**POWER BI ASSIGNMENT 2**

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

Natural Language Query is the ability to use natural language expressions to discover and understand data and accelerate the process of finding answers that data can provide. Another way to think about it would be a translation mechanism that helps bridge the gap between technical and non-technical users who may not understand which database has the data, which field to use or how to create calculations to answer their questions.

An example might be “How many customers made a purchase this month?” And the idea is that the tool would respond and give you answers and visualizations that answer that question or at least help you on the path to finding it.

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. Power BI uses Azure Active Directory (AAD) to store and manage user identities (in Azure Blob), and manages the storage of data and metadata (in Azure SQL Database), both using encryption at rest.

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

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. These two components are responsible for authorizing, load balancing, routing, authentication etc.

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

With ASP.NET core MVC application, we can visualize a better dashboard in a server rendered page from a client SPA rendered report.

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

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| **COMPARISON POINTS** | **POWER BI** | **EXCEL** |
| Data import | Data can be imported to Power BI from Flat Files, SQL Database, OData Feed, Blank Query, Azure Cloud platform, Online Services, Blank Query, Hadoop, Exchange, Active Directory, Excel Workbook, Text/CSV, XML, JSON, Folder, PDF, Parquet, SharePoint folder, Adobe Analysis, Google Analytics, Smartsheet, Zendesk and many more | Data can be imported to Excel from Microsoft Access Database, Web Page, Text File, SQL Server Table, SQL Server Analysis Cube, XML File etc. |
| Modeling | Ideal for building complex data models easily. | Ability to work on simple and structured data models. |
| Reporting | More beautiful, personalized, attractive and interactive reports. | Simpler and toss attractive reports than those of Power BI. |
| Server Deployment | Reports/Dashboards can be published to a server | Reports can’t be published directly |
| Cost | Available in both free and paid versions | Only paid versions available |

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

Flat Files, SQL Database, OData Feed, Blank Query, Azure Cloud platform, Online Services, Blank Query, Hadoop, Exchange, Active Directory, Excel Workbook, Text/CSV, XML, JSON, Folder, PDF, Parquet, SharePoint folder, Adobe Analysis, Google Analytics, Smartsheet, Zendesk etc.