***POWER BI FAQ’s***

Data warehouse Fundamental Questions

* IT applications and differences between OLTP and OLAP?
* **1) OLTP (Online Transaction Processing)**
* Purpose: Day-Day business storage
* Process: Front-End, Back-End process
* Points:
* a) Data: Less data
* b) Model: Noramlized model (more tables,smaller tables)
* c) Joins: More joins (So retrieval it is slower)
* d) Access Frequency: High [Milliseconds to seconds]
* e) Volatality: Volatile [Read, Ins, update, Delete]

* **2) OLAP(Online Analytical Processing)**
* Purpose: For analysis and mining
* Process: Layered architecture
* Points:
* a) Data: More data
* b) Model: DeNoramlized model (Less tables, complex tables)
* c) Joins: Less joins (So retrieval it is faster)
* d) Access Frequency: Low [Day/week/month...]
* e) Volatality: NonVolatile [Read]
* What is Datawarehouse [Single line] and warehouses available in the market?
* Hige storage area and which is suitable for decision making.
* Ex: Teradata,Oracle,Sqlserver,Sybase,Netezza, GreenPlum etc...
* Difference between OLAP and BI?
* BI is a process which uses OLAP approach to gather, convert and present the data.

* Difference between Analysis and Mining?
* Analysis talks about 'current understanding of data' and 'past analysis of data', where as mining talks about 'future prediction of data'.
* Note: Datamining is a knowledge analysis and discovery method.

* How many types of decision making available in IT?
* a) Strategic-- Past analysis [OLAP data]
* b)Tactical--Current and recent [OLTP]

* Difference between OLTP and ODS?
* OLTP holds realtime data where as ODS holds near real time data[daily 4 times from OLTP]

ODS helps in two ways >

* a) Input to DWH
* b) Incase enterprise database [OLTP] fails, it acts like enterprise db and continue operations.
* Note: All top companies use ODS in the ETL flow.
* OLTP similar terminologies?
* a)Operational Systems
* b)Enterprises databases
* c)Business Processing Systems
* d) Transactional systems

* Can you describe an End-End typical ETL Flow?
* OLTP->ODS->Stage Area[Files]->DWH[Stage]-->DWH[WorkArea]->DWH[Target]

* How many life cycle does a DWH project need?
* Three life cycles a)ETL b) Semantic c) Reporting
* Famous DWH life cycles: Agile, iterative incremental [Block approach], V model

* Explain Inmon Characterstics/ Principles?
* Inmon Characterstics:
* **a) Subject oriented:** Store data based on operation but not application.
* Ex: Savings coount subject area
* Application2 : a)Withdraw b)deposit
* Subject Area: withdraw+deposit single area
* **b) Integrated:**Integrate from diverse applications by eliminating inconsistencies and following standards.
* **c) Nonvolatile:** No change of data. [Don't modify the data] Helps to maintain history.
* **d) Timevarient:** Data store base on timeframes [granularity load / grain]
* We can perform the below operations easily.
* a) Current understanding
* b)Past analysis
* c)Future predictions

* What is granularity and which grain your project has?
* Granularity talks about the level of data maintaining in the project. Dwh has multiple tables with multiple grains.
* Always the lowest grain has lot of burden but improves analytical performance.
* Ex: Day/ week/month etc.. grains Day grain is recommended for better analysis

* What is datamart and how many types available?
* **DataMart**--Data sub store for specify business/ operation / functioality May or not not be a subset of DWH.
* Three types of datamarts
* **a)Dependent**-- DWH created first and then datamart [subset of DWH]
* Ex: ICICI DWH, Savings account dependent datamart
* **b) Independent**-- Directly created from source systems [we don't use DWH here]
* Ex: ICICI employee payroll System [No history, not much analysis required]
* **c) Logical Datamart**--It is replica of another data mart
* How do we create datamarts practically?
* a) By using Complex Views [Materialized views] --Dependent DM
* b) By using a complex table --Depedent DM
* c) By using a seperate physical storage area --Independent DM

* How many types of DWH approaches available, which approach your company following?
* Two approaches
* **a) KIMBal approach**--Datamarts-> DWH [Bottom up approach]
* **b) Inmon approach**-- DWH -->Datamarts [Top down approach]
* My company using KImbal approach for DWH implementation because of dynamic decisions and adhod requests.

* How many types OLAP available, which is effective?
* **OLAP--**Online Analytical Processing
* It creates aggregates(sum,avg, max,min stddev,covarience etc...) for decision making.
* **ROLAP:**Relational OLAP--Data and aggrgates in the relation are [OLTP area]
* Latency time less [fresh data anlysis]
* Slower analysis
* Minimal set up
* Ex: Smal, Medium
* **MLOAP:** Multidimensional OLAP-- Data and aggregates in mutidimensional area[ Cube]
* Adv: More and detailed analysis this is helpful
* Latency time is high [ fresh data analysis is not possible]
* Complex set up
* Ex: Corporates
* **HOLAP:**Data in relational area and aggreagates in multidimensional area [cube]
* Ex: Latency time avg
* Avg set
* **Desktop OLAP:** Here the data and aggregates on PC based desk top applications
* Ex: Excel, LOtus, FoxPro,VISICALC etc...
* Explain Time hierarchy?
* Hour-->Day-->Week-->Fort Night-->Month-->Quarter-->half Year(Semister)-->Year

* You have two databases with same size, then dow do you identify which is OLTP or OLAP?
* Normalized model is OLTP, Denormalized model is OLAP

* Need of Data warehouse?
* 1)To Analysis of data and history maintenance.
* 2)Companies require Strategic information to face the competition in market.
* 3)The Operation system are not designed for strategic information.
* 4)To maintain history of data for whole Organization and to have a single place where the entire data stored.

* What is data warehousing and Explain Approaches?
* Many companies follow either characteristic defined by W.H.Inmon or Sean kelly.
* **a)Inmon definition**
* Subjected Oriented, Integrated, Non Volatile,Time Variant
* **b)Sean Kelly definition**
* Seperate, Available, Integrated,TimeStamped,Suject Oriented, Non Volatile, Accessible
* **c)Dwh Approaches**
* There are two Approches
* 1.Top Down by Inmon
* 2.Bottom Up by Ralph kimbal
* **Inmon approach:**Enterprise datawarehouse structured first and next Datamart created.(TopDown).
* **Ralph kimbal:**Datamart designed first, later Datamarts to Datawarehouse designed.(BottomUp).

