

<https://www.edureka.co/blog/interview-questions/power-bi-interview-questions/>

Power BI Interview Questions and Answers in 2022

1). What are the parts of Microsoft's self-service business intelligence solution?

Ans: Microsoft has two parts for Self-Service BI

Excel BI Toolkit	It allows users to create an interactive report by importing data from different sources and model data according to report requirement.
Power BI	It is the online solution that enables you to share the interactive reports and queries that you have created using the Excel BI Toolkit.

2). What is self-service business intelligence?

Ans: Self-Service Business Intelligence (SSBI)

- SSBI is an approach to data analytics that enables business users to filter, segment, and, analyze their data, without the in-depth technical knowledge in statistical analysis, business intelligence (BI).
- SSBI has made it easier for end-users to access their data and create various visuals to get better business insights.
- Anybody who has a basic understanding of the data can create reports to build intuitive and shareable dashboards.

3). What is Power BI?

Ans: Power BI is a cloud-based data-sharing environment. Once you have developed reports using Power Query, Power Pivot, and Power View, you can share your insights with your colleagues. This is where Power BI enters the equation. Power BI, which technically is an aspect of SharePoint online, lets you load Excel workbooks into the cloud and share them with a chosen group of co-workers. Not only that, but your colleagues can interact with your reports to apply filters and slicers to highlight data. They are completed by Power BI, a simple way of sharing your analysis and insights from the Microsoft cloud.

Power BI features allow you to:

- Share presentations and queries with your colleagues.
- Update your Excel file from data sources that can be on-site or in the cloud.
- Display the output on multiple devices. This includes PCs, tablets, and HTML 5-enabled mobile devices that use the Power BI app.
- Query your data using natural language processing (or Q&A, as it is known)

4). How would you define Power BI as an effective solution?

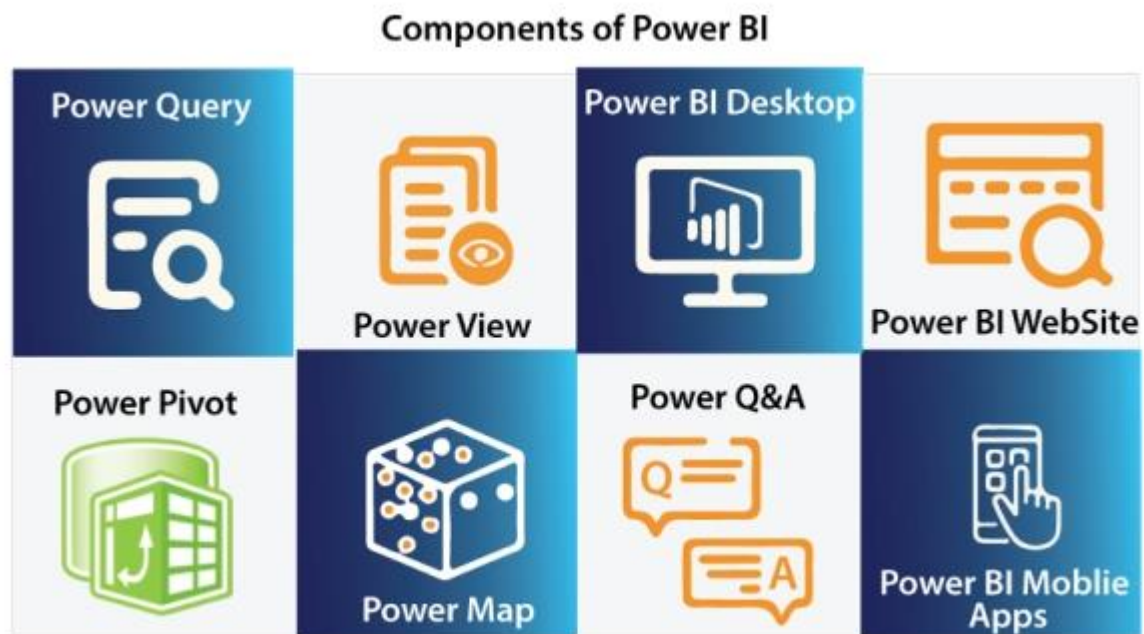
Ans: PowerBI is a cloud based Business Intelligence tool to analyze and visualize raw data that can be fetched from a wide range of data sources. It consolidates business analytics with data visualization and helps any organization to make business decisions based on data. It is easy to work with and the data is processed in such a way that it is easy to understand and reliable. It can be accessed from different platforms and can be shared across on-cloud participants. Thus it is an effective solution.

