Power BI Assignment 2

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

Many analytics vendors today offer search-based NLQ tools. To explore data and find insights, you must use free text, but we also must know what, or how to pose a query.

- 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 Yellowfin
- It's easy to embed Guided NLQ into your applications

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

The WFE cluster uses Azure AD to authenticate clients and provide tokens for subsequent client connections to the Power BI service. Power BI uses the Azure Traffic Manager (Traffic Manager) to direct user traffic to the nearest datacentre.

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

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?

Power BI is a cloud-based business analytics service that gives you a single view of your most critical business data. To learn more about using Power BI with .NET, see Embedding with Power BI. There are multiple options to embed Power BI reports using ASP.NET Core. I Frame solution was simple and straightforward – just copy markup from Power BI portal, paste it to ASP.NET Core view and you are done. With C# and JavaScript our solution was more complex, and we had to write more code

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

1. Data import – excel --

Click the cell where you want to put the data from the text file. On the Data tab, in the Get External Data group, click From Text. In the Import Data dialog box, locate and double-click the text file that you want to import, and click Import.

Power bi -----

- To import an Excel workbook into Power BI Desktop, select File > Import > Power Query, Power Pivot, Power View.
- From the Open window, select an Excel workbook to import. ...
- From the import dialog box that appears, select Start. ...
- Select Close.

Data transformation ----

both business analytics tools efficiently handle this task thanks to Power Query. The latter allows for about 350 data transformation types. For instance, you get data from SQL Server, CSV file, OData, or any other data sources and convert them into a format convenient for data processing in Power BI or Excel. Power Query will do this transformation for you automatically.

Modelling ---- in Power BI, the only option for data modelling and calculations is to use data analysis expressions (DAX). This is a library encompassing functions and operations that can be used for building expressions and formulas. In Microsoft Excel reports you can operate both DAX and standard Excel formulas, which is easier for people not acquainted with DAX.

Reporting ----- A Power BI report is a multi-perspective view into a dataset, with visuals that represent findings and insights from that dataset. A report can have a single visual or many pages full of visuals. Depending on your job role, you might be someone who designs reports, or you might be a business user who consumes reports

An Excel report is simply data that is collected and presented in a visual way on a single sheet. Excel reports are an incredibly versatile way to aggregate, analyse, and present data using charts and graphs. Originally intended for simple calculations, Excel has become a mainstay in boardrooms and business meetings due in part to its ability to build both simple and complex reports.

Server Deployment ----- Excel Server is **a diy tool for building an excel-based information system**

> **Power BI** Report **Server** is an on-premises report **server** with a web portal in which you display and manage reports and KPIs.

Convert Models ----- **Power BI** documentation provides expert information about transforming, shaping, and **modelling** data in **Power BI**. Transform and shape data.

A Data **Model** is a new approach for integrating data from multiple tables, effectively building a relational data source inside the **Excel** workbook.

Cost------ since Power BI and Excel use different approaches to pricing, it's better to calculate the total cost of each tool. Power BI has two plans, Pro and Premium. The Pro plan for $9/user/mo allows for a 1GB model size limit, 10GB/user data storage, and standard Power BI functionality. However, if you need paginated reports, advanced AI, dataflows, or application lifecycle management, you need to choose one of the Premium options, for $20/user/mo or at a flat rate of $4,995/capacity/mo, which is more relevant for an enterprise-scale level organization.

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

The **Database** category provides the following data connections:

- 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
- Google BigQuery (Azure AD)(Beta)

- Vertica
- Snowflake
- Essbase
- Actian (Beta)
- Amazon Athena
- AtScale cubes
- BI Connector
- Data Virtuality LDW
- Denodo
- Dremio Software
- Dremio Cloud (Beta)
- Exasol
- Indexima
- InterSystems IRIS (Beta)
- Jethro (Beta)
- Kyligence
- Linkar PICK Style / MultiValue Databases (Beta)
- MariaDB
- MarkLogic
- TIBCO® Data Virtualization