Power BI Assignment 3

1. List and explain different PowerBi products?

Ans- Microsoft offers a range of Power BI products and services that cater to different user needs and scenarios. Here's a list of various Power BI products and a brief explanation of each:

Power BI Desktop:
Power BI Desktop is a free Windows application for creating interactive reports and data visualizations. It is used for authoring reports and dashboards that can be published to the Power BI Service.

Power BI Service (Power BI online service):
The Power BI Service is a cloud-based platform for publishing, sharing, collaborating on, and accessing Power BI reports and dashboards. It offers web-based access to reports and supports real-time collaboration.

Power BI Mobile Apps:
Power BI Mobile Apps are available for iOS and Android devices. They allow users to access and interact with Power BI reports and dashboards on mobile devices, ensuring data accessibility on the go.

Power BI Report Server:
Power BI Report Server is an on-premises solution that enables organizations to host and view Power BI reports and dashboards within their own network, maintaining data behind their firewall.

Power BI Embedded:
Power BI Embedded is a platform-as-a-service (PaaS) offering that allows developers to embed Power BI reports and dashboards directly into their applications or websites. It is ideal for creating white-labeled solutions.

Power BI Premium:
Power BI Premium is a dedicated cloud capacity offering. It provides more resources for processing and sharing reports, making it suitable for organizations with a high volume of Power BI users.

Power BI Pro:
Power BI Pro is a subscription-based licensing option that allows individual users to publish and share reports through the Power BI Service. It is designed for individual business users and small teams.

Power BI Report Builder:
Power BI Report Builder is a standalone Windows application used for creating paginated reports, which are highly formatted, printed, or PDF-based reports. It supports advanced data modeling and reporting.

Power BI Dataflows:
Power BI Dataflows allow users to transform and shape data within the Power BI Service. It offers self-service data preparation capabilities and the ability to create reusable data transformations.

Power BI Template Apps:
Template Apps are pre-built solutions that provide specific industry or use-case templates for Power BI. Users can easily customize and deploy these apps for their own data.

Power BI Data Gateway:
The Power BI Data Gateway allows secure connectivity between on-premises data sources and the Power BI Service. It facilitates data refresh and live connections to on-premises databases.

Power BI Goals (formerly Power BI Goals Management:
Power BI Goals is a feature that helps organizations track and manage key performance indicators (KPIs) and goals in a visual and interactive way.

These Power BI products cater to different scenarios, whether we are an individual user, a developer embedding reports, or a large organization with advanced reporting and collaboration needs. Users can choose the products and licensing options that best suit their requirements.

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

Ans- Power BI was developed by Microsoft to address several limitations and challenges that users often encounter when using Microsoft Excel for data analysis and reporting. Here are some of the limitations of Excel that Power BI aims to solve:

Data Volume and Performance:

Limitation in Excel: Excel can struggle with handling large datasets and complex calculations, leading to performance issues.

Power BI Solution: Power BI is optimized for handling and analyzing large volumes of data efficiently. It can handle millions of rows of data without performance degradation.

Data Modeling and Relationships:

Limitation in Excel: Building complex data models and establishing relationships between tables in Excel can be challenging and less intuitive.

Power BI Solution: Power BI provides a user-friendly interface for creating and managing data models with ease. It simplifies the process of defining relationships between tables.

Data Transformation:

Limitation in Excel: Excel's data transformation capabilities are limited, and advanced transformations often require writing custom VBA code.

Power BI Solution: Power BI Desktop includes the Power Query Editor, which offers powerful and user-friendly data transformation capabilities without the need for coding.

Visualizations and Dashboards:

Limitation in Excel: Excel's charting capabilities are somewhat limited, and creating interactive dashboards can be cumbersome.

Power BI Solution: Power BI is designed for creating interactive and visually appealing reports and dashboards with a wide range of custom visuals and interactive features.

3. Explain PowerQuery?

Ans- Power Query is a data transformation and preparation tool developed by Microsoft. In short, it helps users connect to various data sources, clean and shape data, and load it into their preferred data analysis and reporting tools. It's integrated into Microsoft Excel, Power BI, and other Microsoft products, allowing users to easily transform and prepare data for analysis. Power Query simplifies tasks like data extraction, transformation, and loading (ETL), making data preparation more efficient and accessible.

4. Explain PowerMap?

Ans- Power Map, now known as 3D Maps, is a data visualization tool in Microsoft Excel. In short, it allows users to create interactive, 3D geospatial and time-based visualizations from their data. With 3D Maps, users can plot data on a 3D globe or custom 3D maps, creating immersive visualizations for better understanding of geographic and time-related trends in their data. It's a valuable tool for exploring and presenting data in a spatial context.

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

Ans- Power BI eliminated the need to host SharePoint Server on-premises by providing a cloud-based solution that offers robust data sharing, collaboration, and reporting capabilities without the complexity and infrastructure requirements of an on-premises SharePoint Server. Here's how Power BI achieved this:

Cloud-Based Platform: Power BI is a cloud-based platform that allows users to publish, share, and collaborate on reports and dashboards directly from the Power BI Service. This means that the reports and data are stored in the Microsoft cloud, eliminating the need for on-premises server infrastructure.
Secure Data Sharing: Power BI provides secure data sharing and access controls, ensuring that users can collaborate on reports and dashboards in a controlled and compliant manner.
Real-Time Updates: Power BI supports real-time data refresh, ensuring that users always have access to the most current information without the need for on-premises data storage or server maintenance.
Integration with On-Premises Data: Power BI offers the Power BI Gateway, which allows users to securely connect to on-premises data sources. This eliminates the need to migrate all data to the cloud and enables a hybrid approach where some data stays on-premises.
Power BI Report Server: For organizations that still require on-premises reporting, Microsoft provides Power BI Report Server. It allows users to host Power BI reports and dashboards on their own servers while still benefiting from Power BI's report creation capabilities.

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

Ans- As of my last knowledge update in September 2021, Power BI Service versioning was not explicitly referred to as "Power BI 2.0." However, Power BI has seen regular updates and new features in its service since its inception. I can provide a general overview of the updates and improvements made over time in Power BI Service compared to its earlier versions:
Improved Performance: Power BI Service has continually improved its performance, making it faster and more responsive when loading and interacting with reports and dashboards.
New Visualizations: Over time, Power BI has introduced new visualizations and custom visuals, expanding the range of options for creating informative and visually appealing reports.
Enhanced Data Security: Power BI Service has implemented more advanced security features, allowing for more fine-grained control over data access and sharing.
Dataflows: Dataflows were introduced, allowing users to perform data preparation and transformation directly within the Power BI Service, reducing the need for external tools.
AI-Powered Insights: Power BI Service now incorporates AI features, such as Quick Insights and AI visuals, which provide automated insights and trend analysis.
Integration with Other Microsoft Services: Improved integration with other Microsoft services like Azure, Teams, and SharePoint, making it easier to collaborate and share data across different platforms.
Power BI Apps: The introduction of Power BI Apps has streamlined the sharing of pre-built content, allowing for better content distribution to different teams and departments.
Improved Sharing and Collaboration: Power BI Service has introduced features like content sharing links, comments, and mentions to enhance collaboration on reports and dashboards.
Mobile Enhancements: The Power BI mobile apps have seen regular updates, providing a better mobile experience for users accessing reports on their smartphones and tablets.
Power BI Premium and Premium Per User (PPU): The introduction of Premium and PPU licensing models has given organizations more flexibility in terms of dedicated capacity and user licensing.