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5). What are the major components of Power BI?

Ans: The major components of PowerBI are as follows :



Let's discuss each component in brief:

Power Query: It is one of the most important components of PowerBI to transform data. Power Query helps to extract data from different data sources like Oracle, SQL, Text/CSV files, Excel, etc. and even delete data from different sources.

Power Pivot : It is used for data modeling that uses DAX (Data Analysis Expression) functions for the calculations. Relationships between different tables can also be created here and we can get values that can be shown in Pivot Tables.

Power View: The Power View is used for providing an intuitive display of the data and retrieving the metadata for data analysis. The views are interactive in nature and slicers and filters can be used for slicing and dicing the data.

Power BI Desktop: Power Desktop is an integration tool for Power Query, Power View, and Power Pivot. It helps to create advanced queries, data models, reports and dashboards and helps in developing your BI skills for data analysis.

Power BI Mobile Application: It is available for the Operating systems Android, iOS and even Windows. The App has an interactive display of the dashboards which can be shared as well.

Power Map: It presents geo-spatial visualization of the data in 3 Dimensional Mode. The data can be highlighted based on the geographical location which can be continent, state, city or even street address.

Power Q&A : It is used to provide answers to the questions asked by users. It works with Power View and can be answered with representations by Power Q&A.

6). What are the various Power BI versions?

Ans: PowerBI has three versions currently:

Microsoft PowerBI Free/ Desktop – It is for anybody who wants to see their business insights from the data with visualizations.

Microsoft PowerBI Pro – It is the full version of PowerBI which enables unlimited viewing, reporting and sharing of reports which PowerBI Desktop doesn't support.

Microsoft PowerBI Premium – The Power BI Premium licence is not a per-user licence, it provides a dedicated unit of capacity for all users in the organisation.

7). What is Power BI Desktop?

Ans: 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 reports 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.

8). What do we understand by Power BI services?

Ans: PowerBI Services is a cloud based service or SaaS (software as a service). It helps to connect to your data, analyse, visualize and share business insights with efficiency.

9). What data sources can Power BI connect to?

