

CONCEPTUAL QUESTIONS

For

POWER BI



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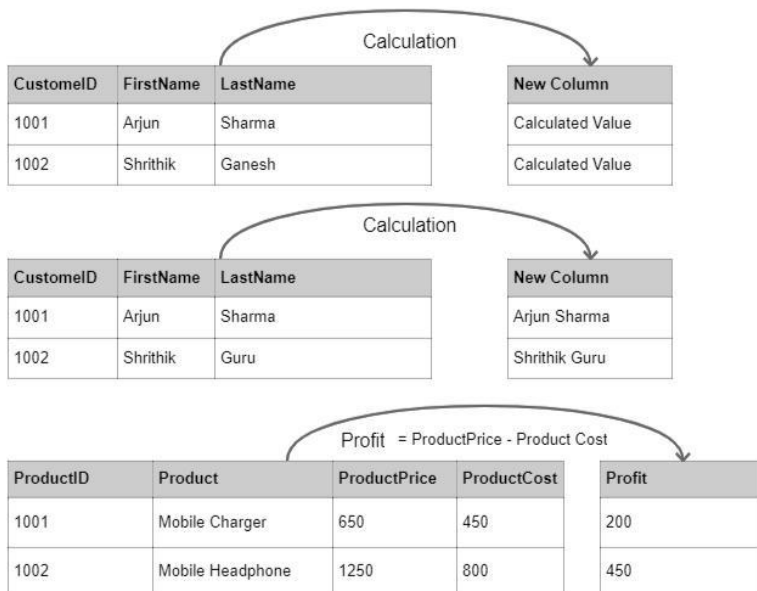
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1. What is Power BI?

Power BI is a business analytics tool developed by Microsoft that allows users to visualize and analyse data from various sources in very interactive manner.

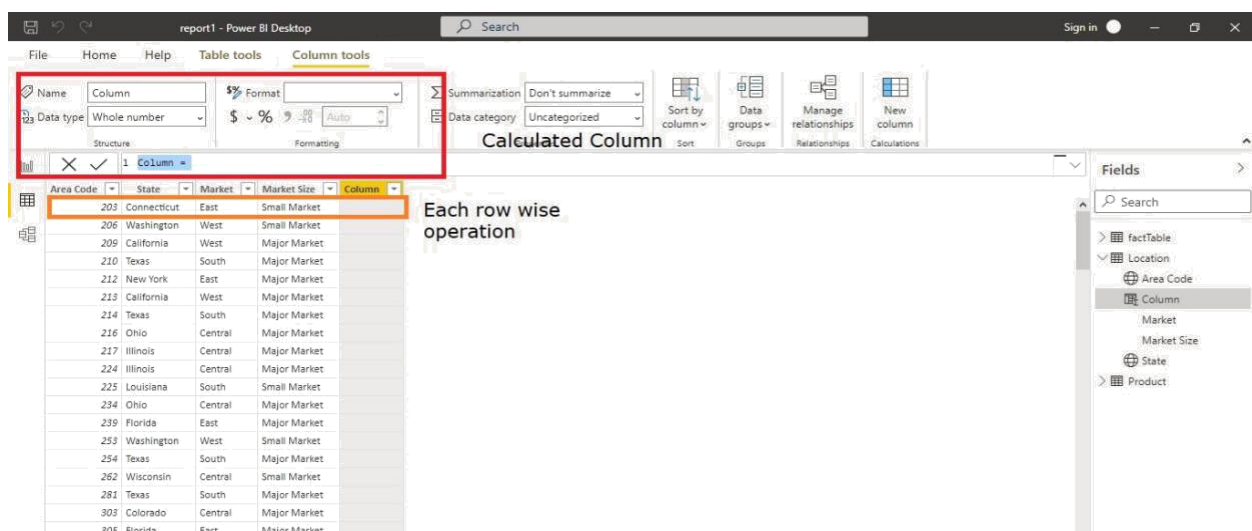
Q. What are calculated columns?



Calculated column is a new column which we create by defining calculations and these calculations can be our concatenate calculations where we might be using it to combine two or more columns' data or some DAX functions like Date, format, Related and so on, so this DAX calculations is performed for each row data in the Table not for entire table data.

Now before you end your answer, to create more impact on your answer you can also tell some benefits of creating new column. i.e. you can say that **in a data model one benefit of creating calculated column is to establish relationship between tables when no unique field exist.**

So, in simple words if u need a new column with some massaged data or transformed data rows then we can use calculated column.



Q. What are the main components of Power BI?

The main components of Power BI are Power BI Desktop, Power BI Service, and Power BI Mobile.

Q. What is the difference between Power BI Desktop and Power BI Service?

Power BI Desktop is a Windows application used to create reports and visualizations, while Power BI Service is a cloud-based platform used to publish, share, and collaborate on reports.

