**Power BI Assignment 2**

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

Natural queries in Power BI refer to using natural language to ask questions and get answers from your data. The main advantages include:

* **Ease of Use:** Users can ask questions in everyday language, making it accessible to non-technical users.
* **Speed:** Quickly retrieves insights without needing to write complex queries.
* **Understanding Complex Data Relationships:** Helps in understanding complex relationships within data by asking direct questions.

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

In Power BI Service Architecture, the Web Front End cluster handles user requests from the web browser or mobile app. It manages authentication, access control, and serves the Power BI reports and dashboards to users.

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

The Back End cluster in Power BI Service Architecture handles data processing, storage, and management tasks. It includes components like data connectors, data storage systems, data processing engines, and APIs that Power BI uses to work with data sources and perform computations.

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

In Power BI Service Architecture, ASP.NET is used for building and managing web applications. It handles web requests, manages sessions, and provides the framework for the web front end of Power BI, ensuring responsiveness and security.

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

**Data Import:**

* **Excel:** Supports importing data from various sources but may require manual steps.
* **Power BI Desktop:** Streamlined process with direct connections to many data sources, including databases, files, and online services.

**Data Transformation:**

* **Excel:** Limited transformation capabilities compared to Power BI.
* **Power BI Desktop:** Advanced data transformation features with Power Query Editor for cleaning, shaping, and combining data.

**Modeling:**

* **Excel:** Limited to basic data modeling with PivotTables and PivotCharts.
* **Power BI Desktop:** Robust data modeling capabilities with relationships, calculated columns, and measures.

**Reporting:**

* **Excel:** Basic reporting through charts, tables, and conditional formatting.
* **Power BI Desktop:** Advanced interactive reporting with customizable dashboards, visuals, and drill-down capabilities.

**Server Deployment:**

* **Excel:** Typically used on local machines; sharing requires emailing files or using SharePoint.
* **Power BI Desktop:** Reports can be published to Power BI Service for sharing and collaboration.

**Convert Models:**

* **Excel:** Limited options for converting models.
* **Power BI Desktop:** Allows converting Excel data models into Power BI models for enhanced analysis.

**Cost:**

* **Excel:** Part of Microsoft Office suite; no additional cost beyond licensing.
* **Power BI Desktop:** Free to download and use; additional costs may apply for Power BI Pro or Premium subscriptions for sharing and collaboration.

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

* Excel files (.xlsx, .xls)
* CSV files
* SQL Server databases
* Azure SQL Database
* Oracle Database
* MySQL Database
* PostgreSQL
* IBM Db2
* SharePoint Online
* Dynamics 365
* Salesforce
* Google Analytics
* Adobe Analytics
* Facebook
* Twitter
* JSON files
* XML files
* Web pages (via Web connector)
* Hadoop File (HDFS)
* OData feed