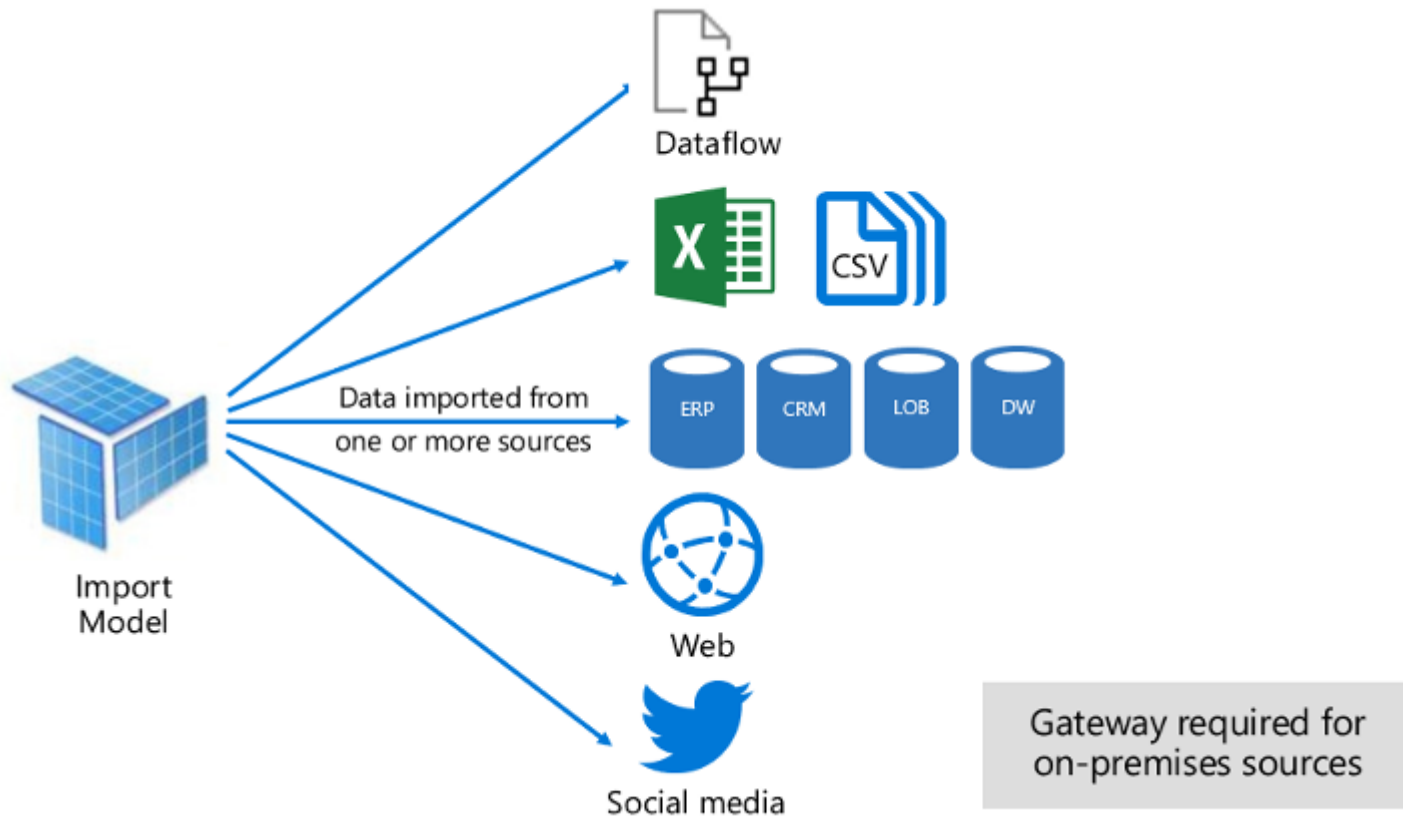
Ans: The list of data sources for Power BI is extensive, but it can be grouped into the following:

- **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.

10). What are the different connectivity modes in Power BI?

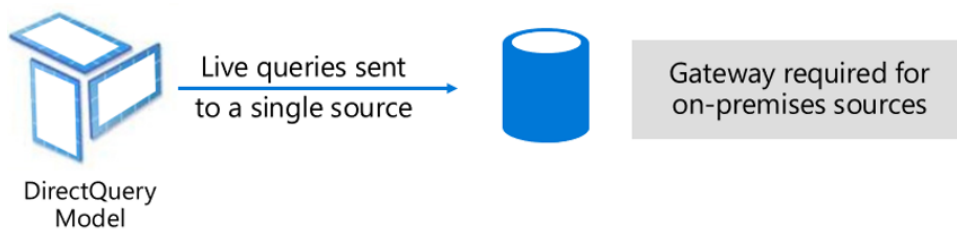
Ans: There are three different connectivity modes in PowerBI which are:

Import Mode:



