Power BI Assignment 3

1. **List and explain different Power Bi products?**
    Solution: Different Power BI products are mentioned below:

    1) Power BI Desktop: This is a Windows-based application that is used to create data models, reports, and visualizations. It is the primary development tool for creating Power BI content.

    2) Power BI Service: This is a cloud-based service that allows users to share and collaborate on Power BI content. It provides a web-based interface for creating and sharing reports and dashboards.

    3) Power BI Mobile: This is a mobile application that allows users to view and interact with Power BI content on their mobile devices. It provides a touch-optimized experience for viewing and interacting with reports and dashboards.

    4) Power BI Report Server: This is an on-premises reporting server that allows users to publish and share Power BI reports within their organization. It provides a secure way to access and share reports behind the organization's firewall.

    5) Power BI Embedded: This is a service that allows developers to embed Power BI content into their own applications. It provides an API for integrating Power BI content into custom applications and workflows.

    Overall, these different Power BI products offer a range of features and capabilities that cater to different user needs and scenarios, whether it is for creating and sharing reports, accessing them on the go, embedding them into custom applications, or managing them within an organization's IT infrastructure.

2. **What limitations of Excel, Microsoft solved by Power Bi?**
    Solution: Excel and Power BI are both powerful tools for working with data, but they have different strengths and limitations. Here are some limitations of Excel that Power BI addresses:

    1) Limited Data Capacity: Excel has a limit on the amount of data that can be processed and analyzed in a single workbook. Power BI can handle much larger data volumes and can handle complex data models.

    2) Limited Data Visualization: Excel offers basic data visualization capabilities, but it can be challenging to create advanced visualizations or customize them to fit specific needs. Power BI provides a rich set of interactive visualizations that can be customized to fit different reporting needs.

    3) Limited Data Integration: Excel can work with data from different sources, but it can be time-consuming to integrate and transform data from multiple sources. Power BI offers seamless integration with various data sources, and its data transformation tools make it easier to clean and prepare data for analysis.

1

4) Limited Collaboration: Excel workbooks can be shared, but it can be difficult to collaborate with others in real-time or track changes. Power BI provides a cloud-based service that allows users to share and collaborate on reports and dashboards in real-time, making it easier to work together on data analysis and reporting.

5) Limited Data Refresh: Excel requires manual refreshing of data, which can be time-consuming for large or complex data sets. Power BI offers automatic data refresh, allowing reports and dashboards to update in real-time with the latest data.

Overall, Power BI provides a more powerful and flexible data analysis and reporting platform that addresses many of the limitations of Excel, especially when it comes to working with large, complex data sets, creating advanced visualizations, and collaborating with others in real-time.

3. Explain Power Query?

Solution: Power Query is a data transformation and data preparation tool that is integrated with Power BI, Excel, and other Microsoft products. It allows users to connect to various data sources, such as databases, Excel files, CSV files, and other cloud-based services, and transform the data using a visual, user-friendly interface.

With Power Query, users can perform a range of data preparation tasks, including filtering, sorting, merging, and pivoting data, as well as transforming data using formulas and functions. Power Query also includes advanced data transformation features, such as data profiling, data type detection, and fuzzy matching, which can help to identify and clean up data quality issues.

One of the key benefits of Power Query is its ability to automate data preparation tasks using a process called query folding. Query folding involves pushing data preparation tasks back to the data source, which can reduce the amount of data transferred between the source and the data preparation tool, resulting in faster and more efficient data processing.

Overall, Power Query is a powerful data preparation tool that can help users clean, transform, and prepare data for analysis and reporting. Its integration with Power BI and other Microsoft products makes it easy to incorporate into existing workflows and automate data preparation tasks.

4. Explain Power Map?

Solution: Power Map is a data visualization tool that is part of the Microsoft Power BI suite. It allows users to create interactive 3D maps and tour them with animated data visualizations to explore and analyze geographic and temporal data.

With Power Map, users can plot data points on a 3D map, including geographic information such as countries, regions, and cities. They can also create custom regions and boundaries using custom shapes. Users can then apply filters and visualizations to their data, such as heat maps, bar charts, and pie charts, to gain insights into the data.

Power Map includes several features that make it easy to create engaging data visualizations. For example, users can create tours of their data, which are interactive presentations that walk viewers through a series of visualizations on the map. Users can also use time sliders to animate the data over time, which can be useful for analyzing trends and patterns.

Power Map also integrates with other Power BI tools, such as Power Query and Power Pivot, which makes it easy to import and manipulate data from various sources. Users can then use Power Map to visualize this data on a 3D map and create compelling visualizations that can help them gain insights into their data.

Overall, Power Map is a powerful data visualization tool that can help users explore and analyze geographic and temporal data in a visual and interactive way. Its integration with other Power BI tools makes it easy to incorporate into existing workflows and create engaging data visualizations.

5. How Power Bi eliminated the need to host SharePoint Server on premises?
Solution: Power BI eliminated the need to host SharePoint Server on premises by providing a cloud-based solution for sharing and collaborating on reports and dashboards. Traditionally, SharePoint Server was used to host and share business intelligence content, such as reports and dashboards, within an organization. However, hosting SharePoint Server on-premises requires significant IT infrastructure and management, which can be expensive and time-consuming.

With Power BI, organizations can host and share reports and dashboards in the cloud, which eliminates the need for on-premises infrastructure and management. Power BI also provides a secure and scalable platform for sharing and collaborating on business intelligence content, with features such as role-based access control, data encryption, and data loss prevention.

Power BI also integrates with SharePoint Online, which allows organizations to embed Power BI reports and dashboards directly into SharePoint sites and pages. This integration provides a seamless experience for users and allows them to access and interact with business intelligence content within the context of their SharePoint sites.

Overall, Power BI provides a cloud-based solution for sharing and collaborating on business intelligence content, which eliminates the need for on-premises infrastructure and management. Its integration with SharePoint Online allows organizations to embed Power BI content directly into their SharePoint sites and pages, providing a seamless experience for users.

6. Explain the updates done in Power Bi Service (Power BI 2.0) as compared to older version?
Solution: Power BI 2.0, also known as the new Power BI service, introduced several updates and improvements compared to the older version. Here are some of the key updates:

1) New User Interface: Power BI 2.0 introduced a new, modern user interface that is more intuitive and user-friendly. The new interface makes it easier to navigate and find the features and tools you need.

2) More Powerful Data Modelling: Power BI 2.0 introduced new data modelling capabilities, such as the ability to create calculated tables and columns, as well as the ability to create relationships between tables using multiple columns.

3) Improved Visualizations: Power BI 2.0 introduced several new visualizations, such as the waterfall chart and the gauge chart. It also improved the performance and flexibility of existing visualizations, such as the bar chart and the line chart.

4) Enhanced Collaboration: Power BI 2.0 introduced several new collaboration features, such as the ability to share dashboards and reports with specific users or groups, as well as the ability to comment on specific visualizations and collaborate in real-time.

5) More Integration Options: Power BI 2.0 introduced several new integration options, such as the ability to embed dashboards and reports in external applications and websites, as well as the ability to connect to more data sources and platforms.

6) Improved Performance and Scalability: Power BI 2.0 introduced several performance and scalability improvements, such as faster load times, improved caching, and better support for large datasets.

Overall, Power BI 2.0 introduced several updates and improvements compared to the older version, which make it a more powerful and flexible tool for data analysis, reporting, and collaboration.