* What are the responsibilities of a data warehouse consultant/professional?
* The basic responsibility of a data warehouse consultant is to ‘publish the right data’. Some of the other responsibilities of a data warehouse consultant are:
* 1. Understand the end users by their business area, job responsibilities, and computer tolerance.
* 2. Find out the decisions the end users want to make with the help of the data warehouse.
* 3. Identify the ‘best’ users who will make effective decisions using the data warehouse
* 4. Find the potential new users and make them aware of the data warehouse.
* 5. Determining the grain of the data.
* 6. Make the end user screens and applications much simpler and more template driven.

* What are fundamental stages of Data Warehousing?
* **a)Offline Operational Databases -**Data warehouses in this initial stage are developed by simply copying the database of an operational system to an off-line server where the processing load of reporting does not impact on the operational system's performance.
* **b)Offline Data Warehouse -** Data warehouses in this stage of evolution are updated on a regular time cycle (usually daily, weekly or monthly) from the operational systems and the data is stored in an integrated reporting-oriented data structure.
* **c)Real Time Data Warehouse -**Data warehouses at this stage are updated on a transaction or event basis, every time an operational system performs a transaction (e.g an order or a delivery or a booking etc.)
* **d)Integrated Data Warehouse -**Data warehouses at this stage are used to generate activity or transactions that are passed back into the operational systems for use in the daily activity of the organization.

* What is Datamart Explain Types?
* It is a specific Subject area or Functionality or Task. It is Designed to facilitate end user Analysis.
* **Wrong Answer--** It is a subset of warehouse
* **Types of Datamarts**
* Dependent, Independent, Logical.
* **Dependent:**Created from Datawarehouse as a seperate physical store.
* **Independent :**Created directly from operational systems to a seperate physical store.
* **Logical:**Exists as a subset of existing Datawarehouse.

POWER BI Interview Questions ( Simple, Medium and Complex)