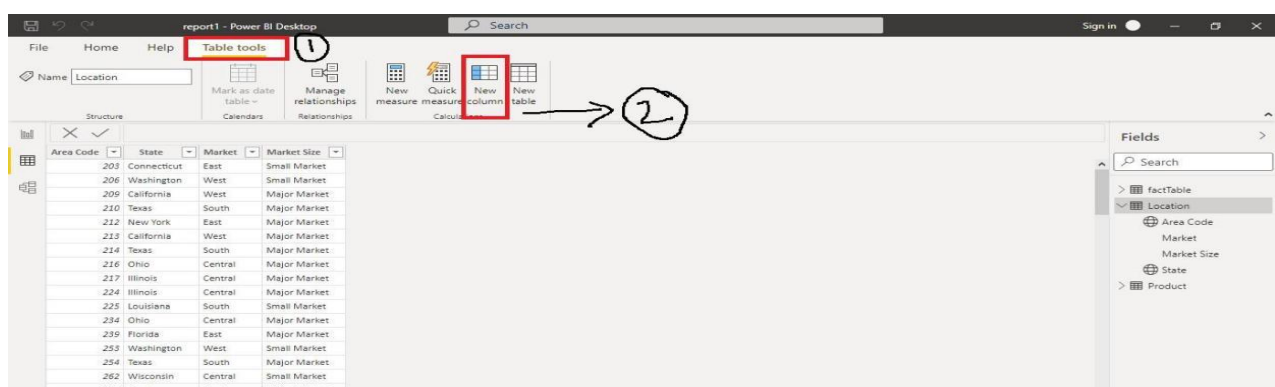
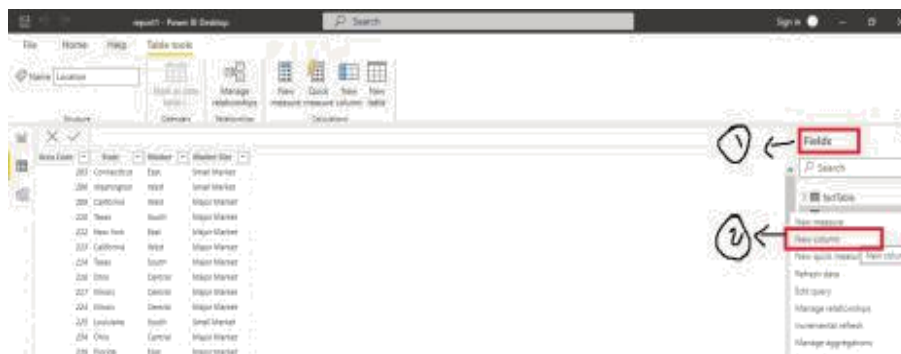
Q. What is a data model in Power BI?

A data model in Power BI is a collection of tables, relationships, and calculations that define how data is organized and structured within the application.

Q. Where can calculated columns be created in power bi?

Now to answer this question you can tell that: There are multiple ways we can create calculated columns

Go to fields then choose any table where you want to create column and click on dotted lines that say new column as shown in below image.



You can also go to table tools and say new column to create column (This option available in data model)

Q. How do you import data into Power BI?

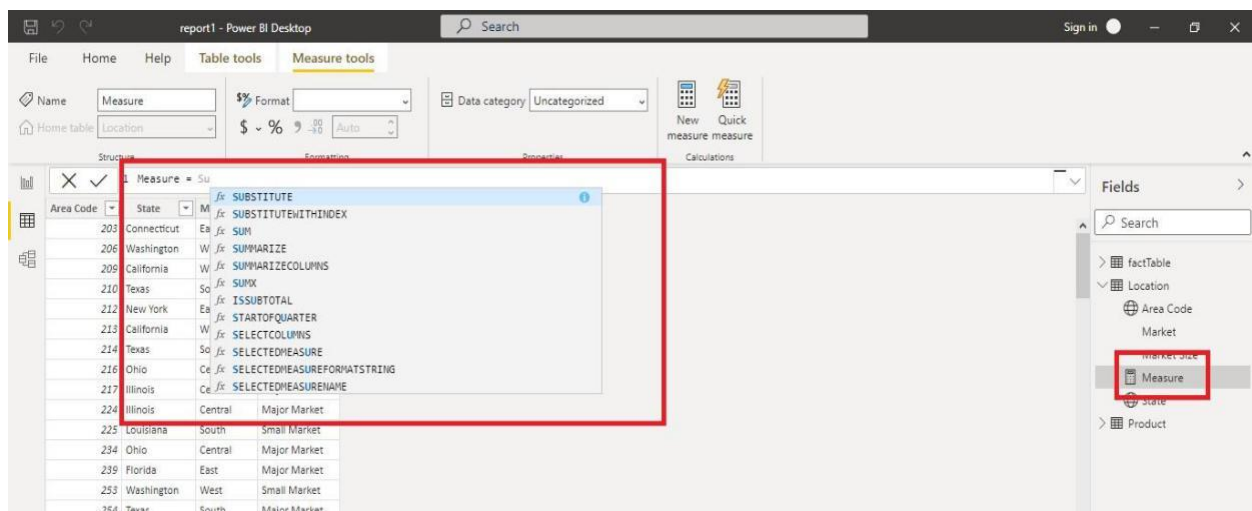
Data can be imported into Power BI by connecting to various data sources such as databases, Excel files, CSV files, and web services.

Q. What are calculated measures in power BI?

ProductID	Product	Product Category	ProductPrice	ProductCost
1001	Mobile Charger	Accessories	650	450
1002	Mobile Headphone	Accessories	1250	800
1003	Iphone XS	Smart Phone	58000	50000
1003	Oneplus	Smart Phone	68000	50000

Expression Total Product
Cost By Product Category
DAX Calculation → SUM(ProductCost)

Measures are just another way of defining calculations in data model. Measures are also known as Power BI DAX expression and we use these DAX functions for doing analysis, calculation, forecasting and many more. Measure works for entire table and depending on context it automatically changes its value. So, popular DAX functions are like...Calculate, Filter, Sum, Average, Min, Max and many more these functions are divided as per logical, time, date, table, filter, iteration wise and so on. Whenever we create a measure in a table a special calculator symbol is represented as you can see in below image.



Q. What is DAX in Power BI?

DAX (Data Analysis Expressions) is a formula language used in Power BI to create custom calculations and measures.

Q. How do you create visualizations in Power BI?

Visualizations can be created in Power BI by selecting a data source, choosing a visualization type, and dragging and dropping fields onto the visualization canvas.

