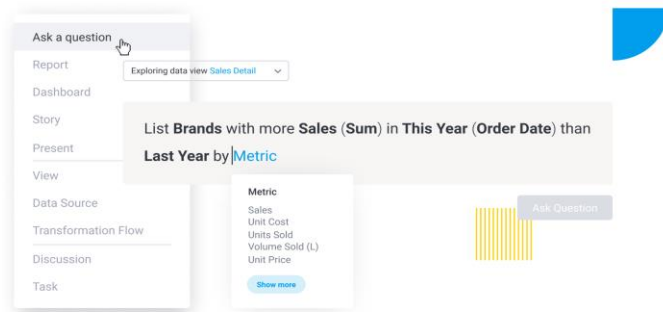


## Assignment 2

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

**Ans:** 1. Guided NLQ is a unique self-service BI experience



2. Every question is understood by Guided NLQ

## 3.Guided NLQ makes it simple to ask complex questions

- **Example:** Tabular and cross-tab reports
- Automatic highlighting of items on charts, such as outliers, values, trends
- Complex filter construction
- Set analysis comparison, ranking, calculations
- Sub Queries, including minus, intersect

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

**Ans:**

- The Web Front End (**WFE**) cluster. The **WFE** cluster manages the initial connection and authentication to the Power BI service.

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

**Ans:** The **Back-End** cluster. Once authenticated, the **Back-End** handles all subsequent user interactions. Power BI uses Azure Active Directory (Azure AD) to store and manage user identities. Azure AD also manages data storage and metadata using Azure BLOB and Azure SQL Database, respectively.

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

**Ans:**

1. **Power BI Desktop:** [Power BI Desktop](#) is a free software used to convert, connect, and visualize datasets on a PC or laptop. It's one of the most important Power BI components where you can integrate distinct information sources and combine them to form a data model. Then, you can create graphics or image collections to share them as records with other individuals in your organization.
2. **Power BI Service:** After the reports are created on Power BI Desktop, you can publish them on the cloud using Power BI Service. The service connects users and allows them to create dashboards known as Power BI Workspace. It offers natural language Q&A and alerts, and it is available in both Power BI free and Power BI Pro versions,
3. **Power BI Mobile Apps:** The mobile apps of Power BI keep you connected with the data no matter where you are. You can see live reports and dashboards on your iOS and Android smartphones and make better market decisions on the go. Only pro Power BI architecture provides the feature of Mobile reports and dashboards.
4. **Power BI Query:** Power Query allows users to connect distinct information from multiple sources and convert them to satisfy their business requirements. Power Query is included in the Power Query Editor of Power BI Desktop.

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

- 1.Data import:

- Excel** has **limitations** in the **amount of data** it can work with. In contrast, **Power BI** can handle much larger amounts of data.

- 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.

- 2.Data transformation

- Excel** is used to **organize data, transform it and perform mathematical operations** and calculations. On the other hand, **Power BI** was conceived as a **business intelligence and data visualization** tool for businesses.

- 3.Modeling

- Excel is focused on simple data models with wide range of features while Power Bi focus on Data Ingest and Building potentially complex data models easily.

- 4.Reporting

- Excel: Simple and less attractive

- Power Bi: Attractive , Personalizes reports

- 5.Server Deployment: *Power BI Report Server* is the **on-premise** option offered by *Microsoft Power BI* Deployment Suit. *Power BI Service* on the other hand is the cloud service and the **cloud solution** from Microsoft.

- 6.Convert Models: Power BI is a Business Intelligence (BI) and Data Visualisation tool for creating custom and interactive dashboards from different data sources while Microsoft Excel is a software application from Microsoft that is used for data analytics, mathematical operations, data organization and many more features using spreadsheet system.

- 7.**Cost:** Power BI Desktop is free to download and use for personal use, but it takes \$10 per month per user to share reports with others. Since we already have Excel, we need to spend additional money to procure this and build dashboards.

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

