1) What is Tableau?

Tableau is a powerful data visualization tool used in the Business Intelligence Industry. It helps in simplifying raw data into a very easily understandable format.

2) What are the popular features of Tableau?

The popular features of Tableau are:

- Data blending
- No need of technical knowledge
- Real-time analysis
- Data collaboration and data notifications
- DAX analysis function
- Patented technology from Stanford university
- Toggle view and drag-and-drop
- List of native data connectors
- Highlight and filter data
- Share dashboards
- Embed dashboards within
- Mobile-ready dashboards
- Tableau reader for data viewing
- Dashboard commenting
- Create "no-code" data queries
- Translate queries to visualizations
- Import all ranges and sizes of data

3) What is Tableau Public?

Tableau Public is a free service that allows anyone to publish interactive data to the web. Once it is on the web, anyone can interact with the data, download it, or create their own data visualization.

4) What are the properties of Tableau combined sets?

Properties of Tableau combined sets are:

- **Name:** It is used to specify the unique name of a tableau set.
- **Sets:** Users can select the existing set from the menu. The first set in the menu acts as a left set. The second set act as the right set.
- **All members in both sets:** This is an option to combined set that holds all the members from left as well as right set.
- **Shared members in both sets:** This option holds matching members from both left and right sets. It means every record must match the condition present in these sets.
- **Left set except shared members:** This Tableau set is used to hold all the members from the left set except matching members from the righsst set.
- **Right set except shared members:** It holds all the members from the right set by matching members from the left set.

5) What are the different Tableau files?

Different Tableau files include:

- **Workbooks:** Workbooks hold one or more worksheets and dashboards.
- **Bookmarks**: It contains a single spreadsheet, and it's an easy way to quickly share your work.
- **Packaged workbooks:**It includes a workbook having supporting background images and local file data.
- **Data extraction files: Data** extract files are basically a local copy of the entire data source or a subset.
- **Data connection files:** It is a XML file containing various information related to connection.

Tableau Interview Question

6) What is the basic difference between published data sources and embedded data sources in Tableau

The basic difference between a published data source and an embedded data source is:

The public data source contains connection information that is independent of any workbook. On the other hand, embedded data source connection information and is associated with a workbook.

7) Mention the characteristics that distinguish data source

The characteristics that distinguish data source are:

- Icon/Name
- Connection Type
- Connects to
- Live or the last extract

8) What are Joins?

Tableau can "join" tables. It can join up to 32 tablets in a data source. Two or more tables can be specified while joining the relationship. The tables present in the data source can be related to each other using the joins such as inner join, left join, right join, and outer join.

9) Explain Tableau Data Extract

A Tableau data extract is a compressed snapshot of data stored on disk. It is loaded into memory to render a Tableau.

10) Explain the primary differences between blending and joining in Tableau?

Joining terms is helpful when you are combining data from the same source. On the other hand, blending would require two completely defined data sources in your report.

11) How many maximum numbers of tables can be joined in Tableau?

The maximum number of tables that can be joined in Tableau is 32.

12) Name the different type of Tableau

The other kind of Tableau products are:

- Desktop
- Prep
- Online
- Server

13) Explain Longitude and Latitude in tableau

Longitude and Latitude (generated) fields are associated with the geographical detail present in the data. The dataset should consist of geographic information like City, Country, or State.

The longitude and latitude values are auto-generated in Tableau. These fields can be used to build maps in Tableau.

14) Why use a hierarchical field in tableau?

A hierarchical field in tableau helps you to drill down data. It allows you to view your data in a more granular level.

15) Explain Connect live

Connect live creates a direct connection to the data source and speed up access.

16) Define the term analytics pane concerning Tableau

The analytics pane offers quick and easy access to everyday analytic objects in Tableau. It allows you to drag forecasts, reference and trend lines, and other objects into your view from the Analytics pane.

17) Explain the term filter actions

Filter actions show related information between a source sheet and one or more target sheets. This type of activities best suited when a developer is building a guided logical path using a workbook or in a dashboard.

18) How to view SQL generated by Tableau Desktop?

A developer can click on My Tableau Repository folder available in My documents in PC to view SQL. If the user is using a live connection to the data source, then check tabprotosrv.txt and log.txt files. If the user is using extract, check the tdeserver.txt file. This file shows details about queries.