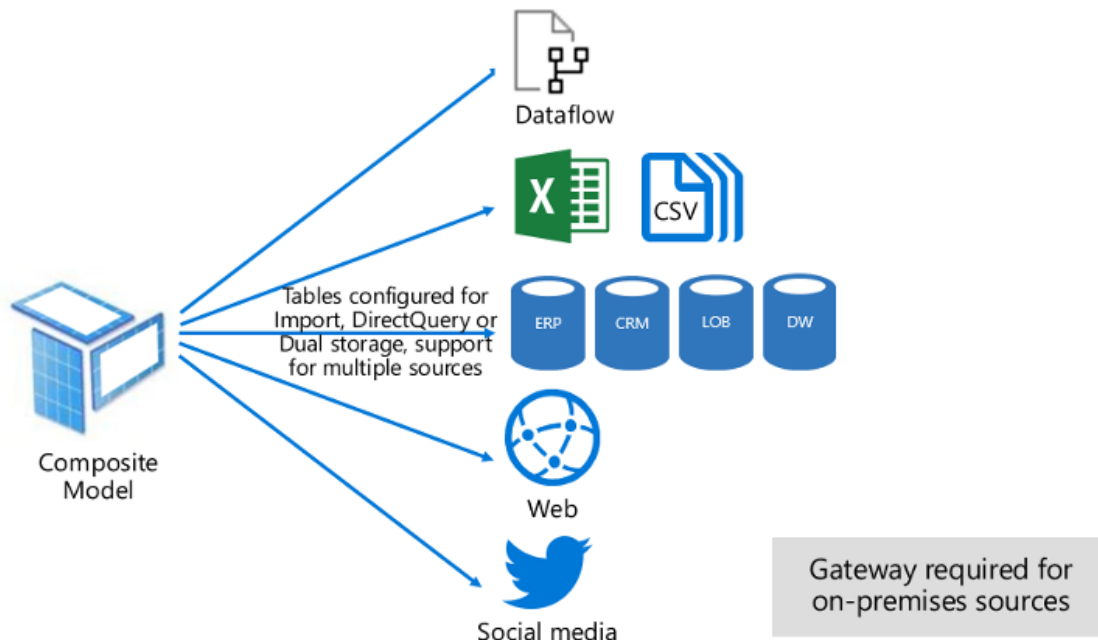
In PowerBI, Import Mode is the default mode since it is most frequently used and delivers fast performance. It can integrate the data from a data source as shown. Imported data is stored in the disk and it is fully loaded while querying or refreshing.

Direct Query Mode



Direct Query Mode is another method of importing data with query to retrieve data from a pre-existing data source. When the data volume is too large, we use DirectQuery to avoid refreshing data as it can take a long time.

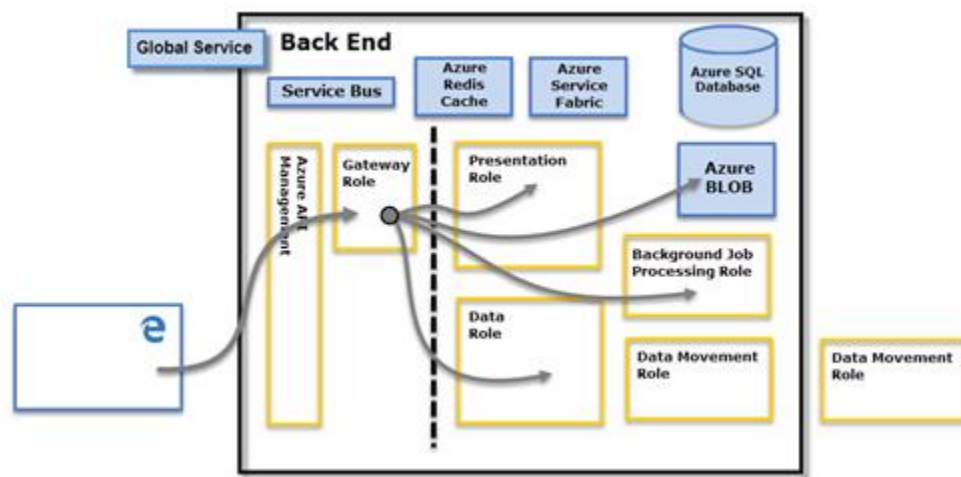
Composite Mode



This mode is an amalgamation of both Import and DirectQuery modes. This mode supports calculated tables which DirectQuery doesn't. It delivers the best of Import Query and DirectQuery modes.

11). Where is the data stored in Power BI?

Ans: Primarily, PowerBI 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.



12). What are Building Blocks in Power BI?

Ans: The following are the Building Blocks (or) key components of Power BI:

1. **Visualizations:** Visualization is a visual representation of data.
Example: Pie Chart, Line Graph, Side by Side Bar Charts, Graphical Presentation of the source data on top of Geographical Map, Tree Map, etc.
2. **Datasets:** Dataset is a collection of data that Power BI uses to create its visualizations.
Example: Excel sheets, Oracle or SQL server tables.
3. **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.
4. **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.
5. **Tiles:** Tile is a single visualization in a report or on a dashboard.
Example: Pie Chart in Dashboard or Report.

