1. List and explain different PowerBi products?

Power BI offers a range of products for data analysis and visualization:

- 1. Power BI Desktop: Windows application for creating interactive reports and visualizations.
- 2. Power BI Service: Web-based platform to share, collaborate, and publish reports and dashboards.
- 3. Power BI Mobile: Native mobile apps for accessing and interacting with reports on iOS and Android devices.
- 4. Power BI Report Server: On-premises solution to host and manage Power BI reports.
- 5. Power BI Embedded: APIs and tools to integrate Power BI into custom applications.
- 6. Power BI Dataflows: Facilitates data preparation and integration for multiple reports.
- 7. Power BI Premium and Power BI Pro: Licensing options with different capabilities and features.

These products enable data analysis, reporting, collaboration, and embedding of Power BI functionality.

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

Power BI was developed by Microsoft to address several limitations of Excel when it comes to data analysis, reporting, and visualization. Here are some of the key limitations of Excel that Power BI helps to overcome:

- 1. Scalability: Power BI handles large datasets more efficiently than Excel.
- 2. Data modeling: Power BI provides advanced and intuitive data modeling capabilities.
- 3. Data refresh: Power BI automates data refresh processes.
- 4. Collaboration and sharing: Power BI offers robust sharing and collaboration features.
- 5. Interactive visualization: Power BI provides interactive and visually appealing dashboards.
- 6. Mobile accessibility: Power BI has dedicated mobile apps for data analysis on the go.

Overall, Power BI overcomes these limitations to provide a more scalable, collaborative, and visually interactive data analysis platform compared to Excel.

3.Explain PowerQuery?

Power Query is a data transformation tool in Power BI, Excel, and other Microsoft products. It offers the following capabilities:

- 1. Data Extraction: Connect to various data sources and import data into your analysis environment.
- 2. Data Transformation: Clean, shape, and refine imported data using operations like filtering, sorting, merging, and aggregating.
- 3. Data Mashup: Combine data from multiple sources by merging tables, joining data, or creating custom calculations.
- 4. Data Cleaning and Shaping: Handle issues like missing values, duplicates, and inconsistent formatting to standardize data.
- 5. Custom Functions: Create reusable transformations or calculations using the M formula language.

- 6. Data Loading: Load transformed data into your analysis tool for further processing and reporting.
- 7. Query Dependencies and Refresh: Automatically track dependencies between queries and refresh data when underlying sources change.

Power Query simplifies data preparation, offering a user-friendly interface, various data connectors, and powerful transformation capabilities. It enables efficient data extraction, transformation, and loading, resulting in clean and structured datasets ready for analysis.

4. Explain PowerMap?

Power Map feature comes with Power BI as well as Excel from Microsoft. It is a data 3D-visualization tool that lets you map your data and plot more than a million rows of data visually on Bing maps in 3-D format. It is used to plot geo-spacial data in 3D mode. Based on a geographical location, the data can be highlighted.

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

There has been a lot of buzz and questions around connecting your Office 365 tenant to data located on Premises. This is a common requirement and is now made possible with PowerBI.

Connecting to your data source is made possible with the Data Management Gateway(DMG) The awesome part of the DMG is that is makes the connection outside the firewall. That means, no reverse proxies, custom web services or firewalls to deal with!

Overall, there are few requirements and caveats that I encountered while setting up my demo environment. FYI, I set this up in under and hour, including the time is took to spin up a PowerBI trial.

The DMG must be installed on a non-SQL server in your on premises environment. I could not get anything to work on my SQL server so I am thinking this has to be done on a member server. 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. The benefit to storing the creds in the cloud is you can recover quicker from a system failure.

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

Admin & governance
Email subscriptions access via Admin API
Allow sharing links to include your changes to the report
Announcing Public Preview of Hybrid Tables in Power BI Premium
Deployment pipelines: assign a workspace to all pipeline stages