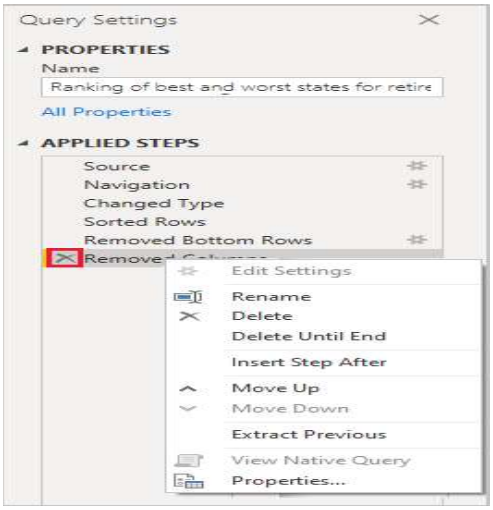
- You can also right-click one of the selected column headers and select Remove Columns from the menu.
- The selected columns are removed, and the step Removed Columns appears in Applied Steps.



Applied steps in the Query setting pane

Right-click any step in the Applied Steps pane and choose to delete it, rename it, move it up or down in the sequence, or add or delete steps after it.

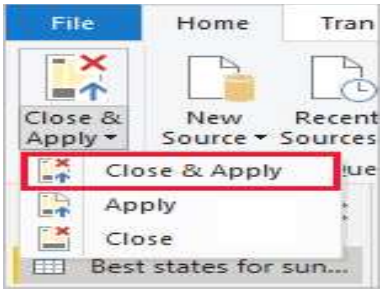
For intermediate steps, Power BI Desktop will warn you if the change could affect later steps and break your query**.**



Once all the required transformations are done the report should be created in the Power BI Desktop

- Apply the changes in Power Query Editor and load them into Power BI Desktop
- Selecting Close & Apply from the Home tab of the ribbon.
- You can also select just Apply to keep the query open in Power Query Editor

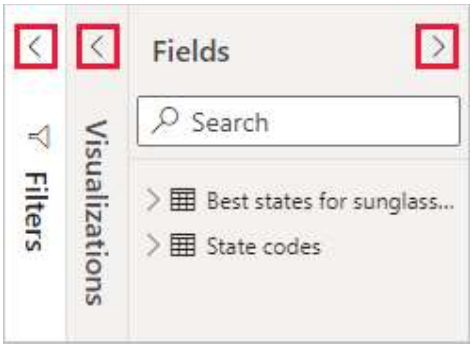
while you work in Power BI Desktop.



To reopen Power Query Editor from Power BI Desktop

Select **Transform Data** on **the Home tab** of the Power BI Desktop ribbon.

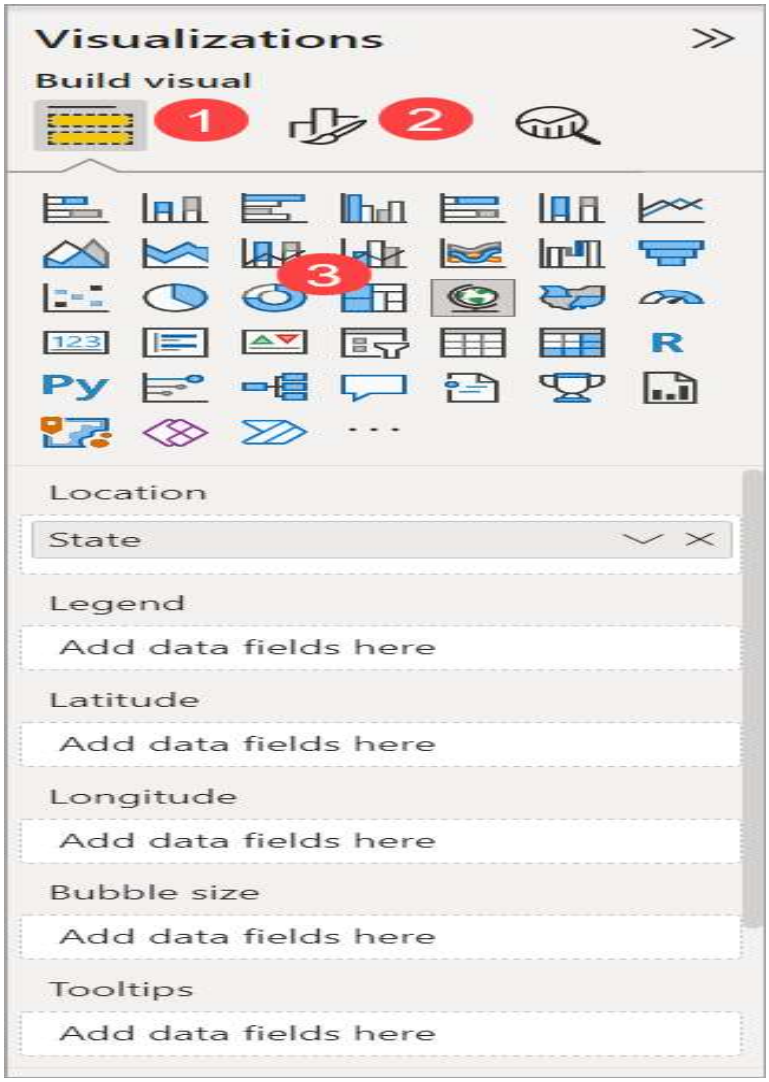
You can expand and collapse the **Filters**, **Visualizations**, and **Fields** panes by selecting the arrows at the tops of the panes. Collapsing the panes provides more space on the canvas to build cool visualizations.