13). What is the comprehensive working system of Power BI?

Ans. Power BI's working system mainly comprises four steps:

Data Importing: The first step is to import the data and convert it into a standard format and store it in a staging area.

Data Cleaning: After assembling the data, it requires transformation or cleaning to remove unimportant values.

Data Visualization: Now the data is visually represented on the Power BI desktop as reports and dashboards using powerful visualization tools.

Save and Publish: Finally when your report is ready you can save and publish these reports that can be shared across users via mobile apps or web.

14). What are content packs in Power BI?

Ans: 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. Microsoft has released content packs for popular services such as Salesforce.com, Marketo, Adobe Analytics, Azure Mobile Engagement, CircuitID, comScore Digital Analytix, Quickbooks Online, SQL Sentry and tyGraph.

Organizational content packs provide users, BI professionals, and system integrator the tools to build their own content packs to share purpose-built dashboards, reports, and datasets within their organization.

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

Ans: 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:** These filters work on the entire report, filtering all pages and visualizations included in the report.

We know that Power BI visual has an interactions feature, which makes filtering a report a breeze. Visual interactions are useful, but they come with some limitations:

- The filter is not saved as part of the report. Whenever you open a report, you can begin to play with visual filters but there is no way to store the filter in the saved report.
- The filter is always visible. Sometimes you want a filter for the entire report, but you do not want any visual indication of the filter being applied.

16). What is a dashboard?

Ans: A PowerBI dashboard is a canvas which creates a story with templates and visualizations for better understanding of the data. It is a single-page report and contains the highlights of the data.



17). What are the available views?

Ans: The different views in PowerBI are:

Report View : It is the default view which shows the visualization of the data in reports. You can create multiple report pages here with a wide range of templates and visualizations.

Data View : Data view shows the transformed data in a table format with columns and rows. It also allows you to create new calculated columns for further insights.

Model View : Also called, Relationship View, helps to create relationships between data models. All the models created in the data can be seen in this view and accordingly you can compare or create diagrams based on subsets of the model.

18). What are the available formats?

Ans: Power BI is available in different formats:

Power BI desktop: You can download and install PowerBI Desktop on your personal computer where you can connect to the data source, transform your data, analyze and visualize it with templates.

Power BI services: It is a cloud based service or SaaS (software as a service). You can connect to data here as well but the modeling is limited.

Power BI mobile app: One can securely access dashboards and reports on any device with the PowerBI app which is available for iOS, Android and even Windows.

19). What are the types of visualizations in Power BI?

Ans: In PowerBI, we can represent the data in graphs and visualizations. The visualization can be of any type, for example:

Bar and Column Charts: It is a standard visualization for looking at a specific value across various categories.

Area Charts(Basic and Stacked) : It is based on the line chart and the area under the line. It depicts the magnitude of change over time.

Card: Card shows aggregate value of a certain datapoint, can be one or more but one per row.

Doughnut and Pie Charts: They show the relation in parts of a whole. Doughnut charts have a hollow in the centre while pie charts don't.

Maps: To show categorical and quantitative data with spatial locations.

Matrix: It's a type of table with easier display that shows aggregated data

Slicers: Slicer is used to filter other visuals on the page.

There are other visuals like Combo Charts, Decomposition Tree, Funnel charts, Gauge charts, KPIs, Line Charts, Ribbon Chart, Scatter, Q&A, Tables, Treemaps, etc.

20). What are custom visuals in Power BI?

Ans: In PowerBI you can create your own visualizations from the library of custom visualizations. A development project has to be created then test the visual in PowerBI service. Once the visualization is customized, it is thoroughly checked and tested before posting. After testing, the visualization is saved in .pbviz file format before sharing. But you need to be a PowerBI Pro user in order to make custom visualizations.

21). Why and how would you use a custom visual file?

Ans: A custom visual file is used when none of the pre existing visuals fit the business needs. Custom visual files are generally created by Developers which can be used in the same way as prepackaged files

22). What are the various type of users who can use Power BI?

