Assignment – 2 (Power BI)

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

Ans: Power BI supports natural language queries, allowing users to ask questions about their data using everyday language. This feature makes data exploration more intuitive and accessible to users who may not have technical expertise.

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

Ans: The Web Front End (WFE) cluster. The WFE cluster manages the initial connection and authentication to the Power BI service. The Back-End cluster. Once authenticated, the Back- end handles all subsequent user interactions.

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

Ans: The Back-End cluster determines how authenticated clients interact with the Power BI service. The Back-End cluster manages visualizations, user dashboards, datasets, reports, data storage, data connections, data refresh, and other aspects of interacting with the Power BI service.

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

Ans: The front end also called the web front-end cluster acts as an intermediary between clients and the back end. The front end services are used for establishing an initial connection and authenticating clients using Azure Active Directory. The Azure Active Directory stores user identities.

Along with this, Azure Traffic Manager is used to direct user requests to the nearest data center after authentication. Once a client/user is authenticated, the Azure Content Delivery Network (CDN) distributes static Power BI content/files to users.

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

**Data import**

**Data transformation**

**Modeling**

**Reporting**

**Server Deployment**

**Convert Models**

**Cost**

Ans: **POWER BI :**

1. Power BI is a recent product, so you cannot see this with all Excel users.
2. Power BI is not that easy. It requires considerable knowledge of Power Query and Power Pivot DAX formulas and techniques to use it.
3. Power BI Desktop is free to download and use for personal use, but it takes $10 per month per user to share reports with others.
4. Power BI is not flexible, especially if it just shifted from Excel to Power BI. You cannot do everything, everywhere.
5. Power BI has a wide variety of visualizations. We can import many other visuals from the marketplace besides available built-in charts.

**Microsoft Excel:**

1. Excel is everywhere and available to most people.
2. Who does not know Excel? Excel is the universal language spoken in almost all offices worldwide. Because Excel has been around for a long time, most users find it easy to learn.
3. Since we already have Excel, we need to spend additional money to procure this and build dashboards.
4. Excel is flexible to use and create summary reports in simple steps and formulas.
5. Excel has only a few built-in charts, and we need to work with only those charts to build dashboards.
6. Excel is special. We can create another set of charts only using built-in charts. For example, a thermometer chart.

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

Ans: SQL Server database

Access database

SQL Server Analysis Services database

Oracle database

IBM Db2 database

IBM Informix database (Beta)

IBM Netezza

MySQL database

PostgreSQL database

Sybase database

Teradata database

SAP HANA database

SAP Business Warehouse Application Server

SAP Business Warehouse Message Server

Amazon Redshift

Impala

Google BigQuery

BI Connector