**Power BI Assignment 3**

1. **List and explain different PowerBi products?**

A: Power BI Desktop: This is a Windows application that allows users to connect to various data sources, transform and model the data, create visualizations and reports, and publish them to the Power BI Service.

Power BI Service: This is a cloud-based service that allows users to access and share their reports and dashboards with others. It also provides additional features such as collaboration, data governance, and data refreshes.

Power BI Mobile: This is a mobile app for iOS, Android, and Windows that allows users to view and interact with their reports and dashboards on-the-go.

Power BI Report Server: This is an on-premises solution that allows users to host and share their reports and dashboards within their own organization's network.

Power BI Premium: This is a paid add-on to the Power BI Service that provides additional features such as larger data capacities, more frequent data refreshes, and the ability to share reports with external users.

Power BI Embedded: This is a service that allows developers to embed Power BI reports and dashboards into their own applications.

Power BI Dataflow: This is a feature that allows users to create reusable data models across multiple reports and dashboards, which makes data preparation and management more efficient.

Power BI Dataflow and Power Query: This is a feature that allows users to perform data transformation and integration tasks on their data sources and create a dataflow which could be used as a single source of truth for multiple reports and dashboards.

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

A: Data size limitations: Excel has limitations on the amount of data it can handle, which can make it difficult to work with large data sets. Power BI can handle much larger data sets and can also connect to big data sources such as Hadoop and Spark.

Data visualization limitations: Excel has basic visualization capabilities, such as charts and tables, but Power BI provides more advanced visualization options, such as interactive dashboards, maps, and gauges, which can help users better understand their data.

Data sharing limitations: Excel files can be shared among users, but the process can be cumbersome and error-prone. Power BI allows users to easily share reports and dashboards with others through the Power BI Service, making it easier to collaborate and share insights.

Limited data visualization option: Excel has limited data visualization options, which can make it difficult to represent data in a way that is easy to understand. Power BI, on the other hand, offers a wide range of data visualization options, including charts, tables, maps, and gauges, which can help users better understand their data.

Data refresh limitations: Excel requires manual data refreshes, which can be time-consuming and error-prone. Power BI can automatically refresh data from various sources, making it easier to keep reports and dashboards up-to-date.

Limited modeling capabilities: Excel has basic modeling capabilities,

1. **Explain PowerQuery?**

A: It is a data connection and transformation tool built into the Power BI Desktop and Excel. It allows users to connect to various data sources, such as databases, spreadsheets, and web services, and perform a wide range of data transformation and cleaning tasks, such as filtering, sorting, and grouping data.

Power Query also includes a functional language called "M" that can be used to create custom data transformation steps. This allows users to perform advanced tasks, such as splitting columns, merging tables, and removing duplicates.

1. **Explain PowerMap?**

A: It is a data visualization tool that allows users to create interactive maps and visualizations in Power BI and Excel. It allows users to represent geographic data on a map, such as sales data by region, population data by city, or weather data by temperature.

Power Map enables users to create 3D map visualizations by layering data on top of a map, which can help users identify patterns and trends in their data. Users can also customize the map by adjusting the colors, labels, and legends to make their data more meaningful.

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

A: Power BI eliminates the need to host SharePoint Server on-premises by providing a cloud-based service for sharing and collaborating on reports and dashboards, with additional features such as data security, data governance, and collaboration.

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

A:Improved User Interface: Power BI 2.0 has a more modern and user-friendly interface, making it easier to navigate and find the information you need.

Dashboard and Report Sharing: Power BI 2.0 allows users to share their dashboards and reports with others by providing them with a link or by creating an app that can be embedded in a website or portal.

Collaboration and Comments: Power BI 2.0 allows users to collaborate on reports and dashboards by adding comments and tagging other users.

Data Governance: Power BI 2.0 provides features like row-level security, which allows users to limit access to specific rows of data based on user roles.

Data Refresh: Power BI 2.0 allows users to schedule data refreshes, which ensures that the data used in the reports and dashboards is up-to-date.

Custom Visuals: Power BI 2.0 allows users to create custom visuals using R and Python.

Mobile Support: Power BI 2.0 has mobile apps available for both iOS and Android, allowing users to view and interact with their reports and dashboards on the go.

Advanced Analytics: Power BI 2.0 includes advanced analytics capabilities such as data modeling, data discovery, and data visualization.

Real-time streaming: Power BI 2.0 allows users to stream real-time data and create visualizations in near real-time

AI Insights: Power BI 2.0 includes AI-powered insights which allow users to detect patterns and trends in their data and create forecasts, also known as Quick Insights.