PROGRAM 5: Introducing Power BI –Components and the flow of work. Power BI Desktop Interface-The Report has five main areas.

Power BI includes the following components −

- **Power BI Desktop** − This is used to create reports and data visualizations on the dataset.
- **Power BI Gateway** − You can use Power BI on-premises gateway to keep your data fresh by connecting to your on- premises data sources without the need to move the data. It allows you to query large datasets and benefit from the existing investments.
- **Power BI Mobile Apps** − Using Power BI mobile apps, you can stay connected to their data from anywhere. Power BI apps are available for Windows, iOS, and Android platform.
- **Power BI Service** − This is a cloud service and is used to publish Power BI reports and data visualizations

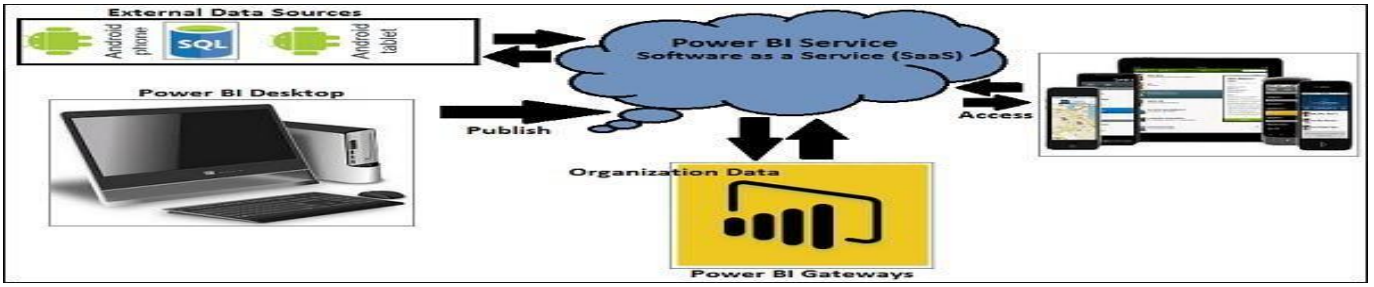


Fig 1 : The Components of Power BI

FLOW OF WORK

- A typical Power BI workflow involves more than one type of content.
- A Power BI designer (yellow in the diagram) collects data from semantic models, brings it into Power BI Desktop for analysis, and creates reports full of visualizations that highlight interesting facts and insights.
- The designer pins visualizations from reports to dashboards, and shares the reports and dashboards with business users like you (black in the diagram).

Fig 2: Flow of work

-  A visualization (or visual), is a type of chart built by Power BI designers. The visuals display the data from reports and semantic models. Because they're highly interactive, you can slice, filter, highlight, change, and even drill into visualizations.

-  A semantic model is a container of data. For example, it might be an Excel file from the World Health Organization. It might also be a company- owned database of customers, or it might be a Salesforce file. And it might be all three if the designer combines them into a single model. Designers manage semantic models. The data contained in semantic models is used to build reports, dashboards, and apps that designers share with you.

-  A dashboard is a single screen with tiles of interactive visuals, text, and graphics. A dashboard collects your most important metrics, or a focused set of metrics, on one screen, to tell a story or answer a question. The dashboard content comes from one or more reports and one or more semantic models.

-  A report is one or more pages of interactive visuals, text, and graphics that together make up a single report. Power BI bases a report on a single semantic model. Often, the designer organizes report pages to each address a central area of interest or answer a single question.

-  An app is a way for designers to bundle and share related dashboards, reports, and semantic models together. Business users receive some apps automatically but can go search for other apps created by colleagues or by the community. For example, out-of- the-box apps are available for external services you may already use, like Google Analytics and Microsoft Dynamics CRM.

Power BI Desktop Interface-The Report has five main areas.