19) List out Three Tableau limitation

Here are some notable limitations in Tableau:

- The parameter doesn't accept multiple sections.
- User can't define the width and columns individually.
- Users can't control the selection, display, sorting of columns in view data option for a worksheet view.

20) How can you perform load testing in Tableau?

Users can do load testing with the help of Tableau Server performance testing solution called TabJolt. However, this is third-party software that is not supported by tableau directly. Therefore, it may be installed using other open-source products.

21) Where can a developer use global filters?

A developer can use global filters in sheets, dashboards, and stories.

22) What is a parameter in Tableau?

Parameters in Tableau are dynamic values that you can replace as constant values in calculations. These values serve as context filters.

23) What is the use of showing me in Tableau?

The show me clause is used to applying a required view to existing data in the worksheet. Views are displayed in graphical formats like a line chart, pie chart, and scatter plot.

24) How to get the current date and time in Tableau?

A developer can get the current date and time in Tableau using the NOW() function.

25) What is Forecasting in Tableau?

Forecasting means predicting the future value of a measure. There are various methods for forecasting. However, in Tableau, the user can only use exponential smoothing.

26) What is the calculated field in Tableau?

A calculated field is a new field that you can create using a formula to modify the existing filed in your data source.
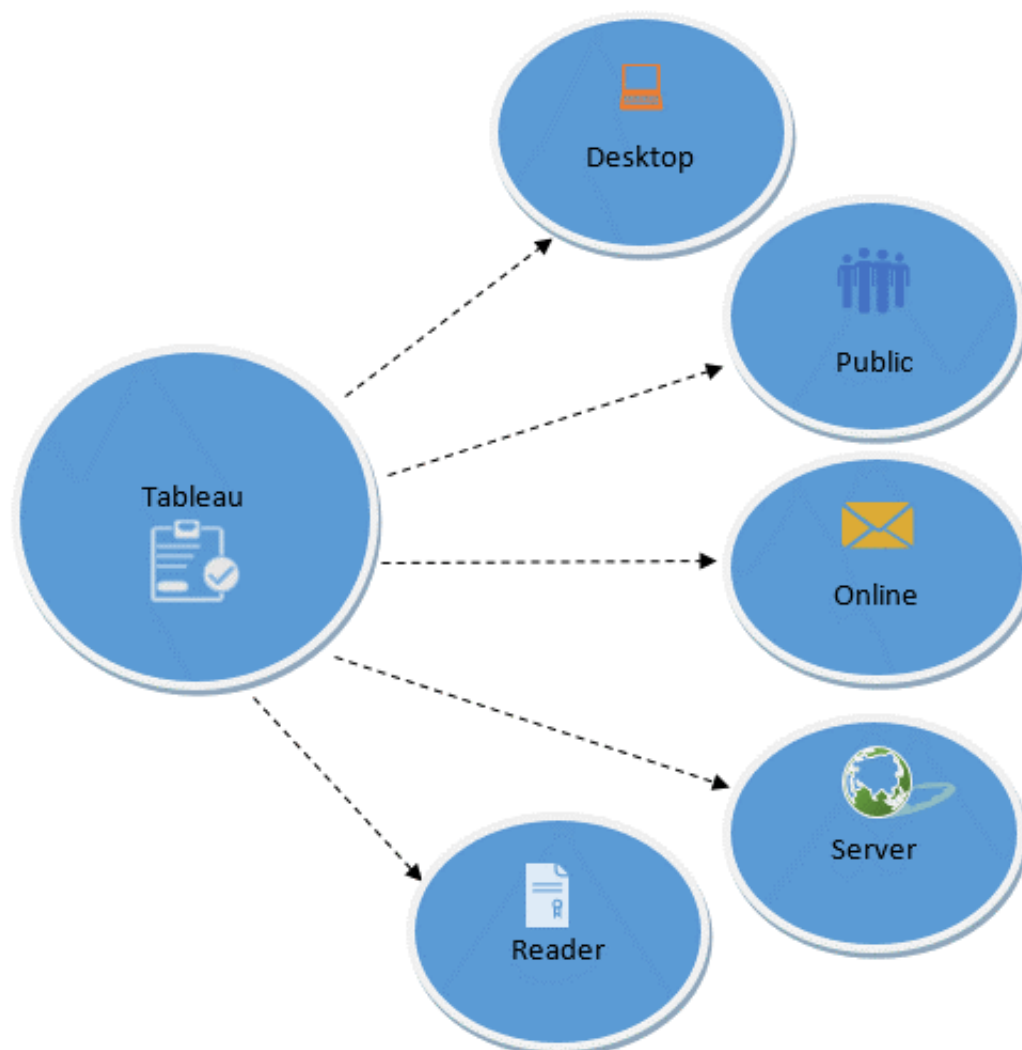
27) What is the use of formatting pane in Tableau