Ans: PowerBI can be used by anyone for their requirements but there is a particular group of users who are more likely to use it:

Report Consumers: They consume the reports based on a specific information they need

Report Analyst: Report Analysts need detailed data for their analysis from the reports

Self Service Data Analyst: They are more experienced business data users. They have an in-depth understanding of the data to work with.

Basic Data Analyst: They can build their own datasets and are experienced in PowerBI Service

Advanced Data Analyst: They know how to write SQL Queries and have hands-on experience on PowerBI. They have experience in Advanced PowerBI with DAX training and data modelling.

23).What are the critical components of the Power BI toolkit?

Ans: The most important components of PowerBI are:

Power Query

Power View

Power Pivot

Power Map

Power Q&A

Power Desktop

Power Website

PowerBI Mobile App

24). What is the maximum data limit per client for the free version of Power BI?

Ans: With a Power BI Free licence a user can use 10 GB of storage in the cloud for hosting Power BI reports. The maximum size a Power BI report can be used in the cloud is **1GB**.

25). Where do you reshape data in Power BI?

Ans: The data can be reshaped in **Data Editing** of PowerBI.

26). How can you refresh data in PowerBI?

Ans: The data can be refreshed in the **Gateway** in PowerBI by scheduling refresh.

27). Which is a single-page canvas that uses visualizations to depict a story?

Ans: PowerBI service dashboard is a single-page canvas that uses visualizations to depict a story.

28). Mention some advantages of Power BI?

Ans: Few advantages of using Power BI are :

- PowerBI 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
- User can have personalised dashboards which are easy to access and understand
- Users can perform queries on reports using DAX language

29). List out some drawbacks/limitations of using Power BI.

Ans: Some disadvantages of PowerBI 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.

Power BI Interview Questions – DAX

30). What is DAX?

Ans: To do basic calculation and data analysis on data in power pivot, we use Data Analysis Expression (DAX). It is a formula language used to compute calculated column and calculated field.

- DAX works on column values.
- DAX can not modify or insert data.
- We can create calculated column and measures with DAX but we can not calculate rows using DAX.

Sample DAX formula syntax:

For the measure named Total Sales, calculate (=) the SUM of values in the [SalesAmount] column in the Sales table.

31). What are the most common DAX Functions used?

Ans: 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, ISEMPTY EXCEPT, NATURALINNERJOIN,
- NATURALLEFTOUTERJOIN, SUMMARIZECOLUMNS,
- VAR (Variables)
- GEOMEAN, MEDIAN, DATEDIFF

32). What are the three fundamental concepts of DAX?

Ans: Three fundamental concepts of DAX are:

Syntax: Syntax is the formula which includes the functions. If a Syntax is incorrect, it will result in an error.

Functions: Functions are arguments with specific orders to perform. It helps to calculate any particular order as required.

Context: Context are of two types: Row Context and Filter Context. Row Context is used when a formula has a Function that applies a filter to identify a row in a table. Filter Context is used when one or more filters are used to get a value.

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33). What are the purpose and benefits of using the DAX function?

Ans: DAX or Data Analysis Expression is a functional language which can create calculated columns and/or measures for smarter calculations to limit the data the dashboard has to fetch and visualize.

34). How is the FILTER function used?

Ans: 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.

- FILTER is an iterator and thus can negatively impact performance over large source tables.
- Complex filtering logic can be applied such as referencing a measure in a filter expression.
 - `FILTER(MyTable,[SalesMetric] > 500)`

35). What is the CALCULATE function in DAX?

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

Syntax:

`CALCULATE (<Expression> [, <Filter> [, <Filter> [, ...]]])`

36). What is special or unique about the CALCULATE and CALCULATETABLE functions?

Ans: 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.

37). What is the common table function for grouping data?

Ans: SUMMARIZE()

- Main groupby 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.

38). What are some benefits of using Variables in DAX ?

Ans: DAX or Data Analysis Expression is a functional language which can create calculated columns and/or measures for smarter calculations to limit the data the dashboard has to fetch and visualise.