Q. Difference between Calculated Column and Measure in Power BI?

Calculated Column	Measure
A new column name added in Data model	A new measure is created but not added to

which is used in formula bar	data model
Here we can view data in added in new column	Here we cannot view data added in measure
Evaluated for each row in our table	Evaluated when we use it in any visualization and this evaluation happens on entire dataset of table
Columns are also called as static row-level attributes	Measures are also called as dynamic aggregations
Here New Column Occupies Space in PBIX file	Here Measure does not occupy any space but yes it occupies space in cache level
Columns are useful to create relationship between tables where unique field does not exists	Here measures are useful to do only aggregation

Q. How can you share your Power BI reports with others?

Power BI reports can be shared by publishing them to the Power BI Service or exporting them to different file formats such as PDF or PowerPoint.

Q. Can you schedule data refreshes in Power BI?

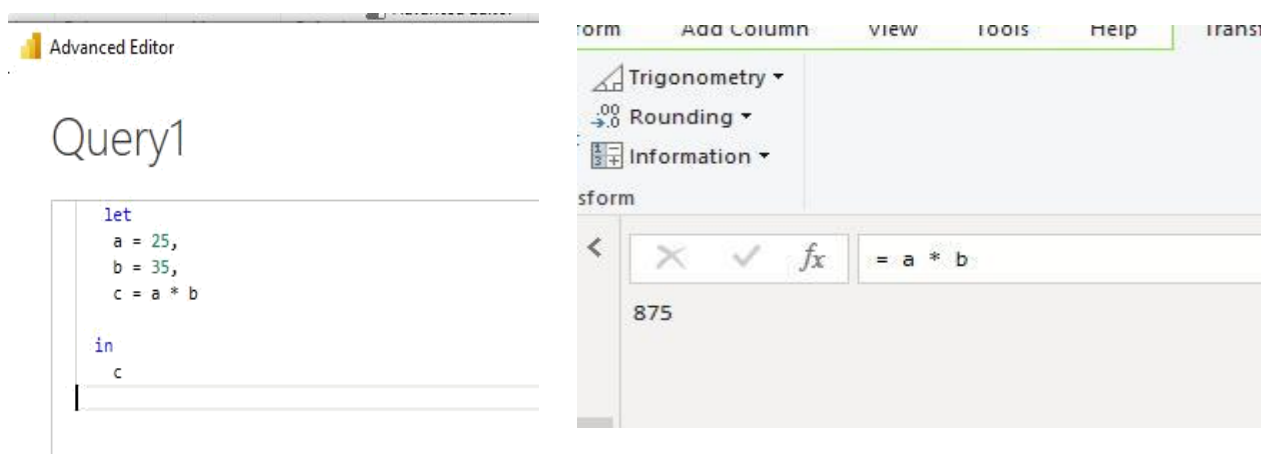
Yes, you can schedule data refreshes in Power BI to ensure that reports and dashboards are always up to date.

Q. What are M codes in power bi & where can you write Power Query M Code?

In Power BI, M codes are used in the Power Query zone for data transformation. M-code, also known as M-Language, is used to clean and structure data according to specific requirements. It is categorized into Logical, Date, Number, Text, Table, and other types.

M-code is used to perform tasks such as removing nulls, errors, and bad data, as well as structuring data in different models like snowflake or star schema. Power BI offers a wide range of M-functions, numbering in the thousands, which can be utilized based on specific needs.

When performing actions in the Power Query editor, such as replacing values, removing columns, appending queries, or adding columns, automatic M-code is generated as steps are taken. However, if one prefers to write M-code manually, they can access the Advanced Editor option or use the Custom Column feature to write custom M-functions.



In summary, M-codes in Power BI are used for data transformation and can be automatically generated or written manually using the Advanced Editor or Custom Column options.

Q. How do you create a calculated column in Power BI?

To create a calculated column, you can use the "Modelling" tab in Power BI Desktop and choose "New Column" from the "Calculations" group.

Q. What is Power BI data gateway?

Data Gateways in Power BI serve as a bridge or connector between on-premises data sources and Power BI files hosted on the Power BI cloud service. They enable the connection and synchronization of data from sources such as SQL server, Excel, CSV files, or other local server computers to cloud services like Azure, Power Apps, SharePoint, etc.

Data gateways ensure secure encryption and decryption of authentication, as well as the secure processing and transfer of data between on-premises and cloud services. They utilize Azure service bus to facilitate secure data transfer.

In summary, data gateways are necessary when Power BI files are hosted on Power BI cloud service and real-time data visualization is required, while the data source remains on-premises. These gateways enable data synchronization and refreshing between Power BI cloud service and on-premises data sources.

Please let me know if you have any additional questions regarding data gateways.

Q. What are the different types of visualizations available in Power BI?

Power BI offers a wide range of visualizations, including bar charts, line charts, pie charts, tables, maps, matrices, and more.

Q. Do we need data gateway for schedule refresh in Power BI?

Answer is yes if your data lies on on-premises data sources. if your data is somewhere in azure or azure sql server, one drive or SharePoint then we don't need data gateways.

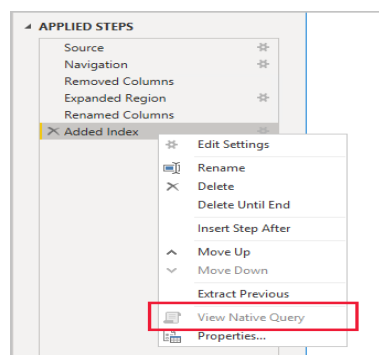
Now most of the companies are already hosted their data on Cloud servers so there is less chance of using these gateways.



Q. What is Query Folding in Power BI?

The process of sending Transformed Native Query (Query which is part of Power Q) back to data source to get only transformed column data are known as Query Folding. So, in simple words Query Folding gives you optimized columns data depending on your transformation requirement by sending native Query back to source data.

Now this Query Folding only works with only Relational DBS, Active directories not with any other sources like Excel, CSV.



In order to take Query Folding optimization advantage, do the steps and check each step if it is generating native query or now. If not then alter steps accordingly.

