**Power BI Assignment 2**

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

Natural Queries in Power BI simplify data interaction by enabling users to ask questions in plain language, reducing the need for technical expertise. This feature accelerates insights retrieval, reduces the learning curve, and offers flexibility in data exploration

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

In Power BI Service Architecture, a Web Front End (WFE) cluster is a component responsible for handling user requests and interactions with Power BI reports and dashboards through the web interface. It manages user authentication, load balancing, and rendering of reports

1. **Explain Back End cluster from Power BI Service Architecture?**

In Power BI Service Architecture, the Back End cluster is the core component responsible for data processing, storage, and management. It handles tasks like data refresh, data modeling, and query processing to ensure that Power BI reports and dashboards display accurate and up-to-date information to users.

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

In Power BI Service Architecture, ASP.NET is used as the web framework to handle HTTP requests and provide the infrastructure for building the web front end (WFE). It helps create the user interface and manage user interactions with Power BI reports and dashboards through web browsers.

1. **Compare Microsoft Excel and PowerBi Desktop on the following features:**

**Data import**

**Data transformation**

**Modeling**

**Reporting**

**Server Deployment**

**Convert Models**

**Cost**

There are many differences between Excel and Power BI Desktop

1 .Data Import:

Excel: Imports data from various sources, including databases, text files, and web data.

Power BI Desktop: Offers a wider range of data connectors, including cloud services, databases, and web APIs, making it more versatile for data import.

2 .Data Transformation:

Excel: Provides basic data transformation capabilities through functions like Excel formulas and Power Query (Get & Transform Data).

Power BI Desktop: Offers robust data transformation tools through Power Query, allowing users to clean, shape, and transform data easily.

3 .Modeling:

Excel: Allows for data modeling using PivotTables and PivotCharts, but it's limited for complex models.

Power BI Desktop: Offers advanced data modeling capabilities with relationships

4 . Reporting:

Excel: Generates reports with charts, tables, and pivot tables

Power BI Desktop: Specializes in creating interactive and visually-rich reports and dashboards, with features like drill-through, slicers, and custom visuals.

5 .Server Deployment:

Excel: Typically used as a desktop application, and sharing reports requires emailing files or using SharePoint, which may lack centralized control.

Power BI Desktop: Designed for centralized server deployment on the Power BI Service, providing a secure and collaborative platform for sharing reports.

6 .Convert Models:

Excel: Limited options for converting models to other formats.

Power BI Desktop: Offers better compatibility with cloud-based services and seamless conversion of reports to Power BI Service.

Cost:

Excel: Part of Microsoft Office suite, and licensing costs depend on Office subscription plans.

Power BI Desktop: Free to download and use for creating reports. Licensing costs apply when using Power BI Pro or Premium for sharing and collaboration.

1. **List 20 data sources supported by Power Bi desktop.**

Power BI Desktop supports a many data sources.

Excel workbook

SQL Server

Azure SQL Database

Azure Data Lake Storage

SharePoint List

HTML

XML

JSON

CSV (Comma-separated values)

Oracle Database

MySQL Database

PostgreSQL Database

IBM DB2 Database

SAP HANA Database

Salesforce

Google Analytics

Web API

OData feed

Hadoop

PDF files