39). How would you create trailing X month metrics via DAX against a non-standard calendar?

Ans: The solution will involve:

1. CALCULATE function to control (take over) filter context of measures.
2. ALL to remove existing filters on the date dimension.
3. FILTER to identify which rows of the date dimension to use.

Alternatively, CONTAINS may be used:

- CALCULATE(FILTER(ALL('DATE'),.....))

40). What are the different Excel BI add-in?

Ans: Below are the most important BI add-in to Excel:

- **Power Query:** It helps in finding, editing and loading external data.
- **Power Pivot:** Its mainly used for data modeling and analysis.
- **Power View:** It is used to design visual and interactively reports.

- **Power Map:** It helps to display insights on 3D Map.

Want to upskill yourself to get ahead in your career? Check out this video

43). What is xVelocity in-memory analytics engine used in Power Pivot?

Ans: 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.

45). Can we have more than one active relationship between two tables in data model of power pivot?

Ans: 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 the continuous line is active.

49). What is query folding in Power Query?

Ans: 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.

50). What are some common Power Query/Editor Transforms?

Ans: Changing Data Types, Filtering Rows, Choosing/Removing Columns, Grouping, Splitting a column into multiple columns, Adding new Columns ,etc.

51). Can SQL and Power Query/Query Editor be used together?

Ans: 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.

52). What are query parameters and Power BI templates?

Ans: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.

53). Which language is used in Power Query?

Ans: A new programming language is used in power query called M-Code. It is easy to use and similar to other languages. M-code is case-sensitive language.

54). Why do we need Power Query when Power Pivot can import data from mostly used sources?

Ans: Power Query is a self-service ETL (Extract, Transform, 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 users needs while loading.

55). Name some commonly used tasks in the Query Editor.

Ans: Some commonly used tasks in the Query Editor are:

Connect to Data: Get Data from various sources and Transform data.

Shape Data: Transform your data according to requirement to clean and shape it

Group Rows: You can group the values of many rows into one single value by summarizing

Pivot Columns: Pivot columns and create a table with aggregated values

Create Custom Columns: You can use custom formulas to create new columns in your table

Advanced Editor: You can make modifications to the data using Advanced Query Editor with query.

Power BI Interview Questions – Power Map

56). What is Power Map?

Ans: 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 upto 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.

57). What are the primary requirement for a table to be used in Power Map?

Ans: For a data to be consumed in power map there should be location data like:

- Latitude/Longitude pair
- Street, City, Country/Region, Zip Code/Postal Code, and State/Province, which can be geolocated by Bing

The primary requirement for the table is that it contains unique rows. It must also contain location data, which can be in the form of a Latitude/Longitude pair, although this is not a requirement. You can use address fields instead, such as Street, City, Country/Region, Zip Code/Postal Code, and State/Province, which can be geolocated by Bing.

58). What are the data sources for Power Map?

Ans: The data can either be present in Excel or could be present externally. To prepare your data, make sure all of the data is in Excel table format, where each row represents a unique record. Your column headings or row headings should contain text instead of actual data so that Power Map will interpret it correctly when it plots the geographic coordinates. Using meaningful labels also makes value and category fields available to you when you design your tour in the Power Map Tour Editor pane.

To use a table structure that more accurately represents time and geography inside Power Map includes all of the data in the table rows, and use descriptive text labels in the column headings, like this:

Year	UFO sightings	City
2006	43	Portland
2006	45	Seattle
2007	34	Portland
2007	23	Seattle

In case you wish to load your data from an external source:

1. In Excel, click **Data** > the connection you want in the **Get External Data** group.
2. Follow the steps in the wizard that starts.
3. On the last step of the wizard, make sure **Add this data to the Data Model** is checked.

The more you use it, the better you'll get at it. So, let's get started.

Power BI Interview Questions – Additional Questions

59). Difference between Power BI and Tableau?

Ans: Both PowerBi and Tableau are business intelligence tools for generating reports and data visualization but they do have a few significant differences.

Data Source:

PowerBI does not have as wide access to data sources as Tableau when compared.

Tableau has a wider range of access to various data sources.