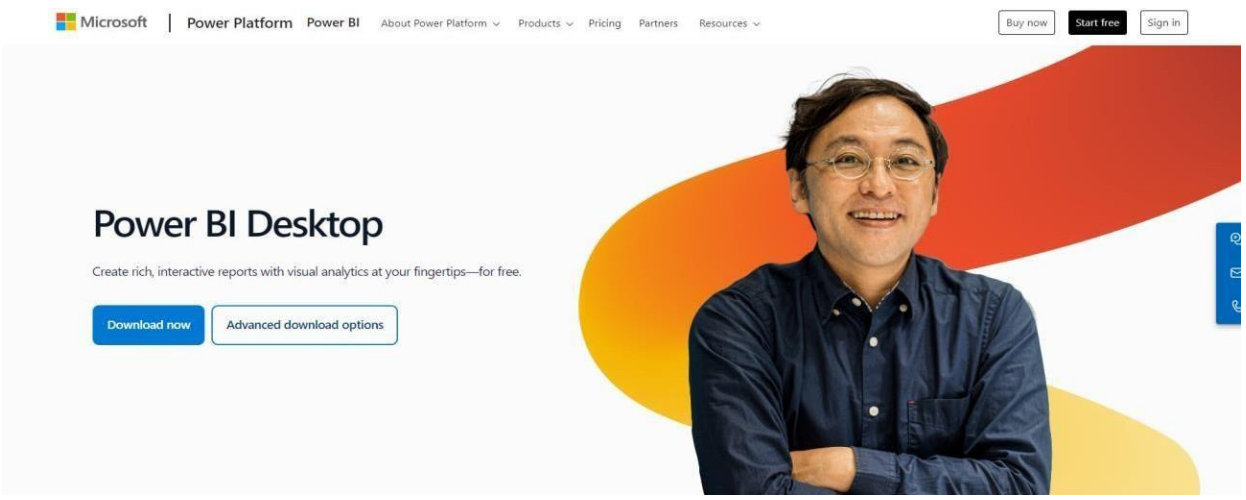
Downloading and Installing Power BI Desktop

Power BI Desktop is available in both 32-bit and 64-bit versions. To download the latest version, you can use the following link –

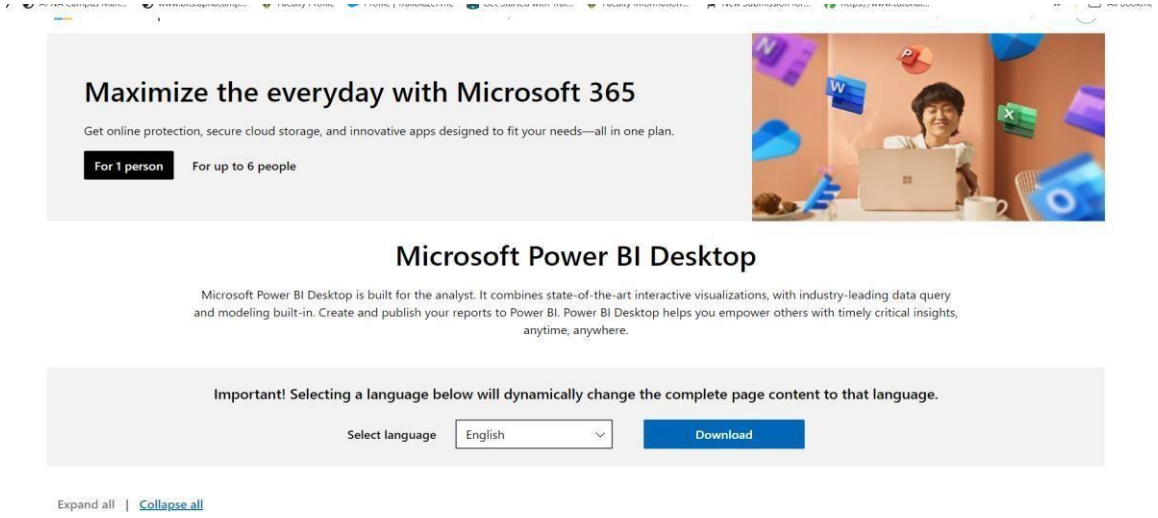
The Steps to be followed

1. **Download from the link** **https://www.microsoft.com/en-us/power-platform/products/power-bi/downloads**