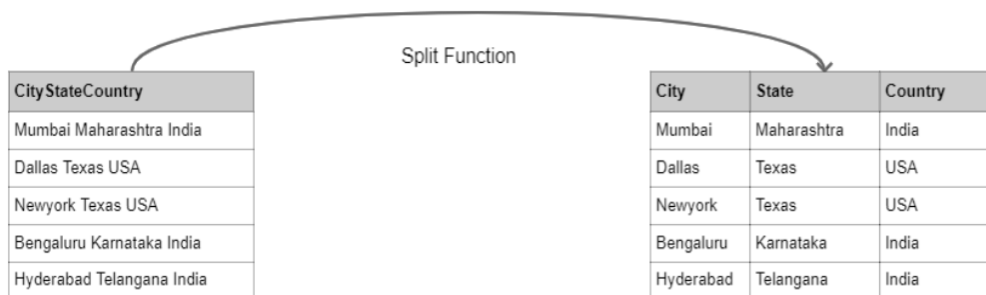
For example, you can see that from above image a new step is created with new native query and now power bi will send this last or final native query back to data source (SQL server in my case). This return back optimization columns are known as Query Folding.

Q. How can you filter data in Power BI?

Data can be filtered in Power BI using slicers, visual level filters, page level filters, or by creating custom filter expressions.

Q. What is the use of Split function in power BI?

Split Function is a part of Power Query editor and it is useful to split data into different columns based on delimiter, number of characters and by position. A nice example is shown below where one column data is split into multiple columns based on delimiter.



Q. What is row-level security in Power BI?

Row-level security in Power BI allows you to restrict data access based on user roles or attributes.

Q. How do you create drill-through actions in Power BI?

Drill-through actions can be created in Power BI by defining drill-through pages and specifying the drill-through filters.

Q. Can you create custom visuals in Power BI?

Yes, Power BI supports the creation and integration of custom visuals developed using the Power BI visuals SDK.

Q. How do you connect Power BI to live data sources?

Power BI supports live connections to various data sources such as SQL Server Analysis Services, Azure Analysis Services, and Power BI datasets.

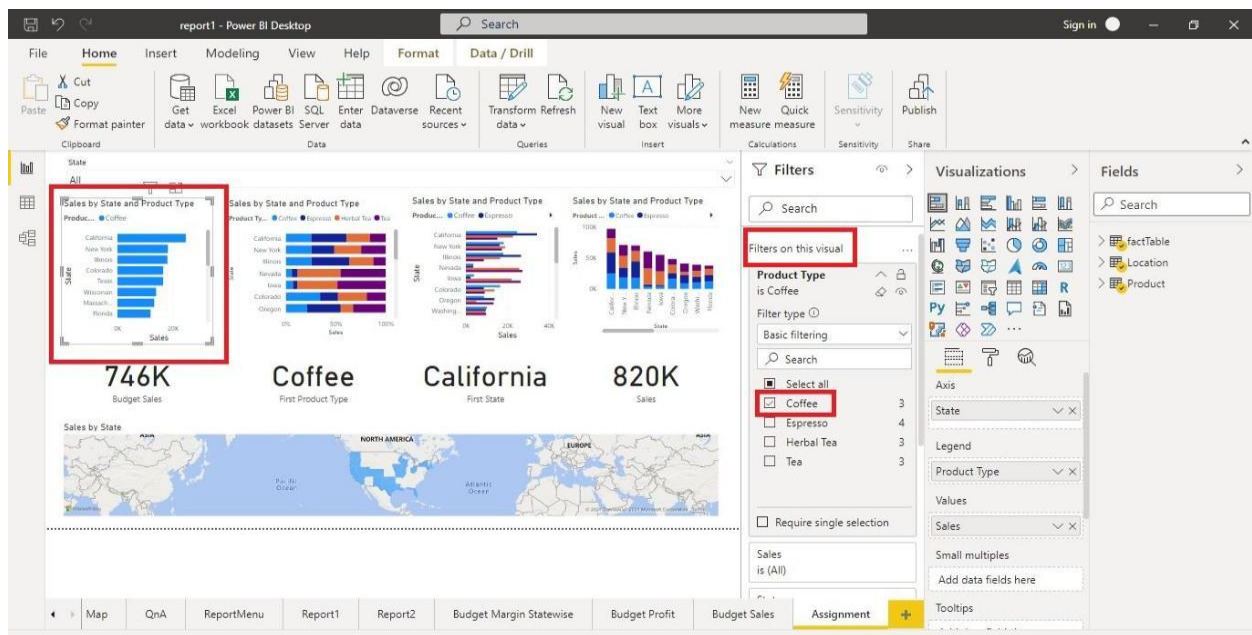
Q. Difference between visual level, page level and report level filters in Power BI?

We have three types' filters in Power BI visualization

- Visual level filter
- Page level filter
- Report level filter.

Visual level filter will able to filter selected visualization only

Example of Visual Level Filter Image:

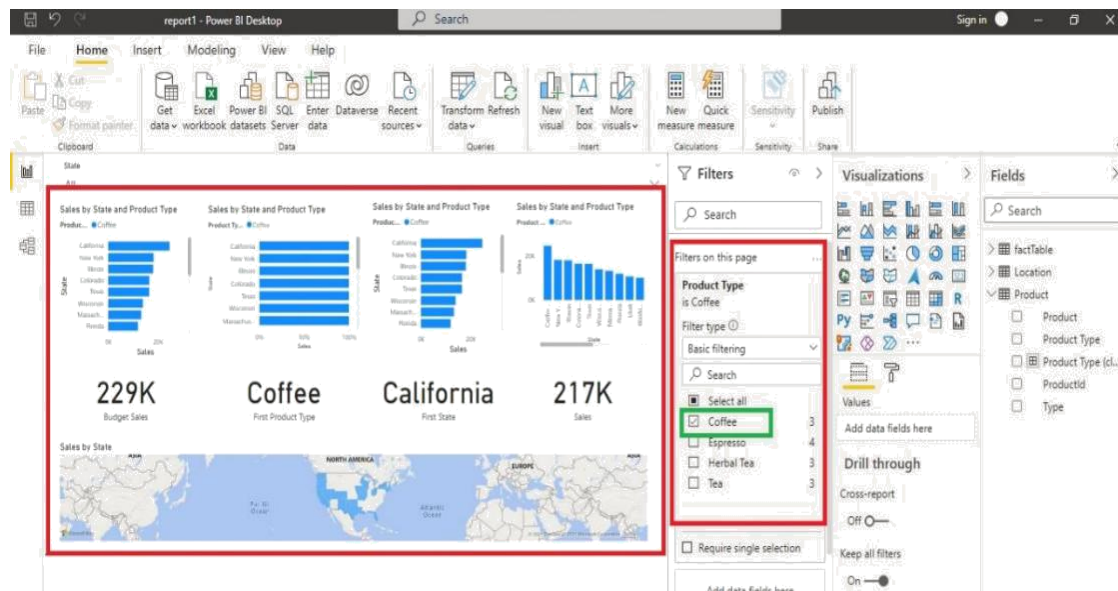


Page level filter will able to filter all visuals present in a single page

Example of Page Level Filter Image:

Report level filter will able to filter all visuals present current page and also present all current pbix report.

These filters can filter can visuals based on selected data fields.



Q. Difference between ALL and ALL EXCEPT functions?

ALL	All Except
Definition: All function. All function helps us to remove any filters from the context that might have been applied and then returns the necessary value.	Definition: This function also works similarly like All function. It also helps us to remove filter not just filter but all filters except column which is specified in that All except function and then returns the necessary value.
Syntax:	Syntax:
It removes filter on table name or column name which is applied in the function	Except column name which is applied in the function, it removes all other filters.
Here we can specify either particular table name or column name	Here we can specify only column name along with dataset name
All is also a comes under table functions	Allexcept is also a comes under table function
Example: In video demonstrated	Example: In video demonstrated

Q. What is "What if" parameter in power bi?

In power bi if we want to perform what-if type analysis then we can achieve it only by using what-if parameter feature, so this feature allows us to dynamically perform what-if type analysis by using slicer bar.

This parameter easily allows us to dynamically change calculation value of DAX expression as we use value of slicer in DAX expression and this value dynamically changes as we slide using slicer bar and thus will allow us to demonstrates how our data changes under various visualization.

For example: If we have current year sales data and we want to analyze like a to get 30%, 50, 60 or 90% growth for upcoming year how much targeted sales is required then yes, we can easily analyze by what-if parameter so this is an ideal example to tell in interviews.

Q. How to keep or remove specific rows in power bi?

This feature is present in Power Query Editor and this feature allows us to keep or remove specific rows in a table. We can keep or remove top, bottom, range of rows not only row data but also, we can remove errors and duplicates, very important feature with respect to data transformation.

Q. What is grouping in Power BI and how to use it?

In power bi whenever a data is presented in visual is more or like in an aggregated way but there are some times when we need to do group data as per our requirement for example let's say customers as per badges (Gold, Silver & Platinum) now power bi cannot able to group it this data using its own intelligence we have to do it manually so always automated data-grouping will not happen in that case data grouping can help us to do that.

Q. How can you create a hierarchy in Power BI?

Hierarchies can be created in Power BI by selecting the relevant fields and using the "Create Hierarchy" option in the modelling tab.

Q. Can you apply conditional formatting in Power BI?

Yes, Power BI supports conditional formatting to highlight data based on specific conditions or rules.

Q. What is the Power BI gateway?

The Power BI gateway is a software component that allows you to securely connect on-premises data sources to the Power BI service.

Q. How do you create a calculated measure in Power BI?

To create a calculated measure, you can use the "Modelling" tab in Power BI Desktop and choose "New Measure" from the "Calculations" group.

Q. Can you create a calculated table in Power BI?

Yes, you can create a calculated table in Power BI by using DAX formulas to define the table's structure and content.

Q. How do you create a report template in Power BI?

Report templates can be created in Power BI by designing a report with the desired structure and visuals, saving it as a template (.pbit file), and using it as a starting point for future reports.

Q. What is the importance of data modelling in Power BI?

Data modelling in Power BI is crucial as it determines how data is structured, relationships are established, and calculations are performed, ensuring accurate and meaningful analysis.

Q. How can you handle large datasets in Power BI?

Power BI offers features like data compression, query folding, and aggregations to handle large datasets efficiently and improve performance.

Q. Can you create a custom color theme in Power BI?

Yes, Power BI allows you to define custom color themes by modifying the default color palette or by importing themes created by others.

Q. How do you optimize performance in Power BI?

Performance in Power BI can be optimized by minimizing data model complexity, leveraging query folding and data compression techniques, and using appropriate visuals and filters.

Q. Can you embed Power BI reports into other applications?

Yes, Power BI reports can be embedded into other applications, websites, or portals using the Power BI Embedded service or APIs.

Q. What is DAX and most common DAX Functions used?

DAX stands for Data Analysis Expressions and it a formula expression language developed by Microsoft that can be used in different Microsoft products like in MSBI SSAS cube model, Power BI and Popular Power Pivot in Excel.They look alike Excel formulas but hold on they are very different. Excel formulas work on cells where else these DAX formulas works on rows and columns of table. It is very powerful expression language where we can write an entire formula like a function and we can keep entire code inside a function.

Main job of DAX is to define custom calculations (also called as Measures), create calculated columns or tables.

Power bi is a powerful data analysis tool if u know DAX, then we can truly unleash the capabilities of power BI.

Now let's talk about what are the most common DAX Functions?