A formatting pane contains a setting that controls the entire worksheet and individual fields in

28) Explain Tableau Product Suite

The Tableau Product Suite consists of

- Tableau Desktop
- Tableau Public
- Tableau Online
- Tableau Server
- Tableau Reader

For a clear understanding, data analytics in the tableau can be classified into two section

Tableau Desktop

Tableau Desktop has a rich feature set and allows you to code and customize reports. It ables users to create charts, reports, and dashboards.

Tableau Public

It is the Tableau version specially build for cost-effective users. By the word "Public," it means that the workbooks created cannot be saved locally. In turn, it should be saved to Tableau's public cloud, which can be viewed and accessed by anyone.

Tableau Server

The software is specifically used to share the workbooks, visualizations that are created in the Tableau Desktop application across the organization.

Tableau Online

As the name suggests, it is an online sharing tool for Tableau. Its functionalities are similar to Tableau Server, but the data is stored on servers hosted in the cloud, which are maintained by the Tableau group.

Tableau Reader

Tableau Reader is a free tool that enables the user to view the workbooks and visualizations created using Tableau Desktop or Tableau Public. The data can be filtered, but editing and modifications are restricted. The security level is zero in Tableau Reader as anyone who gets the workbook can view it using Tableau Reader.

29) Differentiate between Excel and Tableau?

The difference between Excel and Tableau is:

Excel	Tableau
Excel is spreadsheet software that is used for data manipulation.	Tableau is a data visualization tool that is used for analysis.
It is ideal for statistical analysis of structured data.	It is ideal for the quick and easy representation of big data.
Macro and visual primary language are must to fully utilize excel.	It can be used with no programming experience.
The inbuilt security feature is not as good as compared to Tableau.	The inbuilt security feature is not as good as compared to Excel.
Best for preparing on-off reports with small data	Best while working with big data.
Excel integrates with around 60 applications.	Tableaus integrated with over 250 applications.

30) Explain the classification of tableau

Tableau is classified into two sections:

- **Developer Tools:** The Tableau tools that are used for development, such as the creation of dashboards, charts, report generation, visualization, fall into this category. Tableau products, under this category, are the Tableau Desktop and Tableau Public.
- **Sharing Tools:** As the name suggests, the purpose of the tool is to share the visualizations, reports, dashboards that were created using the developer tools. Products that fall into this category are Tableau Online, Server, and Reader.

31) What is the difference between Traditional BI Tools and Tableau?

The difference between Traditional BI Tools and Tableau is:

Traditional BI Tools	Tableau
Tableau BI can handle a huge volume of data with better performance.	Power BI can handle a limited volume of data.
Tableau works best when there is a vast data in the cloud.	Power BI doesn't work better with a massive amount of data
Tableau is a little difficult.	Power BI Interface is very easy to learn.
The information can be stored by using the Tableau server.	Power BI concentrates more on reporting and analytical modeling but not for storing the data.
Tableau deploys MDX for measures and dimensions.	Power BI uses DAX for calculating and measuring columns.

32) List the various datatypes in Tableau?

Various data types in the tableau are: 1) Boolean, 2) date, 3) date and time, 4) geographical values, and 5) text/string, number.

33) Explain Tableau Desktop Professional

Tableau Desktop Professional is pretty much similar to Tableau Desktop. The difference is that the work created in the Tableau Desktop can be published online or in Tableau Server. The professional version provides full access to all sorts of the datatype. It is best suitable for those who wish to publish their work in Tableau Server.

33) What are the dimensions?

