**Power BI Assignment 5**

**1.Explain DAX.**

DAX (Data Analysis Expression) is a formula expression language and can be used in different BI and visualization tool, DAX is also known as function language, where the full code is kept inside the function. DAX programming formula contains two data type. DAX function can also include other functions, conditional statement and value reference.

Power Bi you can use different function types to analyze data and create new columns and measures .It includes function from different categories :

* Aggregate
* Text
* Date
* Logical
* Counting
* Information

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

Power BI, datasets, reports and dashboards are interconnected components that work together to provide data analysis and visualization capabilities.

Datasets: A dataset in Power BI is collection of tables and data that serves as the foundation for analysis. It represent the data you want to work with, which can be imported from various sources or connected directly to data repositories or cloud services. Datasets organize and structure that data in a tabular format, allowing you to perform calculations, Create relationship between tables, and define measures and calculated calculated columns using DAX function.

Report: Report are interactive data visualization that are built on top of datasets. A report consist of one or more pages or tabs, where you can create charts, tables, maps, and other visual representations of your data. In a report you can add visuals, customize their appearance, apply filters, creare drill through actions and add interactivity to allow users to explore and analyze the data.

Dashboards: Dashboards are a high-level summary view of key metrics and visuals from multiple reports and datasets. They allow you to bring together selected visuals from different reports onto a single canvas, providing a consolidated view of your most important information.

Relationship between

* Datasets are the foundation of your analysis. They contain the actual data serve as the source for calculations, relationship, and measures.
* Reports are created based on datasets. You can select the tables and fields from the datset to build visual and explore the data in visual manner.
* Dashboard can be created by pinning visuals from multiple reports onto a single canvas. These visuals are linked to the underlying reports and datasets.

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

Power BI, You Can create reports using two main approaches: Power BI Desktop and power BI service.

Power BI Desktop:

* Open the Power BI Desktop application.
* Connect to your data source: Click on ‘’Get data” in the the Home Tab and select the desired data source e.g Excel, SQL server, sharepoint etc.
* Import or transform data: Use the Power Query editor to import or transform the data as needed.
* Design your report: Drag and drop field from fields pane onto the report canvas to create visuals . Customize the visuals by adjusting properties in the visualization pane.
* Add additional pages: If you have multiple pages in your report, click on the “New page ” button in the pages pane and repeat the process of designing visuals for each page.
* Apply filters and interaction: Use the filters pane to apply filters to visuals and define interactions between visuals.
* Save the report: Click on “file” and then “Save” to save the report locally as a .pbix file.
* Publish the report: To share the report, you can publish it to the Power BI service by clicking on “file” and then “Publish”.

2.Power BI service( Power BI online):

- Go to the Power BI service website and sign in with your Power BI account.

- Navigate to “Workspace”: In the left navigation pane, click on “Workspaces” and select the desired workspace where you want to create the report.

- Click on “Create ” in the top menu and select “report” This will open the Power BI report Editor.

- Connect to your data source click on “Get Data” in the Home tab and choose the appropriate data source.

- Import or transform data: Similar to Power Bi Desktop, use the Power Query Editor to import or transform the data

- Design your report: Drag and drop fields from the fields pane onto the report canvas and customize the visuals using Visualization pane.

- Add additional Pages: Click on the “New Page” button in the pages pane and repeat the process of designing visuals for each page.

- Apply filters and interactions: Utilize the filters pane to apply filters to visuals and define interactions.

- Save the report: The report is automatically saved in the Power BI service as you work on it.

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 , You can use various data source such as databases,files,online services. Steps to connect to google analytics using the content pack in Power BI:

1.Open Power BI Desktop or go to the Power BI Service and sign-in

2. In Power BI Desktop:

- Click on “Get data” in the Home tab.

- In the “Get Data” window search for “Google Analytics” or navigate to “Online services” and select “Google Analytics”

- Click on “Connect” to start the connection process.

Power BI service:

* Click on “Get data”in the left navigation pane.
* In the “Get Data” window, select “Services ” and choose “Google Analytics”.
* Click on “connect” to proceed.

3. In the “Google Analytics” you have two options to authenticate :

- Sign in with your Google Analytics account: Enter your Google Analytics account credential , including the email address and password associated with your Google Analytics account.

- Sign in with a Google account: Use your existing Google account credentilas to sign in.

4. After signing in, you may be prompted to grant permission for Power BI to access your Google Analytics data. Review the requested permissions and click on “Allow ” or “Accept” to grant access.

5. The “Navigator ” window will open, showing a list of available Google Analytics data tables and views. Select the desired tables or views that you want to import into Power BI, and click on “Load” or “Trasform Data’ to proceed.

- If you choose “Load” the selected data will be loaded directly into power BI. If you choose “Transform Data” you will be taken to the Power query editor , where you can apply transformation, filters and other data manipulations before loading the data.

7. Once the data is loaded , you can start creating visuals, measures and reports using the Google Analytics data in Power BI.

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

To import local files in Power BI, such as Excel spreadsheet or CSV files, you can follow these steps:

1.Open Power BI Desktop or go to the Power BI Service and sign in

2.click on faye data , select the type of file you want to import such as Excel or csv from available options.

3. In the “Navigator” window, locate the file you want to import from your local file system or network drive. You can browse through folders and select the file you want to import.

4. Once you select the file , you may have the option to preview the data or perform additional trasformations before loading it into Power BI.

5. Click on “Load” or “Trasform data” to proceed , depending on whether you want to load the data directly into power bi or apply transformation first.

6. If you choose “Trasform Data ”, you will be taken to the Power query editor, where you can perform various data manipulations, such as filtering. Splitting column, merging data or applying transformation specific to your data source.

7. once you have finished transforming the data, click on “Close and apply” to load the data into Power BI.

8. The imported data will be available in the “Fields”,pane and you can start creating visuals measures and reports using imported data in power BI.

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

Reading View:

-Reading view is the default mode when you open a report in Power BI.

- In Reading view, you can interact with the report and explore the visuals and data presented.

- Users can apply filters, drill down into data, visuals to see tooltips mad interact with any interations or slicer defined in the report.

- Reading View is primarily used by consumers or reviews of the report to analyze the data and gain insights from the provided visuals.

- In reading View, you cannot make changes to the report layout, add or modify visuals or alter the report structure.

2. Editing View:

- Editing view is the mode that allows report authors or creators to make changes to the report layout, visuals, data sources and other report properties.

- In Editing view, you have full control over the report design and can add, modify or delete visuals , rearrange elements on the report canvas, and apply formatting and styling options.

- You can also edit the underlying data model, add or remove data sources, create calculated columns or measures, define relationship, and apply data transformation using Power Query Editor.