**Power BI Assignment 2**

1.Explain the advantages of Natural Queries in PowerBi with an example?  
  
**Ease of Use:** Users don't need to write complex formulas or code. They can simply type a question, and Power BI interprets it and returns relevant data visualizations.  
**Accessibility:** Makes data analytics more accessible to non-technical users, who can explore data without needing deep knowledge of the tool or the underlying data structure.  
**Example:** Imagine a retail company using Power BI. A user can simply type “Show me total sales by region for the last quarter” in the Q&A box, and Power BI will instantly generate a bar chart or table visualizing total sales by region.

2.Explain Web Front End(WFE) cluster from Power BI Service Architecture?  
  
The **Web Front End (WFE) Cluster** in Power BI Service Architecture is responsible for handling initial requests from users and acts as the entry point into the Power BI service.  
WFE handles authentication via Azure Active Directory (AAD), ensuring that only authorized users can access the service.

3.Explain Back End cluster from Power BI Service Architecture?  
  
The **Back End Cluster** is responsible for processing and rendering the data, which is then visualized in Power BI reports and dashboards.  
**Data Processing:** Handles queries sent by the WFE, interacts with the data model, and returns the processed data.

4.What ASP.NET component does in Power BI Service Architecture?  
  
In Power BI Service Architecture, the **ASP.NET Component** is part of the Web Front End (WFE) and plays a role in:  
**Rendering HTML:** It serves the web pages that users interact with, including the Power BI dashboards, reports, and settings pages.  
**Managing Sessions:** ASP.NET helps in maintaining user sessions and state information, ensuring that user interactions are handled correctly across multiple requests.  
**Handling API Calls:** It processes API requests made by the front end and routes them to the appropriate backend services.

5.List 20 data sources supported by Power Bi desktop.  
  
 Excel CSV  XML  JSON  SQL Server  Oracle Database  MySQL  PostgreSQL  Azure SQL Database  Azure Data Lake SharePoint Online List  OData Feed  Salesforce  Google Analytics  Adobe Analytics  Web Data Connector  Power BIDatasets  SAP HANA  SAP BW  Azure Blob Storage

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

Data import,Data transformation,Modeling,Reporting,Server Deployment,Convert Models

Cost.

| Feature | Microsoft Excel | Power BI Desktop |
| --- | --- | --- |
| Data Import | Limited to built-in connectors and plugins. | Extensive range of data connectors, including cloud services, databases, and more. |
| Data Transformation | Power Query for basic transformations. | Power Query integrated with more advanced data transformation capabilities. |
| Modeling | Basic pivot tables and Power Pivot for simple data models. | Advanced modeling capabilities, including DAX, calculated columns, and measures. |
| Reporting | Limited to pivot tables, charts, and basic visualizations. | Rich interactive reports with a wide range of visualization options. |
| Server Deployment | Excel Online or SharePoint. | Power BI Service for cloud-based deployment and sharing. |
| Convert Models | Manual conversion of data models. | Seamless integration with various data sources and easy model conversion. |
| Cost | Part of Microsoft Office Suite, more affordable for basic use. | Requires a Power BI Pro or Premium license for advanced features and sharing. |