**Power BI Assignment 2**

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

The natural Query is available on Power BI Cloud version. In natural query, we can write the Query in Plain English and power BI suggest multiple graph to analyse from the uploaded data.

Eg: If we want to analyse the sales of a product in multiple countries, we can upload the data to power BI Cloud version and type in plain English on the search bar “*Sales of product A in different countries*”, then Power BI suggest the graph based on the query written in natural language.

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

The Power BI service is built on Azure. The WFE (Web front End) cluster manages the initial connection and authentication to the Power BI service.

The Web Front End cluster uses Azure Active Directory to authenticate clients, and provide tokens for subsequent client connections to the Power BI service

1. 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

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

Power BI embedded analytics allows us to embed the Power BI items such as reports, dashboards and tiles, in a web application or in a website. Power BI provided ASP.NET SDK, allow to make a customized report (Eg:Custom row level security or custom filter) in the custom application.

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

Data import

Data transformation

Modeling

Reporting

Server Deployment

Convert Models

Cost

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| --- | --- | --- |
|  | **Excel** | **Power BI** |
| **Data import** | Data-->Click & Export data | Get Data-->Select the data |
| **Data transformation** | Home-->Transform-->Choose datantype | Data-->Select Column-->Choose data type in header |
| **Modeling** | Data-->Manage data model | Can do the data modeling in "Model Tab in Home UI |
| **Reporting** | Controller > Reports > Open Report | Can do the Reporting in "Report" Tab in Home UI |
| **Server Deployment** | File-->Publish | Click Publish-->To the work space in Web version(A server storage location) |
| **Convert Models** | Excel is totally focused on structured and simple data models with a wide range of features. | Power BI is really focused on data ingest and building potentially complex data models easily. |
| **Cost** | MS Office 365 For Personal cost 7 $/Month | 10 $ /Month per user(Pro version) |

1. List 20 data sources supported by Power Bi desktop.
2. SQL Server database
3. Access database
4. SQL Server Analysis Services database
5. Oracle database
6. IBM Db2 database
7. IBM Informix database (Beta)
8. IBM Netezza
9. MySQL database
10. PostgreSQL database
11. Sybase database
12. Teradata database
13. SAP HANA database
14. SAP Business Warehouse Application Server
15. SAP Business Warehouse Message Server
16. Amazon Redshift
17. Impala
18. Google BigQuery
19. Google BigQuery (Azure AD)(Beta)
20. Vertica
21. Snowflake