* What is Power BI?
* With Microsoft Power BI, you have the power to gather business insights from both on - premise and cloud stored data in a dynamic, stunning interactive visualization at low cost of ownership.
* With powerful insights, your company will be able to make critical business decisions to help business grow, provide better service to your customers and increase your ROI (Returns of Investment), all at an affordable cost.
* What are Power BI features?
* a)Content Packs: Power BI uses Content Packs, which has dashboard reports, data model and embedded queries. Content Packs are now being used by a large number of applications, including QuickBooks.
* b)Natural Language Q&A: This is one of the most powerful tools in Power BI. Natural Language Q&A allows users to write questions and provides the content and answer, which can be manipulated to match your visual need.
* c)Print Dashboard: Power BI provides a unique feature for printing dashboards, which can be handy in board meetings and discussions.
* d)Custom Visualization: It’s a library of custom visualization. If the business needs are different, then so should the visuals.
* e)Get Data (Data Source): With Power BI, businesses can get data from virtually anywhere. Power BI Desktop includes a huge array of on premise and cloud data sources, structured and unstructured like cloud, SQL Server, Oracle, XML, CSV, OData feed, Azure ….etc.
* f)DAX Data Analysis Function: Has more than 200 function and counting. The rich DAX formula language includes libraries of incredible capabilities to perform computational gymnastics on your data and create powerful analytical data models.
* g)Receive data-driven alerts for mobile insights.
* h)View rich graphical visualizations from complex BI data.i)Schedule Refresh for data sources.
* What are Technical Details?
* a)Devices Supported: Windows, Android, iPhone/iPad, Web-based , Windows Mobile.
* b)Language Support: English.
* c)Pricing Model: Free and Monthly payment.
* d)Customer Types: Large Enterprises and Medium Business.
* e)Deployment: Cloud Hosted and On Premise.
* How Much Does Microsoft Power BI Cost??
* Microsoft Power BI offers three enterprise pricing plans to choose from, one of which can be acquired for free (1 GB data capacity limit).
* a)Power BI – Free 1GB Data Capacity Limit. Create, View, and Share Personal Dashboards and Reports. Author Content. Data Exploration. Native Apps for iOS, Windows, and Android. Consume curated content packs for services like Dynamics, Salesforce, and Google Import data and reports from Excel, CSV and Power BI Desktop files. Publish to web.
* b)Power BI Pro – $9.99/user/month: All Power BI Features. Consume live data sources with full interactivity. Access on-premises data using the Data Connectivity Gateways (Personal and Data Management). Collaborate with your team using Office 365 Groups in Power BI. Create, publish and view organizational content packs. Manage access control and sharing through Active Directory groups. Shared data queries through the Data Catalogue.
* c)Power BI Premium – $4,995 /user/month: Power BI Premium is an on - premise deployment and distribution of Power BI reports using the Power BI Report Server. This allows you to maintain reports on - premise and move to the cloud when your organization is ready.
* Power BI Premium is designed to address the challenges of large enterprise deployments and workloads. It enables your organization to use your own dedicated capacity and hardware rather than relying on Microsoft’s shared capacity.
* You’ll need to provide that capacity and ensure you have enough for your reporting and analysis purposes. This allows for much larger scale and better performance if you size it properly. Microsoft offers three sizes for Premium capacity and each come with a different number of v-cores and memory size.
* 5)Is there a mobile app?
* There is a mobile app available on the App Store, Google Play Store, and Microsoft Store.
* What is Power BI Desktop?
* Power BI Desktop is a free desktop application that can be installed right on your own computer. Power BI Desktop works cohesively with the Power BI service by providing advanced data exploration, shaping, modeling, and creating report with highly interactive visualizations. You can save your work to a file or publish your data and reports right to your Power BI site to share with others.
* What data sources can Power BI connect to?
* The list of data sources for Power BI is extensive, but it can be grouped into the following: Files: Data can be imported from Excel (.xlsx, xlsm), Power BI Desktop files (.pbix) and Comma Separated Value (.csv). Content Packs: It is a collection of related documents or files that are stored as a group. In Power BI, there are two types of content packs, firstly those from services providers like Google Analytics, Marketo or Salesforce and secondly those created and shared by other users in your organization. Connectors: to databases and other datasets such as Azure SQL, Database and SQL, Server Analysis Services tabular data, etc.
* What are Building Blocks in Power BI?
* The following are the Building Blocks (or) key components of Power BI: Visualizations: Visualization is a visual representation of data. Example: Pie Chart, Line Graph, Side by Side Bar Charts and Graphical Presentation of the source data on top of Geographical Map, Tree Map…etc. Datasets: Dataset is a collection of data that Power BI uses to create its visualizations. Example: Excel sheets, Oracle or SQL server tables. Reports: Report is a collection of visualizations that appear together on one or more pages. Example: Sales by Country, State, City Report, Logistic Performance report, Profit by Products report etc. Dashboards: Dashboard is single layer presentation of multiple visualizations, i.e we can integrate one or more visualizations into one page layer. Example: Sales dashboard can have pie charts, geographical maps and bar charts. Tiles: Tile is a single visualization in a report or on a dashboard. Example: Pie Chart in Dashboard or Report
* What are the different types of filters in Power BI Reports?
* Power BI provides variety of option to filter report, data and visualization. The following are the list of Filter types. Visual-level Filters: These filters work on only an individual visualization, reducing the amount of data that the visualization can see. Moreover, visual-level filters can filter both data and calculations. Page-level Filters: These filters work at the report-page level. Different pages in the same report can have different page-level filters. Report-level Filters: There filters work on the entire report, filtering all pages and visualizations included in the report.
* What are content packs in Power BI?
* Content packs for services are pre-built solutions for popular services as part of the Power BI experience. A subscriber to a supported service, can quickly connect to their account from Power BI to see their data through live dashboards and interactive reports that have been pre-built for them.
* What is Row-level security (RLS)?
* Row-level security (RLS) restricts data access for given users. Filters restrict data at the row level. You can define filters within roles. In role based security model, you are defining a role and then assigning users to that role. Within that role you can restrict users from seeing all rows within a table or just specific rows.
* What is Dynamic Row-level security (DRLS)?
* Dynamic row-level security (DRLS) is one of the most effective and efficient ways to restrict data views across an organization. Using DAX functions, DRLS filters the dataset based on the Power BI service user’s log-in credentials. This allows Power BI report authors to easily create filtered data views and skip the hassles of creating multiple security roles in the model and managing the assignment of users to these roles.
* **What is DAX?**
* To do basic calculation and data analysis on data in power pivot, we use Data Analysis Expression (DAX). It is formula language used to compute calculated column and calculated field.
* What are the most common DAX Functions used?
* Below are some of the most commonly used DAX function: SUM, MIN, MAX, AVG, COUNTROWS, DISTINCTCOUNT, IF, AND, OR, SWITCH, ISBLANK, ISFILTERED, ISCROSSFILTERED, VALUES, ALL, FILTER, CALCULATE, UNION, INTERSECT, EXCEPT, NATURALINNERJOIN, NATURALLEFTEROUTERJOIN, SUMMARIZECOLUMNS, ISEMPTY, VAR (Variables),GEOMEAN, MEDIAN, DATEDIFF
* How is the FILTER function used?
* The FILTER function returns a table with a filter condition applied for each of its source table rows. The FILTER function is rarely used in isolation, it’s generally used as a parameter to other functions such as CALCULATE.
* What is special or unique about the CALCULATE and CALCULATETABLE functions?
* These are the only functions that allow you modify filter context of measures or tables. Add to existing filter context of queries. Override filter context from queries. Remove existing filter context from queries. Limitations: Filter parameters can only operate on a single column at a time. Filter parameters cannot reference a metric.
* **What is the common table function for grouping data?**
* SUMMARIZE() Main group by function in SSAS. Recommended practice is to specify table and group by columns but not metrics. You can use ADDCOLUMNS function. SUMMARIZECOLUMNS New group by function for SSAS and Power BI Desktop; more efficient. Specify group by columns, table, and expressions.
* What are some benefits of using Variables in DAX ?
* Below are some of the benefits: a),By declaring and evaluating a variable, the variable can be reused multiple times in a DAX expression, thus avoiding additional queries of the source database. b).Variables can make DAX expressions more intuitive/logical to interpret. c).Variables are only scoped to their measure or query, they cannot be shared among measures, queries or be defined at the model level.
* What are the different Excel BI add-in?
* Power Query: It helps in finding, editing and loading external data. Power Pivot: Its mainly used for data modelling and analysis. Power View: It is used to design visual and interactively reports. Power Map: It helps to display insights on 3D Map.
* What is Power Pivot?
