**Power BI Assignment 2**

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

* Guided NLQ is a unique self-service BI experience
* Every question is understood by Guided NLQ
* Guided NLQ makes it simple to ask complex questions
* Guided NLQ is integrated throughout Yellow fin
* It’s easy to embed Guided NLQ into your applications

Power BI gives us the ability to write our questions in English language and gives us charts and graphs closest to our query.

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

The WFE cluster manages the initial connection and authentication process for Power BI, using AAD to authenticate clients and provide tokens for subsequent client connections to the Power BI service. Power BI also uses the Azure Traffic Manager (ATM) to direct user traffic to the nearest data centre, determined by the DNS record of the client attempting to connect, for the authentication process and to download static content and files. Power BI uses the Azure Content Delivery Network (CDN) to efficiently distribute the necessary static content and files to users based on geographical locale.

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

The Back-End cluster is 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. The Gateway Role acts as a gateway between user requests and the Power BI service. Users do not interact directly with any roles other than the Gateway Role. Azure API Management will eventually handle the Gateway Role.

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

ASP.NET allows you to build high-performance, cross-platform web applications. Patterns like MVC and built-in support for Dependency Injection allow you to build applications that are easier to test and maintain.

1. Compare Microsoft Excel and Power BI Desktop on the following features:

Data import- Power BI can connect to a large number of data sources, while Excel's connectivity capacity is limited

Data transformation- Excel is used to organize data, transform it and perform mathematical operations and calculations. On the other hand, Power BI was conceived as a business intelligence and data visualization tool for businesses

Reporting- Power BI is a more powerful tool than Excel in terms of comparison between tables, reports or data files

Cost- 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 and Excel, we need to spend additional money to procure this and build dashboards.

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

* Excel Workbook
* Text/CSV
* XML
* JSON
* Folder
* PDF
* Parquet
* SharePoint folder
* SQL Server database
* Oracle database
* IBM Db2 database
* MySQL database
* SAP HANA database
* SAP Business Warehouse Application Server
* SAP Business Warehouse Message Server
* Amazon Redshift
* Impala
* Google BigQuery
* Vertica
* Snowflake