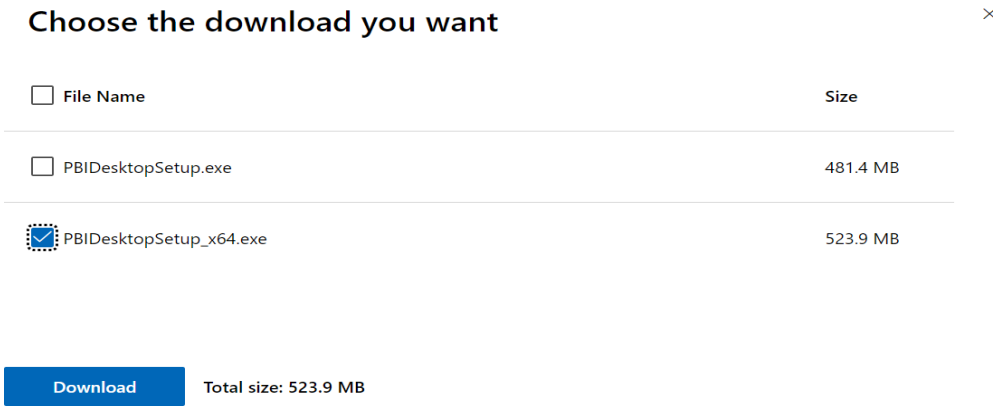
2. Click on Products-Power BI--Desktop



3. Click on Advanced Download option



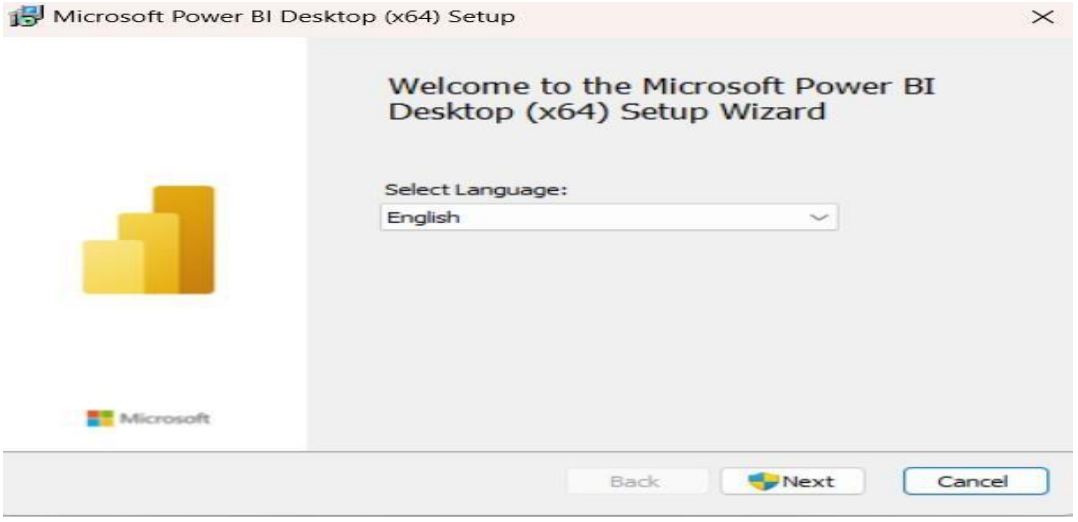
4. Select the Language as English and Click on download and choose PBIDEsktopSetup_x64.exe