* Power Pivot is an add-in for Microsoft Excel 2010 that enables you to import millions of rows of data from multiple data sources into a single Excel workbook. It lets you create relationships between heterogeneous data, create calculated columns and measures using formulas, build PivotTables and Pivot Charts. You can then further analyse the data so that you can make timely business decisions without requiring IT assistance.
* What is Power Pivot Data Model?
* It is a model that is made up of data types, tables, columns, and table relations. These data tables are typically constructed for holding data for a business entity.
* What is xVelocity in-memory analytics engine used in Power Pivot?
* The main engine behind power pivot is the xVelocity in-memory analytics engine. It can handle large amount of data because it stores data in columnar databases, and in memory analytics which results in faster processing of data as it loads all data to RAM memory.
* What are some of differences in data modeling between Power BI Desktop and Power Pivot for Excel?
* Here are some of the differences: a).Power BI Desktop supports bi-directional cross filtering relationships, security, calculated tables, and Direct Query options. b).Power Pivot for Excel has single direction (one to many) relationships, calculated columns only, and supports import mode only. Security roles cannot be defined in Power Pivot for Excel.
* Can we have more than one active relationship between two tables in data model of power pivot?
* No, we cannot have more than one active relationship between two tables. However, can have more than one relationship between two tables but there will be only one active relationship and many inactive relationships. The dotted lines are inactive and continuous line are active.
* What is Power Query?
* Power query is a ETL Tool used to shape, clean and transform data using intuitive interfaces without having to use coding. It helps the user to: Import Data from wide range of sources from files, databases, big data, social media data, etc. Join and append data from multiple data sources. Shape data as per requirement by removing and adding data.
* **What are the data destinations for Power Queries?**
* There are two destinations for output we get from power query: a).Load to a table in a worksheet. b).Load to the Excel Data Model.
* What is query folding in Power Query?
* Query folding is when steps defined in Power Query/Query Editor are translated into SQL and executed by the source database rather than the client machine. It’s important for processing performance and scalability, given limited resources on the client machine.
* What are some common Power Query/Editor Transforms?
* Changing Data Types, Filtering Rows, Choosing/Removing Columns, Grouping, Splitting a column into multiple columns, Adding new Columns ,etc.
* Can SQL and Power Query/Query Editor be used together?
* Yes, a SQL statement can be defined as the source of a Power Query/M function for additional processing/logic. This would be a good practice to ensure that an efficient database query is passed to the source and avoid unnecessary processing and complexity by the client machine and M function.
* What are query parameters and Power BI templates?
* Query parameters can be used to provide users of a local Power BI Desktop report with a prompt, to specify the values they’re interested in. The parameter selection can then be used by the query and calculations. PBIX files can be exported as Templates (PBIT files). Templates contain everything in the PBIX except the data itself. Parameters and templates can make it possible to share/email smaller template files and limit the amount of data loaded into the local PBIX files, improving processing time and experience.
* Which language is used in Power Query?
* A new programming language is used in power query called M-Code. It is easy to use and like other languages. M-code is case sensitive language.
* Why do we need Power Query when Power Pivot can import data from mostly used sources?
* Power Query is a self-service ETL (Extract, Transform, and Load) tool which runs as an Excel add-in. It allows users to pull data from various sources, manipulate said data into a form that suits their needs and load it into Excel. It is most optimum to use Power Query over Power Pivot as it lets you not only load the data but also manipulate it as per the user’s needs while loading.
* What is Power Map?
* Power Map is an Excel add-in that provides you with a powerful set of tools to help you visualize and gain insight into large sets of data that have a geo-coded component. It can help you produce 3D visualizations by plotting up to a million data points in the form of column, heat, and bubble maps on top of a Bing map. If the data is time stamped, it can also produce interactive views that display, how the data changes over space and time.
* What is Power View?
* Power View is a data visualization technology that lets you create interactive charts, graphs, maps, and other visuals which bring your data to life. Power View is available in Excel, SharePoint, SQL Server, and Power BI. The following pages provide details about different visualizations available in Power View: Charts Line charts Pie charts Maps Tiles Cards Images Power View Multiples Visualizations Bubble and scatter charts Key performance indicators (KPIs)
* What is Power BI Designer?
* It is a standalone application where we can make Power BI reports and then upload it to Powerbi.com, it does not require Excel. It is a combination of Power Query, Power Pivot, and Power View.
* Can we refresh our Power BI reports once uploaded to cloud (Share point or Powebi.com)?
* Yes we can refresh our reports through Data Management gateway(for SharePoint), and Power BI Personal gateway(for Powerbi.com).
* What are the different types of refreshing data for our published reports?
* There are four main types of refresh in Power BI. Package refresh, model or data refresh, tile refresh and visual container refresh. Package refresh:- This synchronizes your Power BI Desktop, or Excel, file between the Power BI service and OneDrive, orSharePoint Online. However, this does not pull data from the original data source. The dataset in Power BI will only be updated with what is in the file within OneDrive, or SharePoint Online. Model/data refresh:- It refers to refreshing the dataset, within the Power BI service, with data from the original data source. This is done by either using scheduled refresh or refresh now. This requires a gateway for on-premises data sources. Tile refresh: - Tile refresh updates the cache for tile visuals, on the dashboard, once data changes. This happens about every fifteen minutes. You can also force a tile refresh by selecting the ellipsis (…) in the upper right of a dashboard and selecting Refresh dashboard tiles. Visual container refresh:- Refreshing the visual container updates the cached report visuals, within a report, once the data changes.
* Is Power BI available on-premises?
* No, Power BI is not available as a private, internal cloud service. However, with Power BI and Power BI Desktop, you can securely connect to your own on-premises data sources. With the On-premises Data Gateway, you can connect live to your on-premises SQL Server Analysis Services, and other data sources. You can also schedule refresh with a centralized gateway. If a gateway is not available, you can refresh data from on-premises data sources using the Power BI Gateway – Personal.
* What is data management gateway and Power BI personal gateway?
* Gateway acts a bridge between on-premises data sources and Azure cloud services. Personal Gateway: Import Only, Power BI Service Only, No central monitoring/managing. Can only be used by one person (personal); can’t allow others to use this gateway. On-Premises Gateway: Import and Direct Query supported. Multiple users of the gateway for developing content. Central monitoring and control.
* What is Power BI Q&A?
* Power BI Q&A is a natural language tool which helps in querying your data and get the results you need from it. You do this by typing into a dialog box on your Dashboard, which the engine instantaneously generates an answer similar to Power View. Q&A interprets your questions and shows you a restated query of what it is looking from your data. Q&A was developed by Server and Tools, Microsoft Research and the Bing teams to give you a complete feeling of truly exploring your data.
* Q:What is BI?
* Business intelligence is a technology-driven method.
* It helps you to analyze data and to provide actionable information which helps corporate executives, business managers, and other users to take decisive business decisions.
* Q:What is a Power BI?
* Power BI is a Business Intelligence and Data Visualization tool which helps you to convert data from the various data source into interactive dashboards and BI reports.It provides multiple software connectors and services.
* Q:Why use Power BI?
* Here are four primary reasons for using Power BI tool:
* Pre-built dashboards and reports for SaaS Solutions.
* Power BI allows real-time dashboard updates. Offers Secure and reliable connection to your data sources in the cloud or on-premises Power BI offers fast deployment, hybrid configuration, and secure environment.
* Helps you in data exploration using natural language query
* Q:What are the essential applications of the Power BI?
* Power BI is mainly used by:
* PMO - Project Management Office Business & Data Analyst Developer & Database Administrator IT Team, IT Professional Consumer for End User Report Data Scientist
* **Q:What are the drawbacks of using Power BI?**
* Here, are the main drawbacks of Power BI:
* Dashboards and reports only shared with users having identical email domains.
* Power Bl does not mix imported data, which is accessed from real-time connections.
* Power BI can't accept file size larger than 1 GB.
* Dashboard does not accept or pass user, account, or other entity parameters.
* Q:What are the important components of the Power BI toolkit, and what do they do?
* Power Query: It allows you to discover, access, and consolidate information from different sources.
* Power Pivot: A modeling tool.
* Power View: It is a presentation tool for creating charts, tables, and more.
* Power Map: Helps you to create geospatial representations of your data.
* Power Q&A: Allows you to use natural language to get answers to questions.
