**Power BI Assignment 2**

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

## Answer - the main benefit NLQ is a unique self-service BI experience, provides immediate assistance on the question you want to ask, with no guesswork or technical knowledge required to get started with using the tool. After selecting a dataset, you’re presented with a search box you can type in, but it’s not blank. Guided NLQ provides a list of options for possible questions, then guides you through each step in formulating the query. You can choose your own path through the question by typing what you want to ask, using your mouse to choose an option, or both.

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

## Answer. The Power BI service architecture is based on two clusters – the Web Front End (WFE) cluster and the Back-End cluster. The WFE cluster manages the initial connection and authentication to the Power BI service, and once authenticated, the Back-End handles all subsequent user interactions.

## 3 . 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.

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

## Power BI has faster processing than Excel. Power BI dashboards are more visually appealing, interactive and customizable than those in Excel. Power BI is a more powerful tool than Excel in terms of comparison between tables, reports or data files. Power BI is more user friendly and easy to use than Excel.

## Data import powerbi vs excel.

## Power BI can connect to a large number of data sources, while Excel's connectivity capacity is limited. Also, unlike Excel, Power BI can be easily used from mobile devices. Power BI has faster processing than Excel. Power BI dashboards are more visually appealing, interactive and customizable than those in Excel.

## Data transformation

## Data transformation : One of the key differences is handling the capacity of data quantity. With Power BI, we can handle millions of rows together with fast speed, but with Excel, it is frustrating to handle large amounts of data.

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| **Features** | **Power BI** | **Excel** |
| Tabular Reports | It creates relatively limited tabular reports. | It’s ideal for making tabular reports. |
| Duplicate Tables | Can’t display duplicated tables | Allows you to display duplicated tables |
| Reports | More visually appealing, customized, appealing, and interactive reporting. | Reports are simpler and less appealing than those in Power BI. |
| Crossed Filters | Supports powerful chart cross-filtering features. | There is no advanced graphics cross-filtering. |
| Charts and Visuals | Dashboards, alarms, and KPIs work best. Includes richer graphics than Excel and allows for visual data analysis. | It contains the most powerful and cutting-edge charting tools, however it isn’t compatible with data models. |
| Automatic Updates | Data is automatically updated. | Data is not automatically updated. |
| Availability | Repots can be worked on by a huge number of people, regardless of their expertise. | The number of users who can see a report is limited. |
| Analytics | Power BI has fewer data analysis possibilities. | Excel has more advanced analytical capabilities. |
| Data Model | Ideal for quickly creating complex data models. | Works with simple and structured data models. |
| Separate Tables | Separate tables can be linked together easily. | Connecting various tables is tough. |
| Tools | It is a more complex version of the data analysis tool, with more options for working with data. | It’s a standard spreadsheet tool with a lot of options. |
| Collaborative Work | Power BI makes it simple to share data and reports. | Sharing documents and working with others is complex. |
| Big Data | Allows working with significantly bigger data sets. | Can only handle a certain amount of info. |
| Dashboards | More advanced features for creating custom dashboards. | Users have limited features for creating dashboards. |
| Processing | Faster processing. | Slower processing. |
| Utility | Dashboards can be created and shared, as well as advanced data visualizations. | Typically, it is used to arrange data, execute calculations, and build more complex tabular reports. |
| Data Model Language | DAX language | MDX language |
| Connectivity | Data can be extracted from any virtual platform, software, or application. | Connectivity to other apps and systems is limited. |
| Price | It has [a free version](https://dynamics.folio3.com/blog/difference-between-power-bi-pro-vs-free-vs-premium/) and a payment version. | Payment Tool. |
| Usability | Easy to use compared to Excel | More difficult to use than Power BI |

## . 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

## Vertica

## Snowflake

## Essbase

## Actian (Beta)

## Amazon Athena