**Power BI Assignment 3**

**List and explain different PowerBi products?**

Power BI is a suite of business analytics tools that delivers insights throughout an organization. The main Power BI products include:

Power BI Desktop: A free desktop application that enables users to connect to, transform, and visualize data with a wide range of charts, graphs, and other interactive visualizations.

Power BI Service (previously known as Power BI Online): A cloud-based service that allows users to create and share interactive dashboards and reports with others in their organization. It also includes features such as data collaboration, data governance, and data integration.

Power BI Mobile: A set of apps for iOS, Android, and Windows devices that allow users to access, view, and interact with Power BI dashboards and reports on the go.

Power BI Embedded: A set of APIs and tools that allow developers to embed Power BI dashboards, reports, and visualizations into their own applications and websites.

Power BI Report Server: An on-premises report server that allows users to publish, schedule, and distribute Power BI reports and dashboards within an organization.

Power BI Premium: An add-on to the Power BI Service that provides additional capacity, performance, and scalability for organizations with large data sets or high usage requirements.

Power BI Dataflows: A data preparation and management tool that allows users to connect to and transform data from a wide range of sources, and then reuse that data across multiple Power BI reports and dashboards.

Power BI Apps: Pre-built collections of dashboards, reports, and datasets that provide solutions for specific industries or scenarios, such as sales, finance, and HR.

**What limitations of Excel, Microsoft solved by PowerBi?**

Power BI is a business analytics tool that is designed to provide a more robust and comprehensive solution for data visualization and analysis than Excel. It offers a number of features and capabilities that can help to overcome some of the limitations of Excel:

Data Connectivity: Power BI offers a wide range of data connectors that allow users to easily connect to and retrieve data from a variety of sources, such as databases, files, and web services. This is a significant improvement over Excel, which requires users to manually import data or use complex formulas to retrieve data from external sources.

Data Preparation: Power BI includes a range of tools and features that make it easier to clean, transform, and shape data before it is used in a report or dashboard. This can be a time-consuming process in Excel, especially for large or complex datasets.

Data Visualization: Power BI provides a wide range of interactive visualizations that can be used to explore and analyze data. These visualizations are more flexible and customizable than those available in Excel, and they are designed to be more visually appealing and effective at communicating insights.

Collaboration: Power BI includes features that make it easy to share reports and dashboards with others in an organization, and to collaborate on the creation and analysis of data. This is a significant improvement over Excel, which does not have built-in collaboration features.

Scalability: Power BI is designed to handle large volumes of data and high levels of usage, making it a more suitable tool for organizations with large or growing data needs. This is a limitation of Excel, which can become slow or unreliable when working with large datasets or when multiple users are accessing the same file.

**Explain PowerQuery?**

Power Query is a data preparation and transformation tool that is included with Power BI and Excel. It allows users to connect to, transform, and shape data from a wide range of sources, including databases, files, and web services.

Power Query includes a wide range of connectors that allow users to easily connect to and retrieve data from a variety of sources, such as databases, files, and web services.

Power Query provides a range of tools and features that make it easy to clean, transform, and shape data before it is used in a report or dashboard. This includes features such as filtering, pivoting, grouping, and merging data.

Power Query allows users to add additional data to their datasets by combining data from multiple sources or by using functions to calculate new values.

Power Query can be used to combine data from multiple sources and create "mashups" of data that can be used in Power BI or Excel.

Power Query allows users to save their data transformation steps as reusable queries that can be easily shared with others or used in multiple reports or dashboards.

**Explain PowerMap?**

**Power Map** is a data visualization tool that is included with certain versions of Excel, such as Excel 2013 and Excel 2016. It allows users to create interactive maps and 3D visualizations of data that is plotted on a map.

**Power Map** supports a variety of map types, including street maps, satellite maps, and terrain maps.

**Power Map** allows users to plot data on a map and visualize it using a range of visualizations, such as heat maps, bubble maps, and 3D columns.

Custom Maps: Power Map allows users to create custom maps by importing data from Excel or by using Bing Maps data.

**Power Map** is a useful tool for exploring and visualizing data that is related to geographical locations. It can be used to uncover patterns and trends in data that may not be immediately apparent when viewing the data in a table or chart.

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

Power BI can be used to create and share dashboards and reports that are hosted in the cloud, rather than on premises. This means that organizations can use Power BI without the need to host SharePoint Server on their own servers.

Power BI includes a cloud-based service called Power BI Service (previously known as Power BI Online), which allows users to create and share interactive dashboards and reports with others in their organization. These dashboards and reports can be accessed from any device with an internet connection, eliminating the need to install and maintain software on local servers.

In addition to the Power BI Service, Power BI also includes a set of mobile apps for iOS, Android, and Windows devices that allow users to access, view, and interact with Power BI dashboards and reports on the go.

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

Power BI Service (previously known as Power BI Online) is a cloud-based service that allows users to create and share interactive dashboards and reports with others in their organization. Power BI has undergone a number of updates and improvements since its initial release, including the release of Power BI 2.0, which introduced a number of new features and capabilities.

Some of the key updates and improvements in Power BI Service 2.0 compared to older versions include:

Custom Visuals: Power BI 2.0 introduced the ability to create and use custom visuals, which are user-created visualizations that can be added to Power BI reports and dashboards.

Q&A: Power BI 2.0 introduced the ability to use natural language queries to explore and analyze data in Power BI. This feature, called Q&A, allows users to ask questions about their data using simple language, and receive visual answers in the form of charts, graphs, and other visualizations.

Data Connectivity: Power BI 2.0 introduced a number of new data connectors, including connectors for popular cloud-based services such as Google Analytics, Salesforce, and Dynamics 365.

Collaboration: Power BI 2.0 introduced a number of new collaboration features, including the ability to share dashboards and reports with users outside of an organization, and to collaborate on the creation and analysis of data in real-time.

Data Management: Power BI 2.0 introduced a number of new data management features, including the ability to schedule data refresh, manage data access and security, and monitor data usage.

Overall, Power BI 2.0 introduced a number of significant updates and improvements over older versions, making it a more powerful and comprehensive business analytics tool.