**Power BI Assignment 3**

1. List and explain different Power Bi products?

Ans:

There are several Power BI products available, each designed to serve different needs and use cases. Here are some of the main ones:

1. Power BI Desktop: This is a Windows application used to create data models, reports, and visualizations. It allows users to import data from various sources, transform and shape it, and create custom reports and dashboards.
2. Power BI Service: This is a cloud-based service for sharing, collaborating, and publishing Power BI content. It provides a centralized platform for managing reports and dashboards, and allows users to share content with others, create and join groups, and schedule data refreshes.
3. Power BI Mobile: This is a mobile app available for iOS, Android, and Windows devices that allows users to access and interact with Power BI content on the go. It provides a touch-optimized interface and allows users to view and interact with reports and dashboards on their mobile devices.
4. Power BI Report Server: This is an on-premises solution that provides a dedicated server for hosting and managing Power BI content within an organization's own infrastructure. It allows users to securely share reports and dashboards within their organization, while keeping data behind their own firewalls.
5. Power BI Embedded: This is a solution that allows developers to embed Power BI content, such as reports and dashboards, into custom applications and websites. It provides an API for integrating Power BI into custom applications, and allows developers to control the look and feel of the embedded content.
6. Power BI Premium: This is a paid subscription service that provides additional features and functionality for organizations with larger or more complex data needs. It includes features such as increased data capacity, faster data processing, and more advanced administration and security controls.

Each of these Power BI products serves a different purpose and can be used in different ways depending on the needs of the user or organization.

1. What limitations of Excel, Microsoft solved by Power Bi?

Ans:

Excel is a powerful tool for data analysis, but it has certain limitations that Power BI was designed to address. Some of the key limitations of Excel that Power BI helps to overcome include:

1. Scalability: Excel can struggle to handle very large datasets, while Power BI is designed to handle much larger volumes of data and to scale more easily.
2. Data modeling: Excel can be used to create data models, but it can be time-consuming and difficult to create and maintain complex models. Power BI provides a more intuitive and streamlined interface for building data models and creating relationships between tables.
3. Data transformation: While Excel includes some basic data transformation capabilities, Power BI provides a more robust set of tools for cleaning, transforming, and shaping data from various sources.
4. Visualization and reporting: Excel includes a variety of chart and graph types, but Power BI provides a much more comprehensive set of visualization options, as well as a more intuitive interface for creating custom reports and dashboards.
5. Collaboration: Excel is primarily designed for individual use, while Power BI is designed for collaboration and sharing. Power BI provides a centralized platform for sharing and collaborating on reports and dashboards, as well as more advanced security and permissions controls.

By addressing these limitations of Excel, Power BI helps users to more easily and effectively work with large and complex datasets, build more robust and accurate data models, create more engaging and informative reports and dashboards, and collaborate more effectively with other users.

1. Explain Power Query?

Ans:

Power Query is a data transformation and cleansing tool in Microsoft Power BI that allows users to import, transform and combine data from a wide range of sources, such as databases, spreadsheets, and web pages, and then load it into a Power BI data model for further analysis and visualization.

Power Query provides a user-friendly, visual interface for transforming and shaping data. It allows users to easily perform tasks such as filtering, sorting, grouping, pivoting, and aggregating data, as well as merging and appending data from multiple sources.

Some of the key features of Power Query include:

1. Data import: Power Query supports importing data from a wide range of sources, including databases, spreadsheets, web pages, and cloud services.
2. Data transformation: Power Query provides a range of data transformation functions, such as splitting columns, filtering rows, pivoting data, and merging tables.
3. Custom functions: Users can create custom functions in Power Query using the M language to automate complex data transformation tasks.
4. Query merging: Users can merge multiple queries into a single query, and use the results to create a data model.
5. Data profiling: Power Query provides data profiling features that allow users to explore and understand the structure and content of their data.

Overall, Power Query is a powerful and flexible tool that allows users to easily transform and cleanse their data before loading it into a Power BI data model, improving the accuracy and reliability of their analyses and visualizations.

1. Explain Power Map?

Ans:

Power Map is a 3D data visualization tool in Microsoft Power BI that allows users to create interactive and engaging geographic and time-based data visualizations on a map. It helps users to gain insights into their data by visualizing it in a way that is both informative and visually appealing.

With Power Map, users can create a variety of visualizations such as heat maps, 3D bar charts, and bubble charts that are displayed on a map. These visualizations can be animated over time to show changes in the data, and users can use filters to drill down into specific areas of the map.

Some of the key features of Power Map include:

1. Geospatial data visualization: Power Map allows users to visualize their data in a geographic context by plotting it on a map.
2. 3D data visualization: Power Map provides a 3D visualization environment that allows users to create immersive and interactive data visualizations.
3. Time-based data visualization: Power Map supports animating data visualizations over time, making it easier for users to identify patterns and trends in their data.
4. Customization: Users can customize the appearance of their data visualizations, such as changing colors, labels, and the size and shape of data points.
5. Integration: Power Map can be integrated with other Power BI tools to create more comprehensive and informative data visualizations.

Overall, Power Map is a powerful and engaging data visualization tool that allows users to create geospatial and time-based visualizations that are both informative and visually appealing. It is an effective way to gain insights into data and to communicate those insights to others.

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

Ans:

Prior to Power BI, hosting a SharePoint server on premises was often required to create and share reports and dashboards within an organization. However, Power BI has eliminated the need to host SharePoint server on premises in several ways.

Firstly, Power BI is a cloud-based solution that is built on top of the Microsoft Azure cloud platform. This means that all data and reports are stored in the cloud and can be accessed from anywhere with an internet connection, eliminating the need for on-premises hosting.

Secondly, Power BI integrates with SharePoint Online, which is also a cloud-based solution. This means that reports and dashboards created in Power BI can be easily embedded into SharePoint Online, allowing users to view and interact with the reports and dashboards directly within SharePoint Online.

Thirdly, Power BI offers a range of publishing and sharing options, allowing users to easily share reports and dashboards with others within their organization. Reports can be published to a workspace in the Power BI service and then shared with individual users or groups, and can be accessed from anywhere with an internet connection. This eliminates the need to host a SharePoint server on premises to share reports and dashboards within an organization.

Overall, Power BI's cloud-based architecture, integration with SharePoint Online, and range of sharing options have eliminated the need to host SharePoint server on premises, making it easier for organizations to create and share reports and dashboards with their employees.

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

Ans:

Power BI 2.0, also known as the Power BI Service, includes a range of updates and new features as compared to the older version. Some of the key updates include:

1. New and improved dashboards: The new version of Power BI Service includes a range of new and improved dashboards, making it easier for users to track their KPIs and get insights into their data.
2. Improved collaboration: The new version of Power BI Service includes improved collaboration features, allowing users to easily share and collaborate on reports and dashboards with others within their organization.
3. Enhanced reporting capabilities: The new version of Power BI Service includes enhanced reporting capabilities, making it easier for users to create and customize reports and visualizations.
4. Increased connectivity: The new version of Power BI Service includes increased connectivity to a range of data sources, including cloud-based and on-premises data sources.
5. Enhanced security: The new version of Power BI Service includes enhanced security features, including support for multi-factor authentication and conditional access policies.
6. Improved performance: The new version of Power BI Service includes improved performance and scalability, allowing users to work with larger data sets and complex queries more efficiently.
7. Improved mobile experience: The new version of Power BI Service includes an improved mobile experience, allowing users to access and interact with reports and dashboards on the go.

Overall, Power BI 2.0 (Power BI Service) includes a range of updates and new features that make it easier for users to create, share, and collaborate on reports and dashboards, and to gain insights into their data.