1. There are various advantages of Natural Queries in PowerBi and some of them are that we can first ask a question in the Q&A section and then we are able to get a required output with the visualization. After one visualization we can drill down further, finding key-insights and exploring the data. With the help of one question we are capable finding a unique path in the expiration field.

2. A Web Front End (WFE) cluster is a group of web servers that handle user requests. In a WFE cluster, multiple web servers work together to provide load balancing and high availability for web applications (just like the AWS load balancer). When a user accesses a web application, the request is distributed among the web servers in the cluster, ensuring even distribution of traffic and preventing overload on any single server.

3. The Back End cluster deals with the back end data processing and storage. The Back End cluster is responsible for managing the business logic, processing user input, interacting with databases, and performing other server-side tasks. These tasks may include data processing, authentication, authorization, and various computations.

4. In the Power BI Service architecture, ASP.NET plays a significant role in handling the web application aspect of the platform. ASP.NET is a web framework developed by Microsoft, and it is utilized in the Power BI Service to build the user interface, manage user interactions, and handle various web-related functionalities.

5. The comparison of Power BI and Excel is as follows:-

   Data Import:

   Microsoft Excel: Excel allows users to import data from various sources such as text files, databases, web sources, and other Excel workbooks. Importing data is typically done through copy-pasting, importing wizards, or using Power Query in newer versions.

   Power BI Desktop: Power BI Desktop provides robust data connectivity options and supports a wide range of data sources, including cloud-based services, databases, online services, and on-premises data. Power Query Editor is an integral part of Power BI Desktop, enabling efficient data import and transformation.

   Data Transformation:

   Microsoft Excel: Excel offers basic data transformation capabilities through functions, formulas, and sorting/filtering options. It lacks advanced data shaping and ETL (Extract, Transform, Load) features.

   Power BI Desktop: Power BI Desktop excels in data transformation with Power Query Editor. It allows users to clean, reshape, combine, and model data through a user-friendly and powerful interface.

   Modeling:

Microsoft Excel: Excel has limited modeling capabilities, primarily through PivotTables and PivotCharts. Data relationships are not explicitly defined in Excel.

Power BI Desktop: Power BI Desktop is designed for robust data modeling. It allows users to create relationships between tables, define hierarchies, and use DAX expressions to create custom measures and calculations.

Reporting:

Microsoft Excel: Excel can create basic reports and visualizations using PivotTables, charts, and conditional formatting. Visualizations are typically static and less interactive.

Power BI Desktop: Power BI Desktop is a dedicated data visualization tool, providing extensive options for creating interactive and visually appealing reports and dashboards. It supports a wide variety of charts, custom visuals, drill-down, and cross-filtering.

Server Deployment:

Microsoft Excel: Excel reports are typically shared via email or file-sharing platforms. There is no centralized server-based deployment for Excel files.

Power BI Desktop: Power BI reports can be deployed to the Power BI Service, a cloud-based platform where reports can be shared, collaborated on, and accessed from any device with appropriate permissions.

Convert Models:

Microsoft Excel: Excel models are not directly convertible to Power BI models. While data can be reused, reports and dashboards need to be recreated in Power BI.

Power BI Desktop: Power BI Desktop files (PBIX) can be published directly to the Power BI Service, preserving the data model, reports, and visualizations.

Cost:

Microsoft Excel: Excel is a part of Microsoft Office suite, and its cost is bundled with Office licenses. Advanced features may require specific Office editions or additional licenses.

Power BI Desktop: Power BI Desktop is available for free and can be downloaded independently. However, accessing some advanced features and sharing reports via Power BI Service may require a Power BI Pro or Premium subscription.

6. Some of the data sources which is supported by Power BI include :-

Excel workbooks (.xlsx, .xls)

CSV (Comma Separated Values) files

SQL Server Database

Azure SQL Database

Oracle Database

MySQL Database

PostgreSQL Database

Microsoft Access Database

SharePoint Online lists

SharePoint Server

Web services (REST APIs, OData feeds)

JSON files

XML files

Web data connectors

Salesforce

Google Analytics

Microsoft Dynamics 365

Adobe Analytics

MailChimp

Azure Blob Storage

Azure Data Lake Storage