We have categorized this common function according to different types as shown in below table.

Maths & Stats	Logical	Text	Filter	Date / Time Intelligence
SUM	IF	TRIM	ALL	DATEADD
MIN / MAX	AND / &&	UPPER / LOWER	ALLEXCEPT	DATESQTD
DIVIDE	OR/	LEN	ALLSELECTED	DATESYTD
COUNT/COUNTA	TRUE	PROPER	VALUES	DATESMTD
DISTINCT	FALSE	FORMAT	CALCULATE	DATEDIFF
AVERAGE	SWITCH	REPLACE	FILTER	SAMEPERIODLASTYEAR
SUMX	NOT	LEFT / MID / RIGHT	RELATED	
MAXX	ISTEXT			
AVERAGEX	ISERROR			

Q. How can you handle data security in Power BI?

Data security in Power BI can be managed through row-level security, user roles, and using appropriate security measures when connecting to data sources.

Q. How do you create a KPI (Key Performance Indicator) in Power BI?

To create a KPI, you can use the "Modeling" tab in Power BI Desktop and choose "New KPI" from the "Calculations" group, defining the target, actual, and thresholds.

Q. What are DAX functions most frequently used?

Some important Power BI DAX functions are listed below:

FILTER function: An expression or table's subset is returned by the FILTER function.

`FILTER(<table>,<filter>)`

ALL Function: It can retrieve all values in a column or rows in a given table, overriding any previous filters.

`ALL(<table> or <column>)`

RELATED Function: This DAX function's goal is to enable you to retrieve pertinent data from tables other than the one you're currently working in.

`RELATED(<column>)`

CALCULATE Function: This Function makes simple calculations of multiple variables easy. The context in which the DAX CALCULATE function evaluates an expression has been modified by filters.

`CALCULATE(<expression>,<filter1>,<filter2>)`

Q. What Exactly Does Dax(ssas) New Calendarauto() Function Mean?

The output of the CALENDARAUTO function is a table with a single column called "Date" and a continuous set of dates in it. Based on information in the model, the range of dates is automatically determined.

Q. What does Filter context in DAX mean?

The term "Filter Context" refers to using DAX calculations to apply filters to a set of values in columns or tables. Both implicit and explicit filter contexts exist.

Q. Are there particular data types for DAX?

Yes, DAX does support a few different data types. The seven types are whole numbers, decimal numbers, boolean, text, date, currency, and N/A.

Q. What Is a Pattern?

A pattern is a universally applicable fix for a frequent issue. In Microsoft Excel, patterns are frequently used to create tables, charts, reports, dashboards, and other things.

Q. What is Power Query?

Power Query is a Data Automation Tool, where data preparation or data transformation happens according to requirement. Here is place where we load the raw data different types data connectivity mode...like excel, sql, csv and many more...So it is a kind of ETL tool where first data is extracted then transformed and finally loaded to data model...

So, data transformation like cleaning, removing error, removing duplicates, creating tables, adding columns, combining datasets using append or merge, removing unwanted rows or columns, grouping data and many more transformation we can do in power query.

M language is a heart of power query which helps us to use functions in support of data transformation process... there are like 1000 M-functions available which can be categorized into Logical, Date, numbers,

Text, Table and so on. Once we are done with all data transformations we click on close and apply button to load all our tables into data model.

Q. What are the different types of filters in Power BI Reports?

Visual level Filters - If you apply visual level filter then it will filter data only in that particular visualization only. Visual-level filters provide the most powerful filter conditions in Power BI exclusive of custom filter conditions specified in DAX expressions.

Page Level Filters - If you apply page level filter it will filter the data in all visuals present in that particular page. Report level Filters - If you want to apply filter in all pages of the report you will apply report level filter.

Q. How do DAX patterns work?

Power Pivot's programming language, DAX, contains a collection of ready-to-use data models and formulas called DAX Patterns. Use a DAX pattern to create your Excel data model more quickly.

Q. Which DAX functions don't produce a table as a result?

The date time data type is a DAX data type that the date and time function in the DAX return.

Q. How do Max and Maxx Functions In DAX Differ from One Another?

An argument to the MAX function is a column of numerical values. MAX returns a blank if the column is empty of any numbers. The MAXX function can evaluate values that do not include a number.

Q. How do DAX Statements work?

Users can create calculated fields and measures in Power BI with DAX Statements. All users must be familiar with SQL syntax before we can create DAX statements.

Q. Difference between sum and sumx in power bi?

Definition: SUM an aggregator function which helps to aggregate entire column value and it summarizes a value based on a filter context	Definition: SUMX is the sum of an expression, the X at the end of this function stands for an expression. This is an iterator function which helps to iterate row by row values and then return sum of an expression.
SUM only accepts a column name as input	SUMX accepts table name and an expression. Now this table can be virtual table or table present in data model and here in expression we can use column or any existing Dax Expression.

It just summarizes the entire column	Here we not only just summarize but also, we can do lot more things like removing filter, Addingfilter, using virtual table, addition, multiplication and many more etc.
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Q. What is DAX studio in Power BI?

Data calculations are made easier with the aid of DAX Studio. DAX functions can be used in spread sheet programs like Open Office, Excel, and Google Docs and are faster than M Formula. Power BI may also support DAX functions.

Q. Import Query vs Direct Query in PowerBI?

Import	Direct
Definition: Import Query mode allows to import data and table structure both into its cache memory.	Definition: Direct Query mode allows to get only table structure and data will remain at database source end only.
It is more like offline mode with data source where data is already been sync and cached into its own memory and only required Power BI Gateway to get latest data from On-premise data sources.	It is more like an online mode with data source where to display or to fetch data it needs live connectivity mode. Must require Power BI Gateway frequently to get data from On-premise data sources
Import mode is very fast compare to Direct Query mode because all data comes from Power BI memory Cache.	Direct mode is slow because all data comes from data source and this source can be on-premises, azure data source, sql data etc.

