**Power BI Assignment 2**

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

* [Guided NLQ is a unique self-service BI experience](https://www.yellowfinbi.com/blog/natural-language-query-5-benefits-of-guided-nlq#Benefit_1_-_Guided_NLQ_is_a_unique_self-service_BI_experience)
* [Every question is understood by Guided NLQ](https://www.yellowfinbi.com/blog/natural-language-query-5-benefits-of-guided-nlq#Benefit_2_-_Every_question_is_understood_by_Guided_NLQ)
* [Guided NLQ makes it simple to ask complex questions](https://www.yellowfinbi.com/blog/natural-language-query-5-benefits-of-guided-nlq#Benefit_3_-_Guided_NLQ_makes_it_simple_to_ask_complex_questions)
* [Guided NLQ is integrated throughout Yellowfin](https://www.yellowfinbi.com/blog/natural-language-query-5-benefits-of-guided-nlq#Benefit_4_-_Guided_NLQ_is_integrated_throughout_Yellowfin)
* [It’s easy to embed Guided NLQ into your applications](https://www.yellowfinbi.com/blog/natural-language-query-5-benefits-of-guided-nlq#Benefit_5_-_Its_easy_to_embed_Guided_NLQ_into_your_applications)

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

* 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.

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

* Back End Cluster: It manages the datasets, reports, storage, visualizations, data refreshing, data connections, and other services in the Power BI. At the back end cluster, the web client has only two direct points to interact with the data, i.e., Gateway Role and Azure API Management.

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

* Power Query (for data mash-up and transformation)
* Power BI Desktop (a companion development tool)
* Power BI Mobile (for Android, iOS, Windows phones)
* Power Pivot (for in-memory tabular data modeling)
* Power View (for viewing data visualizations)
* Power Map (for visualizing 3D geo-spatial data)
* Power Q&A (for natural language Q&A)

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

**Data import**

Excel is flexible to use and create summary reports in simple steps and formulas. Power BI has a wide variety of visualizations. We can import many other visuals from the marketplace besides available built-in charts. Excel has only a few built-in charts, and we need to work with only those charts to build dashboards.

**Data transformation**

Access in Excel is via the Get & Transform Data section within the Data tab. In Power BI it exists in the External Data section of the Home tab. Loading CSVs: Importing a CSV via Get & Transform allows for it to be cleaned and made "narrower" or "wider" to assist with data pivoting.

 When you load data you can use data directly as you import on power bi desktop. If you use transform you can modify the data you already have or importing data. Eg: change column names.

**Modeling**

Excel modeling is the process where an individual uses a spreadsheet to make quantitative predictions based on a series of underlying assumptions.

To create data model in Power BI, you need to add all data sources in Power BI new report option. To add a data source, go to the Get data option. Then, select the data source you want to connect and click the Connect button. Once you add a data source, it is presented on the right side bar.

**Reporting**

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, analyze, and present data using charts and graphs.

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

**Server Deployment**

Server deployment is the process of making a server operational. In practice, deployment typically involves installing the hardware on a server rack and configuring the software required for the server's intended function.

Deployment pipelines enable creators to develop and test Power BI content in the Power BI service, before the content is consumed by users. The content types include reports, paginated reports, dashboards, datasets and dataflows.

**Convert Models**

**In Excel**

* Select a cell within your data.
* Select Home > Format as Table.
* Choose a style for your table.
* In the Format as Table dialog box, set your cell range.
* Mark if your table has headers.
* Select OK

**In Power BI**

* Open the PBIX file in Power BI Desktop.
* Click on Transform Data.
* In Power Query Editor, delete all the queries. ...
* You should have 0 queries in the list. ...
* If there are additional tables in the Fields section back in the main Power BI Desktop window, delete those as well.

**Cost**

* Office 365 Personal is currently available for $6.99/month or $69.99/year. Office 365 Home is offered for $9.99/month or $99/year.
* A USD10 per user/month add-on is available for users with Power BI Pro and Microsoft 365 E5 licences to step up to Power BI Premium per user.

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

* Excel Workbook
* Text/CSV
* XML
* JSON
* Folder
* PDF
* Parquet
* SharePoint folder
* 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