**Power BI Assignment 2**

1.Explain the advantages of Natural Queries in PowerBi with an example?

Natural language queries allow users to interact with data using everyday language instead of formal queries or commands. This enhances accessibility and usability, enabling users of all skill levels to analyze data effectively. For example, a user can ask "Show sales by region" instead of writing a complex SQL query, making data analysis more intuitive and efficient.

2.Explain Web Front End(WFE) cluster from Power BI Service Architecture?

The WFE cluster in Power BI Service Architecture handles user requests and interactions with the Power BI service through web browsers or mobile apps. It serves as the front-end interface, rendering reports, dashboards, and interactive visualizations for users. The WFE cluster ensures responsiveness, scalability, and availability of the Power BI service to end-users.

3.Explain Back End cluster from Power BI Service Architecture?

The Back End cluster in Power BI Service Architecture manages data processing, storage, and management tasks behind the scenes. It includes components such as data ingestion, data modeling, security, and data storage. The Back End cluster processes user queries, executes data transformations, and manages access controls to ensure data integrity, security, and performance.

4.What ASP.NET component does in Power BI Service Architecture?

ASP.NET is a web development framework used in the Power BI Service Architecture to build and manage web applications and services. It provides a robust, scalable, and secure platform for hosting Power BI services, enabling seamless integration with other Microsoft technologies and web standards for delivering a rich, interactive user experience.

5.Compare Microsoft Excel and PowerBI Desktop on the following features:

Data import

Data transformation

Modeling

Reporting

Server Deployment

Convert Models

Cost

Data Import:

Excel: Limited to importing data from files, databases, and web queries.

Power BI Desktop: Supports a wide range of data sources including files, databases, cloud services, and streaming data.

Data Transformation:

Excel: Offers basic data manipulation features.

Power BI Desktop: Provides advanced data transformation capabilities with Power Query Editor.

Modeling:

Excel: Limited modeling capabilities with PivotTables and PivotCharts.

Power BI Desktop: Offers robust data modeling capabilities with relationships, calculations, and DAX expressions.

Reporting:

Excel: Static reports with limited interactivity.

Power BI Desktop: Interactive reports and dashboards with drill-down, filters, and slicers.

Server Deployment:

Excel: Reports are typically shared via email or shared network drives.

Power BI Desktop: Reports can be published to the Power BI Service for centralized sharing and collaboration.

Convert Models:

Excel: Limited options for converting data models to other formats.

Power BI Desktop: Supports exporting data models to other formats such as Excel or SQL Server Analysis Services.

Cost:

Excel: Part of Microsoft Office Suite, requires a license for each user.

Power BI Desktop: Free to download and use, with additional features available in Power BI Pro and Premium licenses.

6.List 20 data sources supported by Power Bi desktop.

Excel

SQL Server

Azure SQL Database

MySQL

PostgreSQL

Oracle Database

SharePoint

Dynamics 365

Salesforce

Google Analytics

Facebook

Twitter

Adobe Analytics

Web APIs (REST, OData, etc.)

SharePoint Online

OneDrive

Azure Blob Storage

Azure Data Lake Storage

Amazon Redshift

SAP HANA