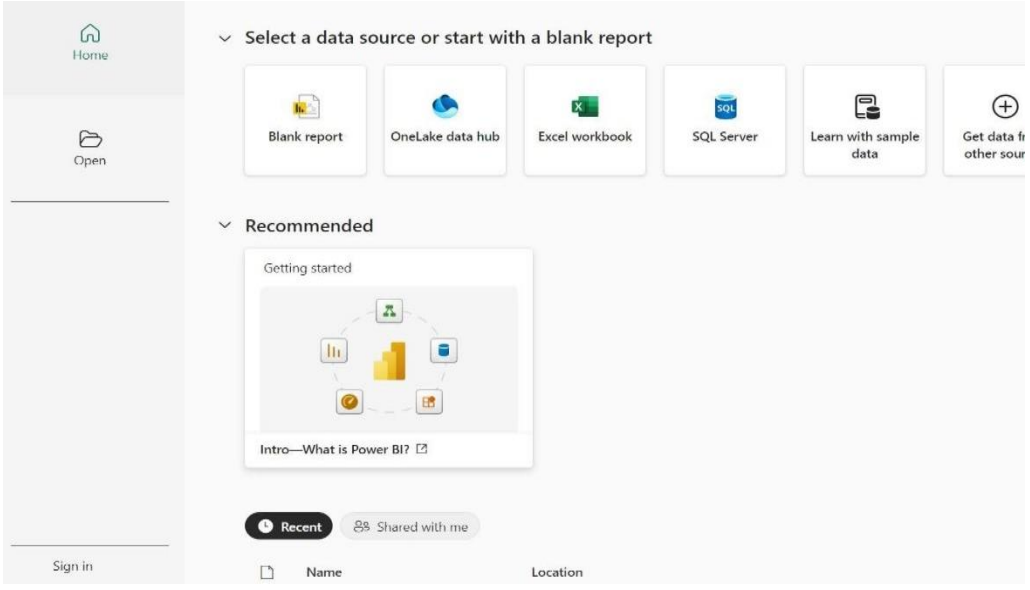
5. **Download Begins and you will get exe file which will be downloaded in your downloads folder**

PBIDesktopSetup_x64 (2).exe

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



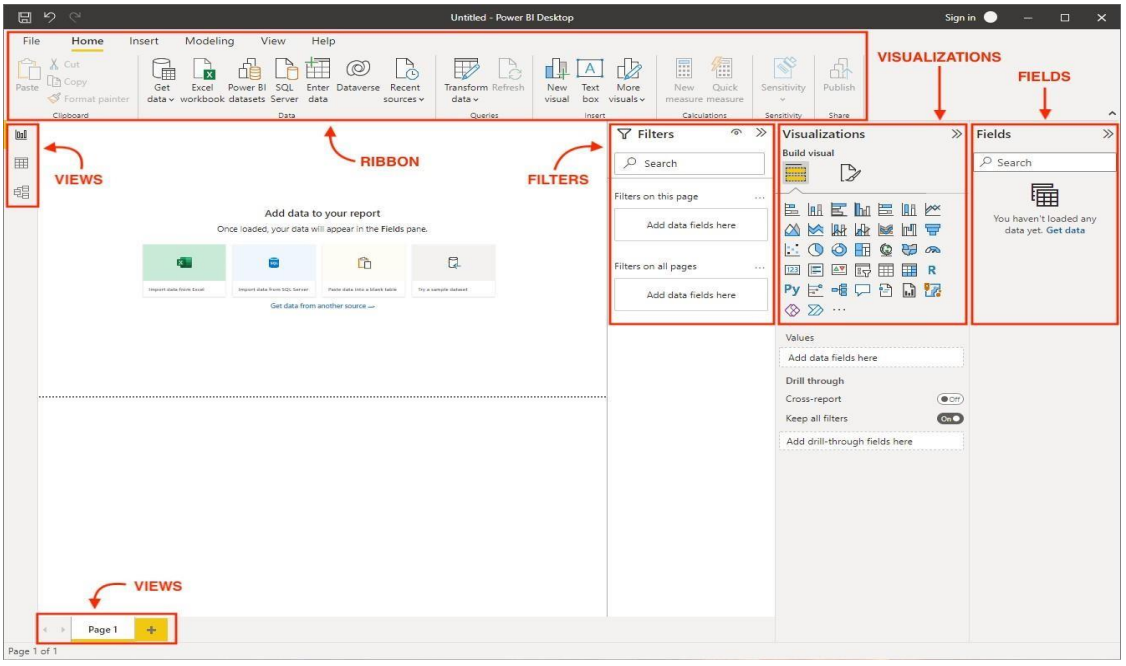
7. **Click on Next button until you get Finish button and finally installationwill be done.**
8. **Once the Installation is done ,double click on Power BI App.**
   The screen appears as below



