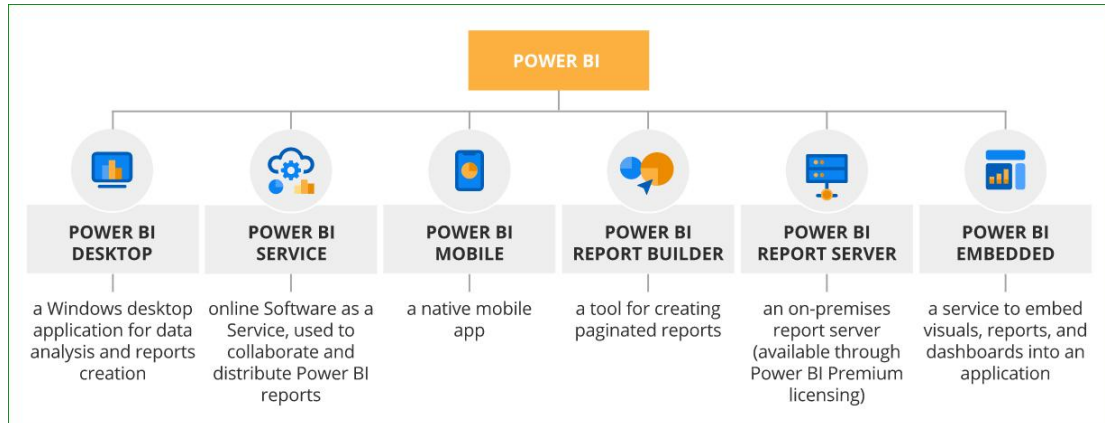


# Power BI Assignment 3

## 1. List and explain different PowerBi products?

Ans:



Power BI products offered by Microsoft:

**Power BI Desktop:** Power BI Desktop is a Windows application that allows users to create powerful data visualizations and reports. It includes features for data import, transformation, modeling, and reporting, and allows for the creation of custom visualizations using R or Python scripts. Power BI Desktop is available for free and is ideal for individual users who need to create data reports and visualizations.

**Power BI Service:** Power BI Service is a cloud-based service that allows users to create, view, and share reports and dashboards. It provides features for data visualization, sharing, collaboration, and analytics, and includes options for real-time data streaming, alerts, and notifications. Power BI Service is available as a subscription-based service and is ideal for businesses and teams that need to create and share data insights.

**Power BI Mobile:** Power BI Mobile is a mobile application that allows users to access and interact with Power BI reports and dashboards on-the-go. It provides features for viewing and sharing reports, setting alerts, and collaborating with team members. Power BI Mobile is available for free and is ideal for users who need to access data insights from their mobile devices.

**Power BI Report Server:** Power BI Report Server is an on-premises server solution that allows users to host Power BI reports and dashboards within their organization's network. It provides features for data visualization, sharing, collaboration, and analytics, and includes options for real-time data streaming

and alerts. Power BI Report Server is available as a perpetual license and is ideal for businesses that require an on-premises solution for data analytics and reporting.

**Power BI Embedded:** Power BI Embedded is a service that allows developers to embed Power BI reports and visualizations within their custom applications. It provides features for data visualization, embedding, sharing, and collaboration, and includes options for real-time data streaming and alerts. Power BI Embedded is available as a subscription-based service and is ideal for businesses that need to create custom data applications for their customers.

Overall, the different Power BI products provide a range of options for users to create, view, and share data insights, either on their own or in collaboration with others. Whether you need a Windows application, a cloud-based service, a mobile app, an on-premises solution, or an embedded reporting option, there is a Power BI product that can meet your needs.

## *2. What limitations of Excel, Microsoft solved by PowerBI?*

Ans: While Excel is a powerful tool for data analysis, there are several limitations that Microsoft has addressed with the introduction of Power BI. Here are some examples:

**Scalability:** Excel is limited in its ability to handle large volumes of data. When working with big data, Excel can become slow and inefficient, and may even crash. Power BI, on the other hand, is designed to handle large data sets and can process data quickly and efficiently. This makes it ideal for working with big data and creating reports and visualizations based on large data sets.

**Data integration:** Excel has limited options for integrating data from different sources. This can make it difficult to bring together data from multiple sources and create reports and visualizations based on that data. Power BI, on the other hand, has a wide range of data connectors that allow users to easily import data from different sources, including databases, cloud services, and even social media platforms. This makes it easier to create reports and visualizations based on data from multiple sources.

**Real-time data:** Excel has limited options for working with real-time data. This can make it difficult to create reports and visualizations that update in real-time as data changes. Power BI, on the other hand, has built-in features for working with real-time data, including the ability to stream data from a variety of sources and create reports and visualizations that update in real-time.