Q. Do DAX functions take the case into account?

The answer is that DAX is a case-insensitive formula language. We can choose between case-sensitive and case-insensitive collation styles when using SQL Server Analysis Services.

Q. Describe Related() and Relatedtable() in detail.

When you have a row context on the table for each side of relationship, RELATED works. If the row context is active on one side of a relationship, RELATEDTABLE will function.

Q. Which are the three places where an Expression can be evaluated and hence a specific context is set?

The places where an expression can be evaluated are:-

- In a cell of a pivot table. Slicers, filters, rows, and columns determine the filter context.
- Row context is established in a row cell (calculated column) by the row itself.
- In a table's area for measuring calculations. There is no context for a row or a filter.

Q. Append Query vs. Merge Query in Power BI?

Append Query	Merge Query
Definition: The append query is used to append the data of two or more queries/tables with the same structure or a different structure into a single query/single table.	Definition: Merge query is used to merge only two queries/tables into a single query/table with a common column condition. Both sides of tables must have common column so that using this common column (Like a join) we merge data.
Example: In Video only	Example: In Video only
Require 90% same column structure to append data between two tables.	Requires one common column to create merge data join between two tables.
In append query from second table there is no option to choose selected column options to be added in as a new query. By default, all columns are added and if extra column is available, it will have null values.	In merge query from second table, we can choose how many selected columns to have in as a new merge query.

Q. What are some important details regarding DAX use in Power BI?

Some important information regarding DAX is:-

DAX expressions are evaluated in an inward to outward direction. It starts from the inner Function to the outermost one at the very last. We should formulate our DAX expressions so that the system reads them properly.

A functional language is DAX which implies that a function is always its entire source code.

Q. How do you know whether we should use M or DAX in which situation?

Based on their applications, both languages are valued.

For example, it is best to use M in Power Query Editor when creating flag column values depending on the values of other columns. We are changing the data in this instance.

Q. What is Power BI Designer?

A standalone companion application to Power BI is called Power BI Designer. It is a single application that combines Power Query, Power Pivot, and Power View.

Q. What are query parameters?

The parameters used as or within queries in the Power BI query editor are known as query parameters. In Power BI Desktop, we can add new parameters that we can use in queries, data models, and reports. A specific set of data values from the entire dataset are contained in query parameters.

Q. How does DAX compare to SQL?

DAX is a more straightforward language created specifically for data analysis. Database management is one of many tasks that can be performed using the more complex language SQL.

Q. What are keepfilters in DAX?

When launching a new query, you can use the DAX function KeepFilters to retain the filters from the previous query. You can quickly filter data between various queries thanks to this.

Q. Types of Join or Types of Join Kind in Power BI?

Types of Join Kind: Left outer join, right outer join, Full outer join, Inner join, Left anti join, right anti join.

We use these join types during data transformation in power query editor and these join types are part of Merge query option.

Output of Join types are explained below

LEFT Table			LEFT OUTER							
ID	Property	CountryID	ID	Property	CountryID	CountryName				
1001	A-property	1	1001	A-property	1	India				
1002	B-property	2	1002	B-property	2	USA				
1003	C-property	3	1003	C-property	3	Null				
RIGHT Table			RIGHT OUTER				FULL OUTER			
CountryID	CountryName		CountryID	CountryName	ID	Property	ID	Property	CountryID	CountryName
1	India		1	India	1001	A-property	1001	A-property	1	India
2	USA		2	USA	1002	B-property	1002	B-property	2	USA
4	AUS		4	AUS	NULL	NULL	1003	C-property	3	Null
							NULL	Null	4	AUS
			INNER							
			ID	Property	CountryID	CountryName				
			1001	A-property	1	India				
			1002	B-property	2	USA				
			LEFT ANTI				RIGHT ANTI			
			ID	Property	CountryID	CountryName	CountryID	CountryName	ID	Property
			1003	C-property	3	Null	4	AUS	NULL	NULL

Q. What is the purpose of the 'Get Data' icon in Power BI?

It shows all data sources from which data can be ingested. Data can actually be directly ingested from any source including files in Excel, CSV, XML, JSON, PDF, and SharePoint formats and databases such as SQL, Access, SQL Server Analysis Services, Oracle, IBM, MySQL, and much more.

Q. Explain how relationships are defined in Power BI Desktop?

Relationships between tables are defined in 2 ways:

Manually (using NEW)-Relationships between tables are manually defined using primary and foreign keys.

Automatic (using AUTO DETECT) - When enabled, this automated feature of Power BI detects relationships between tables and creates them automatically.

Q. Can you have more than one functional relationship between two tables in a Power Pivot data model?

No!!!

There can be multiple inactive relationships, but only one active relationship between two tables in a Power Pivot data model. Dotted lines represent inactive relationships, and continuous lines represent active relationships.

Q. What is row-level security in Power BI?

Row-level security (Manage Roles option) limits the data a user can view and has access to, and it relies on filters. Users can define the rules and roles in Power BI Desktop and also publish them to Power BI Service to configure row-level security.

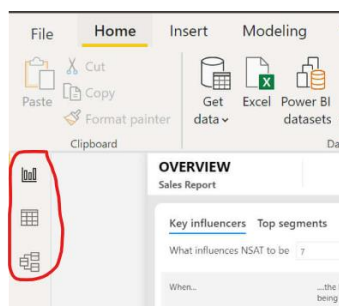
Q. What are the different views available in Power BI Desktop?

There are 3 different views in Power BI, each of which serves another purpose:

Report View - In this view, users can add visualizations and additional report pages and publish the same on the portal.

Data View - In this view, data shaping can be performed using Query Editor tools.

Model View - In this view, users can manage relationships between complex datasets.