Dimensions are the values of attributes used for multiple dimensions. It has a reference of a product key form the table. It can contain product name, color, size, product type, description, etc.

34) What is a group?

A group is a collection of dimension members which can make categories of higher level.

35) What is the key difference between .twb and .twbx extension?

Twb is a one of the XML document that contains all the layouts and selections made by the user whereas Twbx is a 'zipped' archive which contains .twb and external files like background images and extracts.

36) What is Set?

Set is a custom filed that defines a data subset based on some computed condition or data point.

37) Explain various types of Joins in tableau

Various types of Joins in Tableau are:

Inner Join:

It joins all the common records between two tables or sheets. The joining condition can be given based on the primary key. One or more joining conditions can be specified to join the tables. Many tables can be joined together in Tableau for visualization.

Left Join:

A left join is used to join all the records from a left table and common records from the right table. One or more join conditions can be specified to left join two different tables.

Right Join:

A right join is used to join all the records from the right table and common records from the left table. Based on the requirements, one or more joining conditions can be set.

Outer Join:

An Outer join is used to join all the records from both the left and right table. Joining conditions can be set to join common records.

38) Explain the context filter

A Context filter is an independent filter that can create a separate dataset out of the original data set and compute the selections made in the worksheet. One or more categorical filter that separates the dataset into major parts can be used as a context filter. All other filters used in the worksheet works based on the selection of context filter. The functions of context filters can be explained through an excel sheet.

39) What is Dimension Filters?

When a dimension is used to filter the data in a worksheet, it is called a Dimension filter. It is a non-aggregated filter where a dimension, group, sets, and the bin can be added. A dimension filter can be applied through the top or bottom conditions, wildcard match, and formula.

40) What is Dimension Filters?

A measure filter can filter the data based on the values present in a measure. The aggregated measure values can be used in measure filters to modify the data.

41) What are the advantages of Using Context Filters?

The advantages of Using Context Filters

- **Improve Performance:** When context filter is used in large data sources, it can improve the performance as it creates a temporary dataset part based on the context filter selection. The performance can be effectively improved through the selection of major categorical context filters.
- **Dependent Filter Conditions:** Context filters can be used to create dependent filter conditions based on the business requirement. When the data source size is large, context filters can be selected on the primary category, and other relevant filters can be executed.

42) Mention the primary difference between joining and blending in Tableau

Joining is a term that is used when the user combines data from the same source like tables in oracle or excel file while Blending needs two completely defined data sources report

43) Name the components of a Dashboard

Important components of a Dashboard are:

- **Horizontal:** A horizontal layout allows the designer to group dashboard components and worksheets across the page.
- **Vertical:** Vertical containers enables the user to group dashboard components and worksheets top to bottom down your page. It also allows users to edit the width of all elements at once.
- **Text:** It contains all textual files
- **Image Extract:** Tableau applies some code to extract the image that is stored in XML.
- **URL action:** It is a hyperlink that points to file, web page, or other web-based resources.
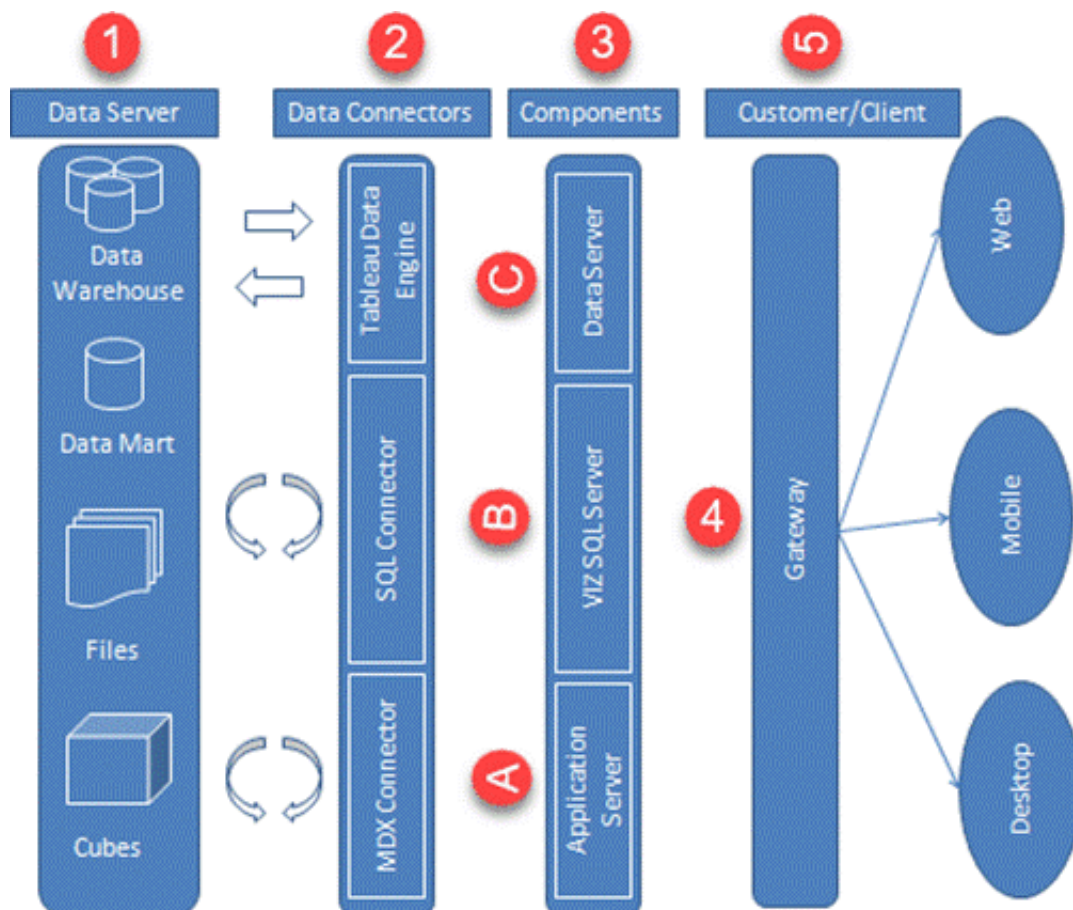
44) Explain story in Tableau

A story is a sheet containing a dashboard or worksheet sequence that works together to convey particular information.

45) Explain Tableau drive

Tableau drive is one methodology that can be used for scaling out analytics. It is based on best practices from successful deployments of an enterprise.

46) Explain the Tableau architecture

Different components of Tableau architecture are:

Data server: The primary component of Tableau Architecture is the Data sources it can connect to it.

Data Connectors: The Data Connectors provide an interface to connect external data sources to the Tableau Data Server.

Components of Tableau Server:

1) Application Server:

The application server is used to provide the authentications and authorizations. It handles the administration and permission for web and mobile interfaces.

2) VizQL Server:

VizQL server is used to convert the queries from the data source into visualizations. Once the client request is forwarded to VizQL process, it sends the query directly to the data source and retrieves information in the form of images.

3) Gateway:

The gateway channelizes the requests from users to Tableau components. When the client makes a request, it is forwarded to the external load balancer for processing. The gateway works as a distributor of processes to various components.

4) Clients:

The dashboards and visualizations in Tableau server can be viewed and edited using different clients. The Clients are Tableau Desktop, web browser, and mobile applications.

47) Explain Measure filter

A measure filter can filter the data based on the values present in a measure. The aggregated values can be used in measure filters to modify the data.

48) Distinguish between Treemaps and Heat Maps

The difference between Treemaps and Heat Maps are:

TreeMap	Heat Map
TreeMap represents and shows data hierarchically as a group of nested rectangles. It can be used for comparing the categories with size, colors, and illustrating the hierarchical data.	Heat Map represents the data graphically with multiple colors to represent values. It can be used for comparing the categories depend on size and color.

49) What is the use of toolbar Icon?

Toolbar icon present below the menu bar can be used to edit the workbook using different features such as undo, redo, save, new data source, slideshow, and so on.

50) What is the use of a blended axis?

Blended axis is used to blend measures that share the axis when they have the same scale.

51) What is the use of dual-axis?

Dual Axis enables users to compare measures. It is useful when they like to compare two measures having different scales.

52) What is LOD expression?

A LOD or (Level of Detail) expression is used to run complicated queries that involve many dimensions at the data source level.

53) Explain data modeling

Data modeling (data modeling) is the process of creating a data model for the data to be stored in a database.