**Collaboration:** Excel is limited in its ability to collaborate on reports and visualizations. While it is possible to share Excel files with others, this can lead to version control issues and can make it difficult to collaborate on a single report or visualization. Power BI, on the other hand, has built-in collaboration features that allow users to share reports and visualizations with others and collaborate on them in real-time. This makes it easier for teams to work together on data projects.

Overall, Power BI addresses several limitations of Excel by providing more advanced features for handling large data sets, integrating data from multiple sources, working with real-time data, and collaborating on reports and visualizations. While Excel is still a useful tool for data analysis, Power BI provides a more robust solution for data professionals who need to work with large data sets and create reports and visualizations based on that data.

### *3. Explain PowerQuery?*

Ans:

Power Query is a data transformation and cleansing tool that is integrated into Microsoft Power BI, Excel, and other Microsoft products. It allows users to connect to various data sources, combine, transform, and clean data, and load the data into a Power BI or Excel data model for analysis and reporting.

Power Query provides a user-friendly interface that simplifies the process of importing data from a variety of sources, such as databases, spreadsheets, web pages, and cloud services. It supports a wide range of data formats, including CSV, Excel, XML, JSON, and many others.

With Power Query, users can perform a variety of data transformation and cleansing tasks, such as removing duplicates, splitting columns, merging tables, filtering data, pivoting and unpivoting tables, and creating calculated columns.

One of the key benefits of Power Query is that it uses a graphical user interface to perform data transformation and cleansing, which eliminates the need for users to write complex code or SQL queries. Power Query also provides a powerful formula language called M, which allows users to create custom transformations and calculations.

Once the data is transformed and cleansed using Power Query, it can be loaded into a Power BI or Excel data model for further analysis and reporting. Power Query supports automatic data refresh, so users can connect to data sources that are updated regularly and ensure that their reports and dashboards always reflect the most up-to-date information.

Overall, Power Query is a powerful and user-friendly tool that makes it easy for users to connect to and transform data from a variety of sources, and prepare it for analysis and reporting in Power BI and Excel.

#### *4. Explain PowerMap?*

Ans:

Power Map is a tool that helps you view data on a map. You can use it to search for information in a fun and interactive way like a game! Imagine you have a lot of information about different countries, such as their population, languages spoken or famous places.

With Power Map you can view all this information on a world map. You can make maps for different countries in different colors or sizes depending on what you want to see. For example, by viewing a world map where countries are colored by population, you can see which countries have the most and least populations. Or share the map with symbols of famous landmarks like the Eiffel Tower or the Statue of Liberty so you can see them all over the world.

Power Map is like a great tool that helps you search for information about the world in an easy and fun way. It's like a game with a big beautiful map

#### *5. How powerBi eliminated the need to host SharePoint Server on premises?*

Ans: Power BI provides a cloud-based data visualization and reporting platform, eliminating the need to host SharePoint Server on-premises.

SharePoint Server is traditionally used as an integration for sharing and managing data, but it also has a feature called Excel Services that allows users to publish Excel workbooks with interactive views and reports. However, this requires an on-premises installation of SharePoint Server, which can be costly and difficult to manage.

With Power BI, users can create and share interactive reports and dashboards in the cloud without having to install SharePoint Server locally. Power BI provides links to various data sources, and users can use Power Query to transform and clean up data. They can then use the drag and drop interface to create visualizations and reports for the Power BI service.

The Power BI service allows users to share their reports and dashboards with others by embedding them on a SharePoint Online site, website, or mobile app, or directly from the Power BI service. Users can also collaborate on reports and dashboards in real time and receive alerts and notifications when data changes.

Overall, Power BI provides a cost-effective and easy-to-use platform for data visualization and reporting without the need for an on-site SharePoint Server installation.

*6. Explain the updates done in Power Bi Service(power BI 2.0) as compared to older version ?*

Ans:

**Advanced Data Modeling and Analysis:** Power BI 2.0 offers Power BI Desktop, a powerful data and analytics tool that allows users to build complex data models, transform and clean data, and create custom DAX tables and metrics.

**Enhanced Data Visualization:** Power BI 2.0 provides many new and improved data visualization options, including visualization, drill-down and drill-down capabilities, and support for geospatial data and chart sharing location.

**Collaboration and integration:** Power BI 2.0 offers many new collaboration and integration features, including the ability to share reports and dashboards with others, integration and true collaboration, and integration with Microsoft Teams.

**Enhanced mobile experience:** Power BI 2.0 provides native apps with enhanced functionality, offline capabilities, and interactivity support for iOS, Android, and Windows devices.