**Power BI Assignment 3**

1. List and explain different PowerBi products?

There are several Power BI products:

* **Power BI Desktop**: This is a Windows application that allows you to create rich and interactive data visualizations using a wide range of data sources. It has advanced data modeling and transformation capabilities and is typically used by data analysts and power users.
* **Power BI Service**: This is a cloud-based service that allows you to publish, share, and collaborate on your Power BI reports and dashboards. It includes features such as automatic data refresh, natural language Q&A, and mobile access.
* **Power BI Mobile**: This is a mobile app that allows you to view and interact with your Power BI reports and dashboards on the go, from your smartphone or tablet.
* **Power BI Report Server**: This is an on-premises solution that allows you to deploy and manage Power BI reports and dashboards within your organization's firewall. It provides similar functionality to the Power BI Service, but with additional security and control options.
* **Power BI Embedded**: This is a developer platform that allows you to embed Power BI reports and dashboards within your own applications or websites. It offers a flexible pricing model based on usage, making it a cost-effective option for businesses that want to provide analytics capabilities to their customers or partners.

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

Some limitations that can be addressed by Power BI:

**Data Size**: Excel has limits on the amount of data it can handle, especially when it comes to analyzing large data sets. Power BI, on the other hand, can handle much larger data sets and can scale up as needed.

**Data Integration**: In Excel, integrating data from multiple sources can be time-consuming and error-prone. Power BI provides a simple and efficient way to combine data from multiple sources and transform it into a usable format.

**Data Visualization**: While Excel has basic data visualization capabilities, it can be limited in terms of creating interactive and dynamic visualizations. Power BI provides a wide range of visualization options, including charts, maps, and gauges, that are interactive and easy to use.

**Collaboration**: In Excel, sharing and collaborating on workbooks can be cumbersome, especially when working with large data sets. Power BI provides a cloud-based service that allows for easy sharing and collaboration on reports and dashboards.

**Real-Time Data**: In Excel, data is typically static and requires manual updates. Power BI can connect to real-time data sources and update visualizations automatically, providing up-to-date information in real-time.

1. Explain PowerQuery?

* Power Query is a data transformation and data preparation tool that is part of the Power BI suite of business analytics tools from Microsoft. It is a powerful tool that enables users to quickly and easily extract, transform, and load (ETL) data from a wide range of data sources into a usable format for analysis.
* Power Query allows users to connect to a wide range of data sources, including databases, Excel spreadsheets, CSV files, and web-based data sources. It also allows users to transform the data in a variety of ways, such as splitting columns, merging data, filtering rows, and pivoting tables.
* One of the main benefits of Power Query is its ability to automate the data transformation process. Once a transformation has been created, it can be saved and applied to other data sources, which can save a lot of time and effort. Additionally, Power Query provides a user-friendly interface that allows even non-technical users to transform and manipulate data without needing to write complex code.
* Power Query is also fully integrated with the Power BI suite, allowing users to seamlessly import data into Power BI for analysis and reporting. Overall, Power Query is a powerful data transformation tool that can greatly improve the efficiency and accuracy of data preparation for analysis.

1. Explain PowerMap?

* Power Map is a data visualization tool in the Power BI suite of business analytics tools from Microsoft. It allows users to create 3D maps and interactive visualizations of data, which can help to reveal trends, patterns, and insights that may not be immediately apparent in a traditional 2D chart or table.
* With Power Map, users can plot data points on a globe, map, or custom image, and then add data layers, filters, and animations to create interactive visualizations. Users can also add in their own data, such as demographics or other geographic data, to create custom maps.

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

* Power BI eliminated the need to host SharePoint Server on premises by providing a cloud-based solution for data sharing and collaboration. Traditionally, SharePoint Server was used as a platform for hosting and sharing business intelligence reports and dashboards, which required a complex on-premises infrastructure to maintain and manage.
* With Power BI, organizations can leverage the power of the cloud to securely share and collaborate on business intelligence content without the need for a complex on-premises infrastructure. Users can easily publish reports and dashboards to the Power BI service, which provides a secure, cloud-based platform for sharing and collaboration.
* The Power BI service offers a range of features for sharing and collaboration, including role-based access control, data-driven alerts, and the ability to embed reports and dashboards in other applications. By using the Power BI service, organizations can reduce the costs and complexity associated with on-premises SharePoint Server deployments, while still providing a powerful platform for data sharing and collaboration.

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

Some of the key updates and improvements include:

* **New visualizations**: Power BI 2.0 introduced several new visualizations, including Treemaps, Combo charts, and Histograms, which allowed for more advanced and interactive data exploration.
* **Real-time dashboards**: Power BI 2.0 added support for real-time dashboards, which allowed users to monitor and analyze data in real-time using live data streams.
* **Improved data modeling**: Power BI 2.0 introduced improvements to the data modeling capabilities, including support for calculated tables, calculated columns, and relationships between tables.
* **Enhanced collaboration**: Power BI 2.0 introduced new collaboration features, including the ability to share dashboards and reports with other users, and the ability to collaborate on reports in real-time.
* **Mobile support**: Power BI 2.0 added support for mobile devices, including a mobile app for iOS and Android, which allowed users to access and interact with reports and dashboards on the go.
* **Integration with other Microsoft products**: Power BI 2.0 introduced deeper integration with other Microsoft products, including Office 365 and SharePoint, making it easier to access and share data across different platforms.