The Visualizations pane shows information about the visualization and lets you modify it.

1. The Fields option in the Visualization pane lets you drag data fields to Legend and other field wells in the pane.
2. The Format option lets you apply formatting and other controls to visualizations.
3. The icons show the type of visualization created. You can change the type of a selected visualization by selecting a different icon, or create a new visualization by selecting an icon with no existing visualization selected
4. The options available in the Fields and Format areas depend on the type of visualization and data you have.
5. You want your map visualization to show only the top 10 weather states.

To show only the top 10 states, in the Filters pane, hover over State is (All) and expand the arrow that appears. Under Filter type, drop down and select Top N. Under Show items, select Bottom, because you want to show the items with the lowest numerical ranks, and enter *10* in the next field.

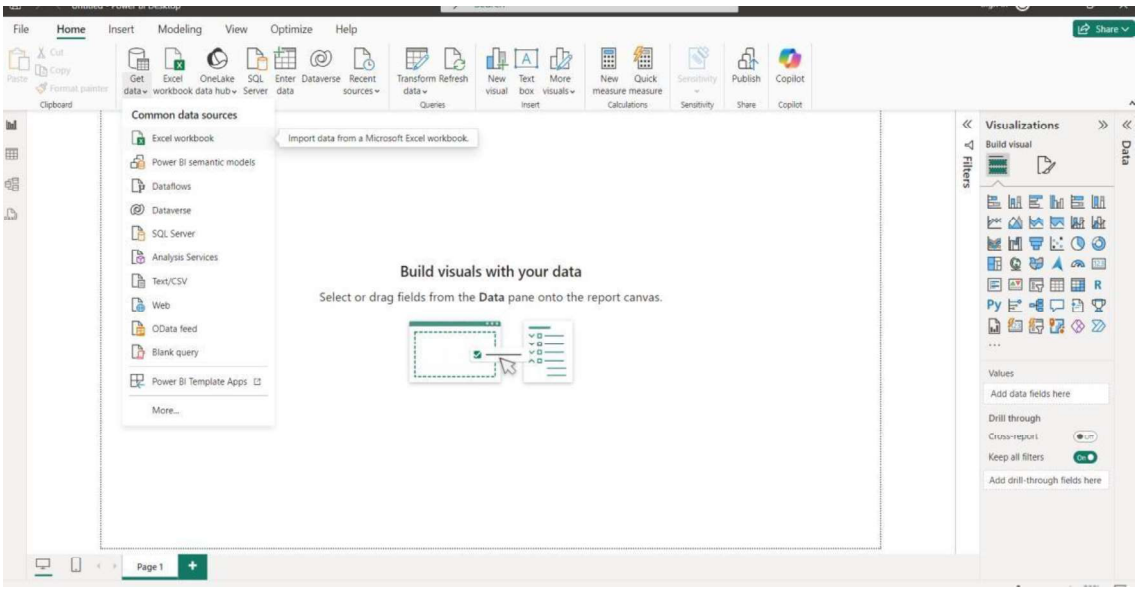

Visualizations
Build visual
1
2
3
Location
State
Legend
Add data fields here
Latitude
Add data fields here
Longitude
Add data fields here
Bubble size
Add data fields here
Tooltips
Add data fields here

Program 7 : Creating Reports & Visualizations - Different types of charts, Formatting charts with Title, Colors

17 Most Common Charts available in Power BI:

- Bar Chart
- Line Chart
- Scatterplot
- Sparkline
- Pie Chart
- Gauge
- Waterfall Chart
- Funnel Chart
- Heat Map / Matrix
- Histogram
- Box Plot
- Maps
- Tables
- Indicators
- Area Chart
- Radar or Spider Chart
- Tree Map

- Open **Power BI Desktop**
- Click on **Get data** in ribbon pane
- Click on **Excel worksheet** option



- Choose specific dataset and open it. Example: HR Data.csv
- Click on **Transform Data** button