This data model is a conceptual representation of Data objects, the associations between different data objects, and the rules. Data modeling helps in the visual representation of data and enforces business rules, regulatory compliances, and government policies on the data.

54) Explain stacked bar chart

Stacked Bar Chart is a chart that is composed of more than one bar that is stacked horizontally. The length of the bar is depended on the value given in the data point. This type of chart makes work more comfortable and helps the user to know changes in all the variables. Users can match the wanted changes in their future values.

55) Explain Page shelf

Page shelf can be used to view the visualization in video format by keeping the relevant filter on the page shelf.

56) Explain filter shelf

The filters that can control the visualization can be placed on the filter shelf, and the required dimensions or measures can be filtered in.

57) Define a bullet graph

A bullet graph is a modification of a bar graph. It is responsible for comparing the performance of measures.

58) Explain bar chart in Tableau

A bar chart can compare the data across different categories. The height of the bars represents the measured value of each category. It can be represented as vertical and horizontal type bar charts.

59) Explain VIZQL in Tableau

VIZQL stands for Visual Inquiry Language. It is a combination of SQL and VIZ. Visual query languages are similar to the SQL language. This language converts queries of data into visual

images.

60) Mention various types of functions commonly used in Tableau

Various types of functions commonly used in the tableau are:

- **String functions:** It includes LEFT, LOWER, LTRIM, MID, and more.
- **Logical functions:** This function contains and, else, else if, if, ifnull, isdate, isnull, max, min, etc.
- **Aggregate functions:** It includes attr, collect, count, covar, and covarp.
- **User functions:** User define functions contain full name, is the full name, is member of, username, username, user domains, etc.

61) What is Line Chart?

A-Line Chart is used to compare the data over different periods. A line chart is created by a series of dots. These dots represent the measured value in each period. The procedure to create a line graph is shown below.

62) List the categories of dimensions in Tableau

The categories of dimensions in Tableau are:

- Slowly ever
- Chop-chop ever
- Unchanged dimension
- Shrunken dimension
- Junk dimension
- Conformed dimension
- Degenerated dimension
- Role enjoying dimension
- Inferred dimension

63) What are the various ways to use parameters in Tableau?

Various ways to use parameters in Tableau are: 1) filters, 2) calculated fields, 3) actions, 4) measure-swaps, 5) changing views, and 6) auto-updates

64) What is the user filter?

User filter secures the row-level data present in a dataset. It can be used when publishing the workbook on a server. Different filter conditions can be applied to different users.

65) Define Histogram chart

A histogram can show the values present in a measure and its frequency. It shows the

distribution of numerical data. As it shows both frequency and measure value by default, it can be useful in many cases.

66) What are the user functions in Tableau?

The user functions in Tableau are unique functions that Tableau developers can use to perform operations on the registered users on Tableau Online or Tableau Server.

67) Explain paged workbook

A paged workbook in Tableau consists of different pages based on specific criteria.

68) Define shelves in Tableau

The Shelves in Tableau are demarcated areas that are used for particular purposes. There are several shelves on a Tableau sheet-like, Filter shelf, Page shelf, Rows and Column shelf, Marks shelf, etc.

69) Explain bin

Bin is a user-defined set of data that are of the equal interval that stores data values according to or which fits in bin size.

70) Explain bubble Chart

A bubble chart visualizes the measures and dimensions in the form of bubbles. The sizes of the bubbles determine the size of the measured value for effective visualization. The color of bubbles can be set to differentiate the members present in a dimension.

71) Define Hyper

Hyper is a high-performance in-memory information engine innovation. It allows clients to analyze complex or large informational sets speedier. This can be done by proficiently assessing analytically questions which are in the value-based database.

72) What are the combined Sets?

The combined Sets in Tableau are handy to compare two existing sets for further analysis.

73) What is Backgrounder?

The backgrounder refreshes planned extracts, conveys notifications, and handle other assignments run in the background. The backgrounder is responsible for expending as much as the processor is accessible to finish the background action as fast as possible.

74) Explain data visualization

Data visualization is one of the forms of visual communication. It includes producing images that communicate relationships among the data. This process can be achieved using a systematic mapping between data values and graphic marks.

