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

Ans: - the fastest way to get an answer from your data is to perform a search over your data using natural language. The Q&A feature in Power BI lets you explore your data in your own words using natural language. Q&A is interactive, even fun. Often, one question leads to others as the visualizations reveal interesting paths to pursue. Asking the question is just the beginning. Travel through your data, refining or expanding your question, uncovering new information, zeroing in on details, or zooming out for a broader view. . Power BI Q&A is free and available to all users. In Power BI Desktop, report designers can use Q&A to explore data and create visualizations. In the Power BI service, everyone can explore their data with Q&A. Our mobile apps support Q&A too, with the Q&A virtual assistant in iOS and the Q&A visual on Android devices. If you have permission to edit a dashboard or report, you can also pin your Q&A results.

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

Ans: -

Front End cluster

The front end also called the web front-end cluster acts as an intermediary between clients and the back end. The front-end services are used for establishing an initial connection and authenticating clients using Azure Active Directory. The Azure Active Directory stores user identities. Along with this, Azure Traffic Manager is used to direct user requests to the nearest data centre after authentication. Once a client/user is authenticated, the Azure Content Delivery Network (CDN) distributes static Power BI content/files to users.

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

Ans

Back End cluster:

The Power BI services at the back end take care of visualizations, datasets, storage, reports, data connections, data refreshing, and other interactions with Power BI. At the back end, a web client has only two direct points of interaction, Azure API Management, and Gateway Role. These two components are responsible for load balancing, authentication, authorization, routing, etc

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

Ans

.NET is a developer platform made up of tools, programming languages, and libraries for building many different types of applications.

The Report Viewer control was first introduced over a decade ago, it has been a key component that allowed developers to surface report content easily in their applications. But although the application development landscape has changed significantly since that time, support for the control is limited to both WinForms and Web Forms.

As we move beyond the Report Viewer and transition to using the Power BI embedded capabilities, application developers can use a single set of APIs to bring both interactive and paginated reports to their modern applications, far surpassing the capabilities ever offered to date. Power BI also offers support for over 100 first- and third-party data sources, with connectivity for additional data sources added on a monthly basis to the Power BI service. As paginated reports are the same reports you use in SQL Server Reporting Services (SSRS), it’s easy to migrate them to the Power BI service.

1. Compare Microsoft Excel and PowerBi Desktop on the following features:
   1. Data import
   2. Data transformation
   3. Modeling
   4. Reporting
   5. Server Deployment
   6. Convert Models
   7. Cost

**Comparison :**

|  |  |  |
| --- | --- | --- |
| **Data Import** | Power BI also has Power Query; it can fetch data from everywhere. | Excel can get data from everywhere with Power Query. |

|  |  |  |
| --- | --- | --- |
| **Data Transformation** | Power BI has a wide variety of visualizations. We can import many other visuals from the marketplace besides available built-in charts. | Excel has only a few built-in charts, and we need to work with only those charts to build dashboards. |

|  |  |  |
| --- | --- | --- |
| **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. |
| **Reporting** | Power BI not only has slicers but also has a wide variety of other slicers. Cross filters, visual level filters, report level filters, and drillthrough filters. | Excel has slicers to make the dashboards interactive with the user. |
| **Data Modelling** | Data Modelling can be done on advance level with large data sets | Excel can also handle large data but the functions are limited |
| **Server deployment** | Has more access and features | No server deployment features actually |

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

Ans:-

* MySQL database
* PostgreSQL database
* Sybase database
* Teradata database
* MS Excel
* SQL Server database
* Access database
* SQL Server Analysis Services database
* Oracle database
* IBM Db2 database
* IBM Informix database (Beta)
* IBM Netezza
* SAP Business Warehouse Application Server
* SAP Business Warehouse Message Server
* Amazon Redshift
* Impala
* Google BigQuery
* Google BigQuery (Azure AD)(Beta)
* Vertica
* Snowflake