1. Explain DAX.

DAX, or Data Analysis Expressions, is a formula language used in Power BI and other Microsoft data analytics tools such as Power Pivot, Power Query, and Analysis Services. DAX is used to create custom calculations and aggregations for data analysis and reporting.

DAX is a powerful formula language that supports over 200 functions, including arithmetic functions, statistical functions, text functions, and date/time functions. It also includes functions for working with relational data, such as lookup and filtering functions.

DAX formulas are similar to Excel formulas, but with some key differences. DAX formulas operate on tables of data, rather than individual cells, and can be used to create calculated columns, measures, and tables.

Calculated columns are columns that are added to a table in Power BI, based on a DAX formula. Measures, on the other hand, are calculations that are performed on data in a report or visualization, such as totals, averages, or percentages. DAX tables are created using the EVALUATE function, which allows users to create custom tables of data based on a DAX expression.

One of the key advantages of DAX is its ability to handle large amounts of data with complex calculations, while maintaining fast query performance. This is because DAX is optimized for in-memory processing, allowing calculations to be performed on the entire dataset in memory, rather than querying the data source each time a calculation is needed.

In summary, DAX is a powerful formula language used in Power BI and other Microsoft data analytics tools, allowing users to create custom calculations and aggregations for data analysis and reporting.

1. Explain datasets, reports, and dashboards and how they relate to each other?

In Power BI, datasets, reports, and dashboards are three important components that work together to provide users with a complete data analysis and visualization solution.

**A dataset** is a collection of related tables, columns, and relationships that have been imported or connected to Power BI. Datasets can be created from a wide variety of data sources, including Excel files, SQL Server databases, and cloud-based services like SharePoint and Salesforce. Once a dataset is created, it can be used to create reports and dashboards.

**A report** is a visual representation of data that has been imported or connected to Power BI. Reports can be created from one or more datasets and can include various visualizations such as tables, charts, and maps. Reports are used to present data in a way that is easy to understand and allows users to interact with the data to gain insights and answer questions.

**A dashboard** is a collection of visualizations that provide a high-level overview of key metrics and KPIs. Dashboards can be created using one or more reports and are designed to be easily accessible and shareable. Users can interact with dashboards to drill down into more detailed reports and datasets, providing a holistic view of data across an organization

1. How reports can be created in power BI, explain two ways with Navigation of each.

* Using the Power BI Desktop application:

Open Power BI Desktop and select "Get Data" from the Home tab.

Choose the data source you want to use and connect to it.

Once your data is loaded, you can create visualizations by dragging and dropping fields from the Fields pane onto the canvas.

Customize your visualizations using the formatting options available in the Visualizations pane.

Save the report and publish it to the Power BI Service to share it with others.

* Using the Power BI Service:

Sign in to the Power BI Service and select "Create" from the top menu.

Choose "Report" from the dropdown menu.

Connect to your data source and select the data you want to use.

Drag and drop fields onto the canvas to create visualizations.

Customize your visualizations using the formatting options available in the Visualizations pane.

Save the report and share it with others.

* Navigation in Power BI Desktop:

To connect to a data source, select "Get Data" from the Home tab and choose the type of data source you want to use.

To add visualizations to your report, drag and drop fields from the Fields pane onto the canvas.

To customize visualizations, use the formatting options available in the Visualizations pane.

* Navigation in the Power BI Service:

To create a new report, select "Create" from the top menu and choose "Report" from the dropdown menu.

To connect to a data source, click the "Get Data" button in the left-hand menu.

To add visualizations to your report, drag and drop fields from the Fields pane onto the canvas.

To customize visualizations, use the formatting options available in the Visualizations pane.

1. How to connect to data in Power BI? How to use the content pack to connect to google analytics? Mention the steps.

* To connect to data in Power BI, follow these steps:

Open Power BI Desktop or sign in to the Power BI Service.

Click on the "Get Data" button in the Home tab or left-hand menu.

Select the type of data source you want to connect to, such as a database or file.

Enter the connection details for your data source, such as server name, database name, or file path.

Choose the data you want to import and any transformation options you need.

Review and edit the query if necessary.

Click on "Load" to import the data into Power BI.

* To use the content pack to connect to Google Analytics, follow these steps:

Open the Power BI Service and sign in.

Click on the "Get Data" button in the left-hand menu.

Select "Services" and choose "Google Analytics" from the list.

Enter your Google Analytics account credentials and authorize Power BI to access your data.

Choose the Google Analytics views and metrics you want to import.

Review and edit the query if necessary.

Click on "Load" to import the data into Power BI.

Once the data is imported, you can create visualizations and reports using the imported data in Power BI.

1. How to import Local files in Power BI? Mention the Steps.

* To import local files in Power BI, follow these steps:

Open Power BI Desktop or sign in to the Power BI Service.

Click on the "Get Data" button in the Home tab or left-hand menu.

Select "File" and choose the type of file you want to import, such as Excel, CSV, or text file.

Browse to the location of the file you want to import and select it.

Choose the data you want to import and any transformation options you need.

Review and edit the query if necessary.

Click on "Load" to import the data into Power BI.

Alternatively, you can also drag and drop the file directly into the Power BI Desktop canvas to import it.

1. In Power BI visualization, what are Reading View and Editing view?

Reading View is the default view for reports and dashboards that have been shared with others. It allows users to view and interact with the visualizations, explore the data, and apply filters to the report. Users can also view and interact with the report on different devices such as desktops, tablets, and mobile phones.

Editing View is a mode that allows report authors to modify the report or dashboard by adding, removing, or modifying visualizations, adjusting filters, changing the layout, and adding new data sources. In Editing View, report authors have full control over the design and functionality of the report, and they can also add new pages, bookmarks, and other features to enhance the report.

To switch between Reading View and Editing View, click on the "Edit" button in the top right corner of the report or dashboard. This will open the report in Editing View, where you can make changes. To switch back to Reading View, click on the "Reading View" button in the top right corner of the screen.