* Q:What is grouping? How can you use it?
* Power BI Desktop allows you to group the data into small chunks. For grouping, you should use Ctrl + click to select multiple elements in the visual.
* Right-click one of those elements which appear in groups window.
* Q:Explain the term responsive slicers.
* On a report page, you can easily resize a responsive slicer to various sizes and shapes, and the data contained in it should be rearranged according to it. In case if the visual becomes too small to be useful, an icon representing the visual ability to take its place, thus saving the space on the report page.
* Q:Define the term 'M language."
* It is a programming language used in Power Query.
* It's a functional, case-sensitive language which is similar to other programming languages and easy to use.
* Q:What information is required to create a map in Power Map?
* Power Map can display visualizations which are geographical in nature.
* That's why some kind of location data is needed, for example, city, state, country or latitude and longitude.
* Q:What are the steps to go to Data Stories Gallery in Power Bi communities?
* Steps to go to Data Stories Gallery:
* First, open PowerBI.com in a favorite browser.
* By hovering on Learn
* Click on Community
* Scroll down little, and you will find Data Stories Gallery.
* Anyone can submit her or his Data Story as well.
* Q:Where incremental licensing refresh feature is accessible?
* Incremental refresh feature mainly used for high-end scalability of data by publishing only on that workspace in Power BI Service where Premium capacity is needed.
* Q:How can you analyze Power BI reports data in excel?
* You need to follow the below-given steps:
* Open Power BI Admin portal, go to tenant settings and select -> Analyze.
* Check that Power BI Administrator has enabled Excel option or not.Then at the upper right corner, click settings to download and install Excel updates.
* Next, go to the left-hand side navigation pane, go to the workspace, click on the dataset, click on Eclipses (three dots) and select Analyze in Excel.
* Download ODC file, save, and double click on it.
* After that needs to provide power BI user id and password.
* Q:How can you perform Dynamic filtering in Power BI?
* Dynamic Filtering in Power BI is done using the following steps:
* Once all the data are set up, publish a detail report to Power BI.
* Publish it to group workspace.
* Create a filter link Create a DAX calculated column. Public overview report
* Q:What are Tiles in Power BI?
* Tile is an important feature of power BI services and can be said as a picture of the data which can be pinned to the dashboard.
* Q:Explain the term data alerts.
* Alert works on data that is refreshed, Power BI looks for an alert, and it reaches the alert threshold or the limit then the alter will be triggered.
* Q:What is query collapsing?
* The process of converting the steps in power query editor to SQL and executing it by the source database is called query collapsing.
* Q:Explain data source filter.
* It is a parameter to filter the data into machines.
* Q:What is content packs?
* These are pre-built solutions build for popular services as a major part of the Power BI experience.
* **Q:What is Bookmark?**
* Bookmark in Power BI helps you to capture the configured view of a report page in a specific time.
* This includes filter and state of visual which can use a short cut to come back to the report that you can add as a bookmark.
* Q:Why use selection pane in Power BI?
* Selection Pane helps you to take control over visuals which require to be displayed and which should not be displayed. It allows you to combine multiple visual pages in the group and is also used in bookmarking.
* Q:Explain x-velocity in memory.
* It is the main engine which is used in power pivot. It allows you to load the large set of data into Power BI data.
* Q:Explain the term Custom Visuals.
* Graphs or visual which are not included in Power BI desktop are imported for better visualization.
* **Q:Explain the term incremental refresh?**
* Increment refresh is a newly added data so that there is no need to truncate or load the entire data.
* **Q:State the main difference between Filter and Slicer.**
* If you are using the normal filter user cannot interact with the dashboard. On the other hand, slicer allows users to have an interaction with Reports as well as Dashboards.
* Q:What is the Embed Code?
* Power BI online contains an option for publishing on web that will generate a link address for the Power BI report. You can share these links to others, which is called embed code.
* Q:What are the method to hide and unhide a specific report in Power BI?
* To hide and unhide specific report, you have to go to selection Pane in the menu bar, and press hides/unhide toggle button to bookmark.
* **Q:How can you compare Target and Actual Value from a Power BI report?**
* You need to use Gauge chart to compare two different measure.
* **Q:Can you create multiple dynamic connections between two tables?**
* Ans:
* **Q:Can you refresh Power BI reports after they are published to the cloud?**
* **Yes, it is possible. Gateways can be used to do so. For SharePoint: Data Management Gateway For Powerbi.com: Power BI Personal Gateway**
* Q:What is natural language search choice?
* The natural language search choice is language-based learning for communicating with information as a part of Power BI suite for Office 365 advertising.
* Q:Why is TOP N not accessible for the Page and Report Level Filter?
* ToP N is not accessible for the Page and Report Level Filters because their channels are associated with different visuals.
* Q: Explain the collect function.
* Collect function excludes null value. It does aggregate spatial values. You can't transform data to another format.
* Q:How can you differ COVAR and COVARP?
* **The main difference between the two is that: COVAR directly gives the same co-variance, whereas COVARP is the population covariance.**
* Q:Explain z-order in Power BI?
* Z-order is a design strategy which is used for arranging visual over shapes. It can be defined as an implementation method which can be applied whenever reports have multiple elements.
* Q:What is the only prerequisite for connecting to a database in Azure SQL Database?
* **The only prerequisite for before connecting to a database is that the user need to configure firewall setting to allows remote connections.**
* Q:Name widely recognized information forming systems.
* The most widely recognized information forming systems are: Removing columns and rows Adding indexes Applying for a sort order
* Q:What is CORR function? When we use it?
* CORR is a correlation function. It gives a correlation between two variables. It mostly ranges from -1 to 1.
* Q:State the difference between Count and CounD function.
* Count function returns to count, excluding NULL values whereas Countd returns distinct values which exclude NULL values.
* Q:Name the market place where you can download the Power BI mobile apps.
* App store
* Google Play
* Window Store
* Q:In which year Microsoft invented Power BI Embedded?
* In, the year 2016 Microsoft discharged new administration which is named as Power BI Embedded.
* Q:What is the process to refresh Power BI reports when it is uploaded into the cloud?
* Power BI, reports can be refresh using Data management, gateway, and Power BI Personal Gateway.
* Q:What visual would you need to use to show solitary esteem?
* Disseminate Plat is a visual you should use to show solitary esteem.
* Q:What context style is allowed by Power BI DAX?
* Power BI DAX content style is both Row and Filter.
* Q: What is parameter in Power BI?
* A: One kind of variable to store values.
* Q: What is the advantage of parameter in Power BI?
* A: Two major advantages
* a)Which support user interaction
* b)Environment set up.
* Q: How many types of parameters available?
* A: Three types of parameters
* a) Any parameter: User has to enter value
* b) List Parameter: User selects from static list of values from dropdown
* c) Query Parameter: User selects from dynamic list of values from dropdown
* Q: What is cascading parameter in Powrer BI?
* A: One parameter output is input to another parameter
* Ex: Country you select, displaying states, state you select displaying city
* Q: What is Mark Date table as Date in Powrer BI?
* A: If we consider a table as date, then it is used for all date and time calculations .
* Q: Can we mark a table with gaps as date table in Powrer BI?
* A: Gaps shuold not be there to consider a table as Date table.
* **Q: How many types of grouping available in Power BI?**
* A: Two types of grouping
* a) Logical Grouping: Create groups logically [happen at Power BI Dataset properties]
* b) Physical Grouping: Create groups physically by slicing data [happen at Power Query Level]
* Q: How many types of group options availabe at Power BI Dataset?
* A: Two types
* 1) List Group: Manual values selection and Group
* Note: For most of the data types (whole, characters, dates etc...)
* 2) Bin Group: Based on user selected bins or bin size groups created
* Note: For limited data types (whole, dates etc...)
* Q: What is Bin in Power BI?
* A: Bin is the type of group, which will take either size or value.
* Bin Count: Number of groups
* Bin Size: The value / gap between two groups
* How many bars system will generate if main category having 3 values and child category having 4 values?
* Clustered chart: 3 \* 4 = 12 bars
* Stacked Chart: 3 bars only
* 100% stacked : 3 bars only
* Q:What is Power BI DAX style?
* It is both Row and Filter Context
* Q:How can I purchase Power BI suite?
* You can purchase Power BI licenses version directly from their website www.powerbi.com.
* What are some ways that Excel experience can be leveraged with Power BI?
* Below are some of the ways through which we can leverage Power BI: The Power BI Publisher for Excel: Can be used to pin Excel items (charts, ranges, pivot tables) to Power BI Service. Can be used to connect to datasets and reports stored in Power BI Service. Excel workbooks can be uploaded to Power BI and viewed in the browser like Excel Services. Excel reports in the Power BI service can be shared via Content Packs like other reports. Excel workbooks (model and tables) can be exported to service for PBI report creation. Excel workbook Power Pivot models can be imported to Power BI Desktop models.