Q. Explain responsive slicers in Power BI?

On a Power BI final report page, a developer can resize a responsive slicer to various sizes and shapes, and the data collected in the container will be rearranged to find a match. If a visual report becomes too small to be useful, an icon representing the visual takes its place, saving space on the report page.

Q. What information is needed to create a map in Power Map?

Power Map can display geographical visualizations. Therefore, some location data is needed—for example, city, state, country, or latitude and longitude.

Q. What are KPIs in Power BI?

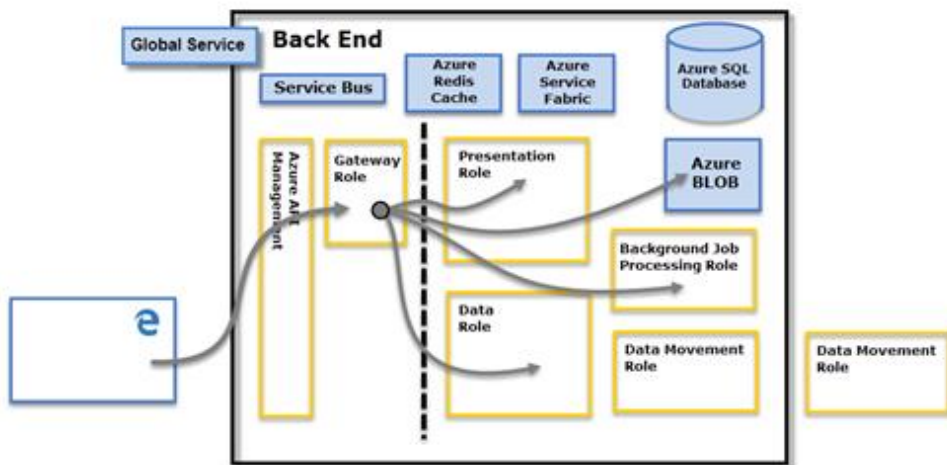
KPI is abbreviated as Key Performance Indicator. Any professional organization has teams and employees follow the KPI protocols. The organizations set up KPIs for all the employees. These KPIs act as their targets. These KPIs are compared to previous performance and analyze the progress.

Q. What is a Slicer?

Slicers are an integral part of a business report generated using Power BI. The functionality of a slicer can be considered similar to that of a filter, but, unlike a filter, a Slicer can display a visual representation of all values and users will be provided with the option to select from the available values in the slicer's drop-down menu.

Q. Where is the data stored in Power BI?

Primarily, Power BI uses two repositories to store its data: Azure Blob Storage and Azure SQL Database. Azure Blob Storage typically stores the data that is uploaded by the users. Azure SQL Database stores all the metadata and artifacts for the system itself.



Q. Mention some advantages of Power BI?

Few advantages of using Power BI are:

- Power BI can input a huge quantity of data
- Information can be visualized using powerful templates and visualizations
- Users get cutting edge intelligence technologies and powerful algorithms that are updated regularly
- Users can have personalized dashboards which are easy to access and understand
- Users can perform queries on reports using DAX language

Q. List out some drawbacks/limitations of using Power BI?

Some disadvantages of Power BI are:

- Complex in nature: One major drawback of PowerBI is it is designed in a complex manner. One needs complete knowledge of PowerBI in order to start working with PowerBI.
- Large data: PowerBI cannot handle large supply of data and might time out while processing a large data. PowerBI cannot process data more than 1 GB.
- Limited Sharing of Data: Reports can be shared only with users who have the same domain or have their emails listed in the Office 365.
- Limited data Source: PowerBI can connect to real time data sets but there are very limited data sources that allow real-time connection to the PowerBI dashboards.

Q. What is the CALCULATE function in DAX?

The CALCULATE function measures the sum of a column from any table and can be modified with Filters.

Syntax: CALCULATE (<Expression> [, <Filter> [, <Filter> [, ...]]])

Q. What is Power Query?

Power query is an 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.

Q. Which language is used in Power Query?

A new programming language is used in power query called M-Code or M-Language, also known as “Mashup” Language. It is used in the first part of the data import process for Power BI Desktop, which is when data is loaded into the data model and queries are run in the background using M. When importing data, M query is frequently used to query data sources, clean and load the data, and build custom columns.

Q. Differentiate between Power BI and Excel?

Parameter	Power BI	Excel
Tabular reports	Power BI is not very good at handling tabular reports.	Excel is better at handling tabular reports
Duplicate table	Power BI can't display duplicate tables.	Excel allows users to display duplicate tables.
Reports	Power BI allows interactive, personalized reports.	Excel users cannot perform advanced cross-filtering between charts.
Analytics	Power BI offers simple analytics.	Excel offers advanced analytics.
Applications	Power BI is ideal for KPIs, alerts, and dashboards.	Excel has new charts now but they can't connect to data model.

Q. What is Power BI Q&A?

Power BI Q&A is a language tool that helps with data querying and obtaining the required results. Q&A renders your questions and reveals a restated query about what it requires from your data.

Q. How to Show Percentage in Power BI?

To show percentage in Power BI, we can create a calculated measure/calculated column using DAX calculation & show it in the report visual depending on the requirement of the dataset being analyzed.

Q. What are the three fundamental concepts of DAX?

Syntax: This is how the formula is written—that is, the elements that comprise it.

The Syntax includes functions such as SUM (used when you want to add figures). If the Syntax isn't correct, you'll get an error message.

Functions: These are formulas that use specific values (also known as arguments) in a particular order to perform a calculation, similar to the functions in Excel. The categories of functions are date/time, time intelligence, information, logical, mathematical, statistical, text, parent/child, and others.

Context: There are two types: Row context and filter context.

Row context comes into play whenever a formula has a function that applies filters to identify a single row in a table. When one or more filters are applied in a calculation that determines a result or value, the filter context comes into play.