Power BI Assignment 3

1. List and explain different PowerBi products?

Microsoft offers a variety of Power BI products, each designed to cater to different needs. **Power BI Desktop** is a Windows application for desktop computers that allows users to create interactive reports and dashboards. **Power BI Pro** is a cloud-based service that enables users to publish reports created in Power BI Desktop, share dashboards, and collaborate with others in their organization. **Power BI Premium** provides more capacity and flexibility than Power BI Pro, allowing an organization to use Power BI on a larger scale. It offers faster data refresh rates, more storage, and the ability to distribute reports broadly across an enterprise and beyond, without requiring per-user licenses for viewers. **Power BI Mobile** is an app for iOS and Android devices that allows users to access Power BI reports and dashboards on the go. **Power BI Embedded** is a service that developers can use to incorporate Power BI visuals into other applications. Lastly, **Power BI Report Server** is an on-premises solution for companies that need to keep their data and reports entirely within their own network.

2. What limitations of Excel, Microsoft solved by PowerBi?

Microsoft PowerBI addresses several limitations of Excel, particularly in the context of Business Intelligence (BI). While Excel is a powerful tool for data analysis, it has limitations when it comes to handling large volumes of data. Excel functions slow down significantly when dealing with more than one million rows of data. PowerBI, on the other hand, can handle much larger datasets without performance issues. Excel also has limitations in terms of collaboration, data integrity/security, and scalability. PowerBI overcomes these by providing a platform for real-time collaboration, robust security features, and the ability to scale with business needs. Furthermore, Excel can have outdated and unreliable data due to exports, while PowerBI allows you to work with data directly from the source in real-time. Lastly, Excel's data intake can be slow and limited, whereas PowerBI can handle a much larger data intake efficiently.

3. Explain PowerQuery?

Power Query is a data extraction, loading, and transformation tool developed by Microsoft. It allows you to import data from various sources and then clean, transform, and reshape it as needed. Power Query comes with a graphical interface for getting data from sources and a Power Query Editor for applying transformations. It's available in many products and services, and the destination where the data will be stored depends on where Power Query was used. Using Power Query, you can perform the extract, transform, and load (ETL) processing of data. It helps business users spend less time on data preparation, which delays the work of analysis and decision-making. Power Query offers the ability to work against a subset of the entire dataset to define the required data transformations, allowing you to easily filter down and transform your data to a manageable size. Power Query queries can be refreshed manually or by taking advantage of scheduled refresh capabilities in specific products or even programmatically.

4.Explain PowerMap?

Microsoft Power Map for Excel is a three-dimensional (3-D) data visualization tool that allows you to view information in new ways. It enables you to plot geographic and temporal data on a 3-D globe or custom map, show it over time, and create visual tours that you can share with others. You can use Power Map to map data, discover insights by viewing your data in geographic space and seeing time-stamped data change over time, and share stories by capturing screenshots and building cinematic, guided video tours. It's particularly useful for plotting more than a million rows of data visually on Bing maps in 3-D format from an Excel table or Data Model in Excel.

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

Power BI has made it possible to connect your Office 365 tenant to data located on premises, eliminating the need to host SharePoint Server on premises. This is achieved through the Data Management Gateway (DMG). The DMG must be installed on a non-SQL server in your on premises environment. A new Gateway must be created via your BI admin center. You must register the gateway with the on premises DMG client. You can then store your credentials for the data sources on premises or in the cloud. This makes the connection outside the firewall, allowing you to connect to your data source. This has been a common requirement and is now made possible with Power BI.

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

The Power BI 2.0 update has brought several improvements and new features. In terms of performance, it now has the ability to retrieve several million rows of data, and fine-tuning is possible through the batch size parameter. It also allows for switching execution modes and supports compressed mode, which is especially beneficial for high-latency connections or large semantic models. The update also includes new features for Power BI Desktop and the Power BI service, such as a button slicer, reference labels, enhanced Q&A visuals with suggested synonyms from Copilot, on-object interaction updates, and support for Azure Maps visual that aggregates multiple data points at the same location. The data model can now be edited in the Power BI service, and there are many new and updated visuals. There are also updates to the connectors, including a new connector for Azure Resource Graph. The datasets have been renamed to semantic models, and there is support for Direct Lake on Synapse Data Warehouse. A DAX query view has been added to write and run DAX queries on your model. These are just a few of the updates; there are many more features and improvements in the Power BI 2.0 update.