Power BI Assignment 2

Que 1 - Explain the advantages of Natural Queries in Power BI with an example?

Ans 1 – Advantages of Natural Queries in Power BI are as follows:

- It is fastest way to get the result/ answer for the question you ask.
- Power BI lets you explore your data in your own words using Natural Language.
- To make it easier for you to notice which words the algorithm recognized or didn't, Q&A highlights certain terms.
- Power BI Q&A provides contextual and relevant recommendations as you write your query, enabling you to rapidly use natural language to ask questions and get answers.
- The purpose of Q&A is to automatically plot the fields on the appropriate axis, instantaneously analyses the question, visualize the answer, and interpret both.

Que 2 - Explain Web Front End (WFE) cluster from Power BI Service Architecture?

Ans 2 – The Power BI initial connection and authentication procedure is managed by the WFE cluster, which uses AAD to verify client identities and provide tokens for further client connections to the Power BI service. Additionally, Power BI makes use of the Azure Traffic Manager (ATM) to route user traffic to the closest datacenter for authentication purposes and to download static files and content based on the DNS record of the client making the connection. Power BI effectively distributes the required static material and files to users based on location using the Azure Content Delivery Network (CDN).

Que 3 - Explain Back End cluster from Power BI Service Architecture?

Ans 3 – The Back-End cluster oversees data storage, data connections, data refresh, reports, datasets, user dashboards, visualizations, and other elements of interfacing with the Power BI service. User queries are sent through the Gateway Role to the Power BI service. Other than the Gateway Role, no other roles are directly interacted with by users. The Gateway Role will eventually be managed by Azure API Management.

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

Ans 4 – The business suite Power BI consists of several interconnected technologies. Microsoft Power BI technology is made up of a variety of parts, to create superior business intelligence solutions:

- An ASP.NET website operating in the Azure App Service Environment makes up a WFE cluster.
- The client's DNS service may get in touch with Azure Traffic Manager when users try to connect to the Power BI service to determine the best (often closest) datacentres for their needs.

Que 5 - Compare Microsoft Excel and Power BI Desktop on the following features: Data import, Data transformation, Modelling Reporting, Server Deployment, Convert Models, Cost

Ans 5 –

- Data import: Power BI can connect to a large number of Data sources, whereas, Excel’s connectivity with data sources is limited.

- Data Transformation: Power Query is used by Excel and Power BI for data cleansing and transformation. With the inclusion of this function, Excel is now a strong candidate for data analysis and reporting.
- Modelling: While Power BI's data model focuses mostly on large datasets and the ability to construct more complicated structures on top of it, Microsoft Excel's data model focuses on keeping things simple while still providing you with a wide range of functionality. While Power BI works with the simplification of real-time data acquired from many sources in addition to complicated analysis of past data, Microsoft Excel is mostly utilized for basic analytical activities on past data only.
- Reporting: When it comes to functionality and interaction, Microsoft Excel only provides a small selection of dashboards. Its tabular data structure enables you to view data using a variety of chart types. however, For bigger datasets, it is not the best tool. The reports are simple to read and aesthetically appealing because to Power BI's powerful features including easy formatting, natural language querying, scaling, editing, and filtering.
- Server Deployment: The on-premises option made available by the Microsoft Power BI Deployment Suit is called Power BI Report Server. On the other hand, the cloud service and cloud solution is Power BI Service. By setting up an Excel Services Application service application in Central Administration, Excel Services can be made available. Running the Excel Services application pool requires a domain account. To carry out the procedures, you must be a member of the Farm Administrators group.
- Convert Models: Excel has ability to work on simple and structured data models. On the other hand, power bi is ideal for building complex data models easily. Power BI Desktop allows you to quickly import Excel files with Power Query queries and Power Pivot models. Based on the Excel worksheet, Power BI Desktop automatically generates reports and visualizations. With Power BI Desktop, you may keep enhancing and modifying such reports after import.
- Cost: Excel is only paid version and power BI has free version and a payment version.

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

Ans 5 – Here are the 20 listed data sources supported by Power BI Desktop are as follows: i. Excel ii. Text/CSV iii. XML iv. JSON v. Folder vi. PDF vii. Parquet viii. SharePoint Folder ix. SQL server database x. Access database xi. Oracle Database xii. IBM Db2 database xiii. SAP Hana xiv. Amazon Redshift xv. Impala xvi. Google Big Query xvii. Snowflake xviii. Vartica xix. Exasol xx. Azure SQL Database