* What is a calculated column in Power BI and why would you use them?
* Calculated Columns are DAX expressions that are computed during the model’s processing/refresh process for each row of the given column and can be used like any other column in the model. Calculated columns are not compressed and thus consume more memory and result in reduced query performance. They can also reduce processing/refresh performance if applied on large fact tables and can make a model more difficult to maintain/support given that the calculated column is not present in the source system.
* How is data security implemented in Power BI ?
* Power BI can apply Row Level Security roles to models. A DAX expression is applied on a table filtering its rows at query time. Dynamic security involves the use of USERNAME functions in security role definitions. Typically a table is created in the model that relates users to specific dimensions and a role
* What are many-to-many relationships and how can they be addressed in Power BI
* Many to Many relationships involve a bridge or junction table reflecting the combinations of two dimensions (e.g. doctors and patients). Either all possible combinations or those combinations that have occurred. Bi-Directional Crossfiltering relationships can be used in PBIX. CROSSFILTER function can be used in Power Pivot for Excel. DAX can be used per metric to check and optionally modify the filter context.
* Why might you have a table in the model without any relationships to other tables?
* There are mainly 2 reasons why we would have tables without relations in our model: A disconnected table might be used to present the user with parameter values to be exposed and selected in slicers (e.g. growth assumption.). DAX metrics could retrieve this selection and use it with other calculations/metrics. A disconnected table may also be used as a placeholder for metrics in the user interface. It may not contain any rows of data and its columns could be hidden but all metrics are visible.
* What are the differences between a Power BI Dataset, a Report, and a Dashboard?
* Dataset: The source used to create reports and visuals/tiles. A data model (local to PBIX or XLSX) or model in an Analysis Services Server Data could be inside of model (imported) or a Direct Query connection to a source. Report: An individual Power BI Desktop file (PBIX) containing one or more report pages. Built for deep, interactive analysis experience for a given dataset (filters, formatting). Each Report is connected to at least one dataset. Each page containing one or more visuals or tiles. Dashboard: a collection of visuals or tiles from different reports and, optionally, a pinned. Built to aggregate primary visuals and metrics from multiple datasets.
* What are the three Edit Interactions options of a visual tile in Power BI Desktop?
* The 3 edit interaction options are Filter, Highlight, and None. Filter: It completely filter a visual/tile based on the filter selection of another visual/tile. Highlight: It highlight only the related elements on the visual/tile, gray out the non-related items. None: It ignore the filter selection from another tile/visual.
* How does SSRS integrate with Power BI?
* Below are some of the way through which SSRS can be integrated with Power BI: Certain SSRS Report items such as charts can be pinned to Power BI dashboards. Clicking the tile in Power BI dashboards will bring the user to the SSRS report. A subscription is created to keep the dashboard tile refreshed. Power BI reports will soon be able to be published to SSRS portal
* **Name some of the filters used in Power BI reports.**
* Page Level Filters, Visual Level Filters, Drill Through Filters, Report Level Filters.
* What are the different components of Power BI?
* Power BI Service, Power Query, Power Pivot, Power View, Power Map, Data Management Gateway, Power BI Q & A, Data Catalogue.
* Explain When Do You Use Sumx() Instead Of Sum()?
* When the expressions to SUM() consist of anything else than a column name. Typically when you want to add or multiply the values in different columns: SUMX(Order line, Order line[quantity], Order line[price]) SUMX() first creates a row context over the Sales table. It then iterates through this table one row at a time. SUM() is optimized for reducing over column segments and is as such not an iterator.
* What Do You Understand by New Calendarauto () Function in Dax(SSAS)?
* CALENDARAUTO function returns a table with a single column named “Date” that contains a contiguous set of dates. The range of dates is calculated automatically based on data in the model. Example: In this example, the MinDate and MaxDate in the data model are July 1, 2010 and June 30, 2011. CALENDARAUTO () will return all dates between January 1, 2010 and December 31, 2011. CALENDARAUTO (3) will return all dates between April 1, 2010 and March 31, 2012
* Name Any 3 Most Useful Aggregation Functions Dax?
* The text functions in DAX include the following:
* o CONCATENTATE
* o REPLACE
* o SEARCH
* o UPPER
* o FIXED
* How Is Filter Context Propagated Through Relationships?
* Filter context automatically propagates following the filtering of the relationship. It always propagates from the one side of the relationship to the many side. In addition, you also have the option of enabling the propagation from the many side to the one side. No functions are available to force the propagation: Everything happens inside the engine in an automatic way, according to the definition of relationships in the data model.
* What Is The Difference Between Distinct () And Values() In Dax?
* Both count the distinct values, but VALUES() also counts a possible implicit virtual empty row because of non-matching values in a child table. This is usually in a dimension table.
* Which Function Should You Use Rather Than Countrouws (distinct ())?
* DISTINCTCOUNT ()
* What Is A Pattern?
* A pattern is a general reusable solution to a commonly occurring problem. In Microsoft Excel, you use patterns every day to build tables, charts, reports, dashboards, and more.
* What Are Dax Patterns?
* DAX Patterns is a collection of ready-to-use data models and formulas in DAX, which is the programming language of Power Pivot. Create your Excel data model faster by using a DAX pattern.
* **Explain Related () And Relatedtable ()?**
* RELATED works when you have a row context on the table on the many side of a relationship. RELATEDTABLE works if the row context is active on the one side of a relationship. It is worth noting that both, RELATED and RELATEDTABLE, can traverse a long chain of relationships to gather their result; they are not limited to a single hop.
* How Does Calculate() Result In Context Transition?
* When in row context it transitions to filter context: the filter on the rows of a specific table propagates through the relationship to the related before the calculation is completed. E.g.CALCULATE(SUM(Other Table[column]) in a calculated column. It extends or modifies an existing filter context, by adding a filter as its second parameter. CALCULATE() always introduces filter context.
* What Is the Difference Between Max and Maxa Functions In Dax?
* The MAX function takes as an argument a column that contains numeric values. If the column contains no numbers, MAX returns a blank. If you want to evaluate values that are not numbers, use the MAXA function.
* How Are Row Contexts Created?
* 1. Automatically in a calculated column, 2. Programmatically by using iterators
* How Are Filter Contexts Created?
* 1. Automatically by using fields on rows, columns, slicers, and filters. 2. Programmatically by using CALCULATE ().
* How Can You Propagate Row Context Through Relationships?
* Propagation happens manually by using RELATED () and RELATEDTABLE (). These functions need to be used on the correct side of a one-to-many relationship: RELATED () on the many side, RELATEDTABLE () on the one side.
* **How Does Summarize columns Relate to Filtering?**
* 1. SUMMARIZECOLUMNS is not susceptible for outer (external) filters, in contrast to SUMMARIZE.
* 2. You can add a filter (e.g. using FILTER) as a PARAM of SUMMARIZCOLUMNS and it will filter accordingly. It acts as if you've added a filter in a pivot table.
* What Is the Initial Filter Context?
* The initial filter context comes from four areas of a pivot table: 1. Rows 2. Columns 3. Filters 4. Slicers It is the standard filtering coming from a pivot table before any possible modifications from DAX formulas using CALCULATE ().
* **Why Don't You Use A Calculate () In The Aggregation Expression Of A Summarize column()?**
* The CALCULATE() is automatically generated.
* What Is The Difference Between Having A Measure As A Second Filter Param And Having The Original Measure Expression As A Param? Filter (table, [measure]) Vs Filter (table, Sum(...))?
* A measure has always implicit filter context, so the ROW context induced by the FILTER is transferred to filter context in the measure.  
  In case of the expression only, no filter context is imposed on the expression, so the expression is evaluated with an empty filter context! This gives a different result.
* Dax Nested Functions Is Equivalent to SQL What?
* SQL subqueries.
* What is Drill Through?
* drill through is an action in which you move horizontally between two items via a related link
* What are Drill down and Drill up?
* Generally associated with drill down and drill up, which indicate vertical movements between components.
* What is Drill Crossed Report?
* With the cross-report drill through feature in Power BI Desktop, you can contextually jump from one report to another report. This is true as long as the reports are within the same workspace or app in the Microsoft Power BI service.
* Practical Questions:
* How can we perform dynamic Axis in Power BI?
* How can we Drill Down, Drill Through and Drill Crossed Report in Power BI?
* Have you ever worked with Toggle with Images?
* What is Conditional Formatting?
* How can you sort one column with another column?
* How can you implement Tooltip?
* How can you implement Dynamic RLS, Content Packs and Apps?
* How can you pass data labels dynamic way?
* How can you implement Multi Select Dynamic Title Values in Power BI?
* How can you implement single slicer selection for all pages?