When you launch the application, Power BI Desktop will start with a blank report.

Let's go 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 datasets connecting 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

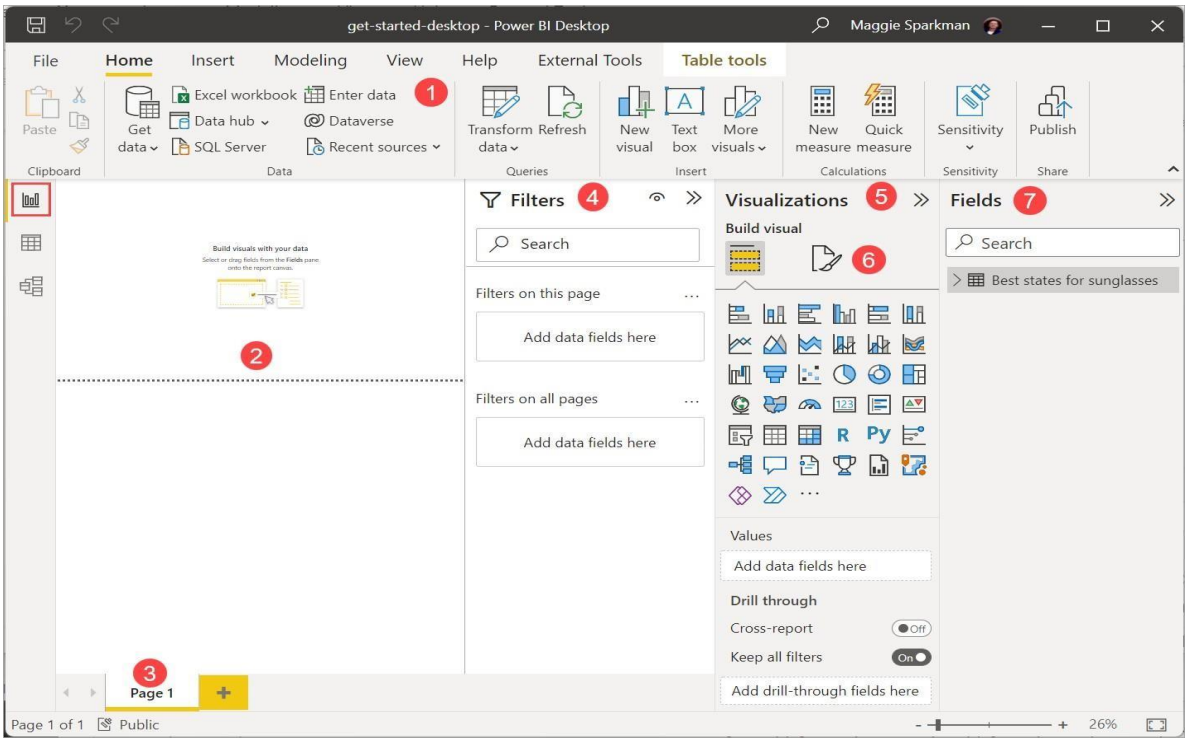
It is a Data Modelling technique that is used to create relationships between datasets. It performs complex computations by utilizing DAX functions.

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 withreports 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.