Data Capacity:

Maximum of 10 GB of data can be handled in each workspace in PowerBI or else it needs to be stored in the cloud.

While in Tableau, we can fetch billions of rows for each column as it works on columnar

based structure which stores unique values.

Machine Learning:

PowerBI has integration with Microsoft Azure which helps in analyzing the data.

Tableau has in-built Python machine learning capacities which makes it efficient to perform ML Operations on datasets.

Performance:

PowerBI can handle a limited amount of data while Tableau can work with a huge volume of data with ease.

Pricing:

PowerBI is cheaper compared to Tableau. Tableau needs to be paid more when third party applications are connected.

60). What is Power View?

Ans: 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
- Tables
- Power View
- Multiples Visualizations
- Bubble and scatter charts
- Key performance indicators (KPIs)

61). What is Power BI Designer?

Ans: It is a stand alone application where we can make Power BI reports and then upload it to Powerbi.com, it does not require Excel. Actually, it is a combination of Power Query, Power Pivot, and Power View.

62). Can we refresh our Power BI reports once uploaded to cloud (Share point or Powebi.com)?

Ans: Yes we can refresh our reports through Data Management gateway(for sharepoint), and Power BI Personal gateway(for Powerbi.com)

63). What are the different types of refreshing data for our published reports?

Ans: 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, or SharePoint 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.

To know more about data refresh and understand how to implement data refresh, you can check the following [link](#).

64). Is Power BI available on-premises?

Ans: 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.

65). What are the data management gateway and Power BI personal gateway?

Ans: 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.

66). What is Power BI Q&A?

Ans: Power BI Q&A is a natural language tool that helps in querying your data and getting 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.

67). What happens when you click the Infocus mode of a tile on the PowerBI dashboard on the browser?

Ans: When you click the Infocus mode of a tile on the PowerBI dashboard on the browser, the selected tile expands and takes the full space

68). How do you consolidate inquiries in Power BI?

Ans: Join Queries are used to consolidate inquiries in Power BI.

69). What are some ways that Excel experience can be leveraged with Power BI?

Ans: 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.

70). What is a calculated column in Power BI and why would you use them?

Ans: 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.

71). How is data security implemented in Power BI ?

Ans: 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.

72). What are many-to-many relationships and how can they be addressed in Power BI ?

Ans: 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.

73). Why might you have a table in the model without any relationships to other tables?

Ans: 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.

74). What is the Power BI Publisher for Excel?

Ans: You can use Power BI publisher for Excel to pin ranges, pivot tables and charts to Power BI.

- The user can manage the tiles – refresh them, remove them, in Excel.
- Pinned items must be removed from the dashboard in the service (removing in Excel only deletes the connection).
- The Power BI Publisher for Excel can also be used to connect from Excel to datasets that are hosted in the Power BI Service.
- An Excel pivot table is generated with a connection (ODC file) to the data in Azure.

The Publisher installs all necessary drivers on local machine to establish connectivity .

75). What are the differences between a Power BI Dataset, a Report, and a Dashboard?

Ans: 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 atleast 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.

76) What are the three Edit Interactions options of a visual tile in Power BI Desktop?

Ans: 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.

77). What are some of the differences in report authoring capabilities between using a live or direct query connection such as to an Analysis Services model, relative to working with a data model local to the Power BI Desktop file?

Ans: With a data model local to the PBIX file (or Power Pivot workbook), the author has full control over the queries, the modeling/relationships, the metadata and the metrics.

With a live connection to an Analysis Services database (cube) the user cannot create new metrics, import new data, change the formatting of the metrics, etc – the user can only use the visualization, analytics, and formatting available on the report canvas.

With a direct query model in Power BI to SQL Server, for example, the author has access to the same features (and limitations) available to SSAS Direct Query mode.

- Only one data source (one database on one server) may be used, certain DAX functions are not optimized, and the user cannot use Query Editor functions that cannot be translated into SQL statements.

78). How does SSRS integrate with Power BI?

Ans: 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

I hope this set of Power BI Interview Questions and Answers will help you in preparing for your interviews. All the best!

Got a question for us? Please mention it in the comments section and we will get back to you