**DAX few important points for understanding**

* What is DAX?
* Data Analysis Expressions
* Why do we require:
* To work with Power Pivot [ 2010], Tabular Model[2012], and Power BI [2013]
* What it does?
* Help us to create new measures, columns, tables which are suitable for  
  a) Modeling  
  b) Analysis  
  Note: It can transform data with few operations [Data Conversion, mathematical calculations, formations etc...]
* In which year introduced?
* 2009 End
* What is the Inspration:
* Excel functions and MDX[Multi Dimensional Expressions] functions are inspiration.
* What Excatly DAX Contain?
* DAX is a Formula Language / Functional Language, which contain multiple elements like other languages  
  a) Identifier : Name it, what kind of chars / digits / special you cna take, how do you recognize a name etc...  
  b) Data Type: Integer, String, Date, Boolean, BLOB etc...  
  c) Operators: Arithemetic [+, -...], Concatination [+,||], Logical [and or not ]etc....  
  d) Parameter naming convention  
  e) Functions [ 12 kinds of functions available]  
  DateTime  
  Mathematical  
  Parent Child etc...  
  These are of two types  
  a) Functions without arguments [parameters]  
  Rand()  
  b) Functions with arguments [parameters] Sum(columnname)
* Where do we write DAX?
* a) PowerPivot: Expression Bar or Any Cell  
  b) Tabular Model: Expression Bar or Any Cell or On Cube Database  
  c) Power BI: Expression Bar
* Are we going to use any tools?
* DAX is a formula language, we can also use like query language. There are two types of tools  
  **a) SSMS: Sql Server Management Studio [ Native and from MicroSoft]  
  b) DAX Studio [ DAX Org]**
* DAX availability?
* **In Two ways  
  a) Expressions  
  b) Querying**
* What is Parameter in DAX?
* Parameters are called as arguments in other languages. It may be an expression / table / ties/ column etc...
* What is Context, how it impacts?
* Context is the filter used to evaluate a DAX function.  
  There are multiple contexts.  
  a)Row  
  b) Column  
  c) Multi-row  
  d) Filter etc...  
  Ex: You created a DAX function with SUM(DiscountFee), but the value changes based on the filter / row / column / multi-row selection.
* What are the important terminologies to remember to work with DAX?
* a) Single value return: New measure  
  b) Multiple values return in a single column: New column  
  c) Multiple columns returns : New Table
* Where do we write DAX?
* a) Power Pivot in Excel  
  b) SSDT -Sql Server Data Tools (Visual Studio)  
  c) SSMS--Sql Server Management Studio  
  d) Power BI Desktop (Cloud/ On-premises)  
  e) DAX Studio
* Explain object referencing in DAX?
* **Tablename  
  'Tablename'  
  'Table name'  
  Tablename[Columnname]  
  'Table name'[columnname]**
* What kind of statements we write in DAX queries frequently?
* **a) Evaluate : like Select statement  
  b) DEFINE: Like Scope / CTE (with in the query it will be executed)  
  c) Var: Intermediate value storage holder**
* How do we work with variables in DAX?
* By defining and using Define  
  Var totalval=sum(...)  
  If  
  (totalval>1000000,'Good Business', 'Poor Business')

DAX Interview Questions ( Simple, Medium and Complex)

* **Difference between Summarize and Group By?**
* The GROUPBY function is similar to the SUMMARIZE function. GROUPBY does not do an implicit CALCULATE for any extension columns that it adds. GROUPBY attempts to reuse the data that has been grouped making it highly performant. Group isn’t placed into the filter context. Start with the specified table (and all related tables in the “to-one” direction) CURRENTGROUP supports AverageX, CountAX, CountX, GeoMeanX, MaxX,MinX, ProductX, StDevX.S, StDevX.P, SumX, VarX.S, VarX.P. No such option
* Difference between Summarize and Group By?
* DATES (MTD/YTD/QTD)--return DATES for the function. For totals, again we need to take aggregate function. TOTAL (MTD/YTD/QTD)--Total Value returned for the function
* Differences between First Date(or Lastdate) and First Non Blank Date (or Last NonBlank Date)?
* First Date--First date of business start First Non Blank Date-- First business value started date
* Differences between IFERROR and isERROR?
* IFERROR does not require conditional validation, if it is error, then handle automatically with second argument action. Whereas iserror returns TRUE / False, so separate conditional validation (like if clause) is required.
* Differences between PARALLEL PERIOD and SAME PERIOD LAST YEAR?
* Parallel period is super set and give you parallel date with any interval. Sameperiodlastyear will give you only one interval past data.
* Differences between ALL and ALLEXCEPT?
* All will ignore filters and consider all values. AllExcept will consider all values except the specified column value.
* Difference between ALL and ALL SELECTED?
* All will ignore filters and consider all values. AllSelected will keep all explicit filters and ignore filter section values. This is helpful to findout visual aggregations.
* Difference between ALL and ALL SELECTED?
* All will ignore filters and consider all values. AllSelected will keep all explicit filters and ignore filter section values. This is helpful to findout visual aggregations.
* Calculate perform calculations, whereas calculate table return set of rows based on condition
* USERELATIONSHIP function
* Differences between Related and Related Table?
* Related will get required value based on model relationship. Related Table will get set of rows based on the table data filtered or sliced in the current context
* Differences between Calculate and Calculate Table?
* **Calculate perform calculations, whereas calculate table return set of rows based on condition**
* Differences between IN, CONTAINS and CONTAINSROW?
* IN--Multiple values against single column CONTAINS--Single value against single column CONTAINSROW--Multiple values against multiple columns in a row
* Differences between Related and LookupValue?
* Related will use model join and gets result column value. Whereas Lookup will give you result column value after manual condition match (manual join). Related works at row level for each cell value, where as Lookup returns a single value.
* When do we return TRUE or FALSE values apart from Informational Functions?
* When manually we write condition and eveluate, if condition satisfied return TRUE, otherwise FALSE.
* Differneces between SUM, SUMX, AVG, AVGX, MIN, MINX, MAX, MAXX, PRODUCT,PRODUCTX etc..?
* SUM--column wise operation, multiple rows passed to it. Only one argument it will take. SUMx--Row wise operation, conditional expression used here. Two arguments it will take.
* Differneces between SUMx and Calculate?
* SUM X always take same table [single] fields in the first and second argument. Calculate can take multiple table arguments. It uses internal model join condition to perform calculation.
* Differences between Generate and GenerateSeries?
* Generate will do cross join of two tables, whereas GenerateSeries will generate sequence of values. (similar to identity topic in SQL server)
* Differences between COUNT, COUNTA, COUNTAX, COUNTXX?
* The COUNT function counts the number of cells in a column that contain numbers. The COUNTA function counts the number of cells in a column that are not empty. It counts not just rows that contain numeric values, but also rows that contain nonblank values, including text, dates, and logical values. The COUNTAX function counts nonblank results when evaluating the result of an expression over a table. COUNTX counts the number of rows that contain a number or an expression that evaluates to a number, when evaluating an expression over a table.
* Differences between MAX and MAXA?
* MAX--Numeric values MAXA: Numerics + Logical values+ Blanks
* Differences between MIN and MINA?
* MIN--Numric values MINA: Numerics + Logical values
* Difference between Value, Row, and DataTable?
* Value:Single column values retrieval Row: Single row with multiple columns values Datatable: Help us to create table with data
* Difference between RANDOM and SAMPLE?
* Random: Gives random value between the range specified SAMPLE: Returns the specified sample number of rows
* Differnece between Concatinate and CombineValues?
* Combinevalues: Combine based on delimiter Concatinate: Concatinate the specified values (no delimiter option)
* **Difference between Count and CountRows?**
* **Count works on column wise and count rows works on row wise.**
* I want to find out number of string values or date values in a column?
* COUNTA
* How do we implement SubSrting functionality in DAX?
* Using MID
* How do we implement SubSrting functionality in DAX?
* Using MID
* **Differences between FIND and Search?**
* **Search:** Returns the number of the character at which a specific character or text string is first found, reading left to right. Search is case-insensitive and accent sensitive. =search("te","VINAYTECH",2) --RESULT IS 6
* **Find:** Returns the starting position of one text string within another text string. FIND is case-sensitive. =search("te","VINAYTECH",2) --FAILS
* **Differences between REPLACE and SUBSTITUTE?**
* Substitute: Replaces existing text with new text in a text string. Multiple times it can subsititute. =SUBSTITUTE([Product Code], "NW", "PA") REPLACE replaces part of a text string, based on the number of characters you specify, with a different text string. One time replacement based on the positions mentioned. =REPLACE(‘DIMCOURSE’[COURSE DESC], 3,9,”VINAYTECH”)
* Differences between Values and Value?
* Value--consider string as value =Value("3") Values--Return set of column values =values(dimcourse[courseid])
* **How do we establish bidirectional cross filtering in DAX dynamically?**
* Using CROSSFILTER and specifying both option
* Difference between earlier and Earliest?
* Earliest has one additional level of recursion
* Difference between RANKX and RAN.EQ?
* RankX for column values based ranking, Rank.EQ for comparing one column values with others and taking a rank value.
* How do we get earliest value and comparing with other values like correlated sub query?
* Earlier function.
* **Can we create a table in DAX with columns and data types?**
* DATA TABLE function.
* Difference between CROSS JOIN and GENERATE?
* Cross join works and Generate close to each other, but Generate support dat context, where as cross join does not support context.