75) How to perform performance testing in Tableau?

User can perform performance testing in Tableau using by:

- Recording performance information about the events that interact with the workbook.
- Reviewing the tableau desktop logs.

76) What is Aggregation?

Aggregation is the process of viewing measures or numeric values at higher and more summarized data.

78) Why use Disaggregation in Tableau?

Disaggregation is a Tableau used to view every row of the data source. It is useful while analyzing measures for both independent and dependent data in the view.

79) What the limitations of setting channels

The limitations of setting channels are:

- If the channel is changed by the customers on a regular basis, the database should be reprocessed and modify the short-lived table.
- The transient table needs to reload every time when the view is begun.

80) What is the difference between Tableau and QlikView?

The difference between Tableau and QlikView is:

Tableau	QlikView
Data integration is exceptional.	Data integration is good.
The support of PowerPoint is available in Tableau.	The support for PowerPoint is not available.
Tableau scalability is good.	QlikView is limited by RAM.

81) What is the Tableau data engine?

Tableau data engine manages to open, refresh, create, and query extracts of the user.

82) What is metadata in Tableau?

Metadata in tableaus refers to the editing of original data in Tableau. It includes custom data

and formatting of data.

83) Explain dashboard lifecycle

Dashboard lifecycle in Tableau:

Functional Knowledge: Business Analysts give a current functional knowledge of the organization.

Requirement Analysis: Requirements that are kept in consideration are:

- The requirement of the dashboard.
- How is data flowing in the current system?
- Blueprint or layout of the system.
- Dashboard scope.
- The value that is added to the business
- required tools for the development of the project and its costs.

Planning Phase: It includes:

- Timeline and needed resources.
- Work and leave plan.
- Dependencies and future challenges.

Methodologies to follow: Scrum, Agile, Waterfall, etc.

Technical Specs: It includes:

- Technical details.
- SQL, relations, and Joins.
- Credentials for database access.
- Business logic.

Development: It includes:

- Query generation.
- Connecting databases and creating dimension model
- Publish it to the server.
- Unit testing.

Q&A Testing: It includes:

- Functionality and UI testing.
- SQL testing and data validation
- Security testing
- Testing of applied customization.

Performance testing: Report opening time, with or without any webpage.

User Acceptance Testing (UAT): User validates data and functionality.

Production and Support: System is produced, and support is given once it goes live.

84) What are the advantages of Tableau over excel?

The advantages of Tableau over excel are:

- Tableau handles big data problems.
- Excel does not have large columns and rows.
- Excel has lesser resources than tableau.

85) What is the use of marks cards?

Marks cards can be used to design the visualization. The data components of the visualization, like color, size, shape, path, etc. used in the visualizations. It can be modified in the marks card.

86) List the types of maps available in Tableau

There are six types of maps in Tableau:

- Choropleth maps (filled maps)
- Proportional symbol maps
- Spider maps (origin-destination maps)
- Heatmaps (density maps)
- What are Discrete data in tableau
- Point distribution maps
- Flow maps (path maps)

87) What is the use of a custom data view?

A custom data view is used by tableau users to extend the normal data views to gain the advantage of additional features.

88) What is Tableau Table Report?

Table Report in Tableau provides the primary ways to display data in tabular format.

89) What are the types of data sources that can be connected to Tableau's native connectors?

What are the types of data sources that can be connected to Tableau's native connectors are:

- File systems like Excel and CSV.

- Relational systems like SQL Server, Oracle, DB2, etc.
- Cloud systems like Google BigQuery and Microsoft Azure.
- Database connection sources such as ODBC.

90) What is the use of data blending?

Data blending is used when the is a possibility of related data in multiple sources that you need to analyze in a view.

91) What is Worksheet in Tableau?

The worksheet is the place where the actual visualization can be viewed in the workbook. The design and functionalities of the visual can be viewed in the worksheet.

## 92) What is the data source page?

The data source page is a page where users can set up their sources of data. It generally contains four main areas: 1) left pane, 2) join area, 3) preview area, and 4) metadata area.

93) What is format pane?

A pane that contains formatting settings to control the worksheet and fields available in the view is called format pane. It appears on the left side of the tableau workbook.

94) Explain Tableau Navigation

The navigation of workbook contains:
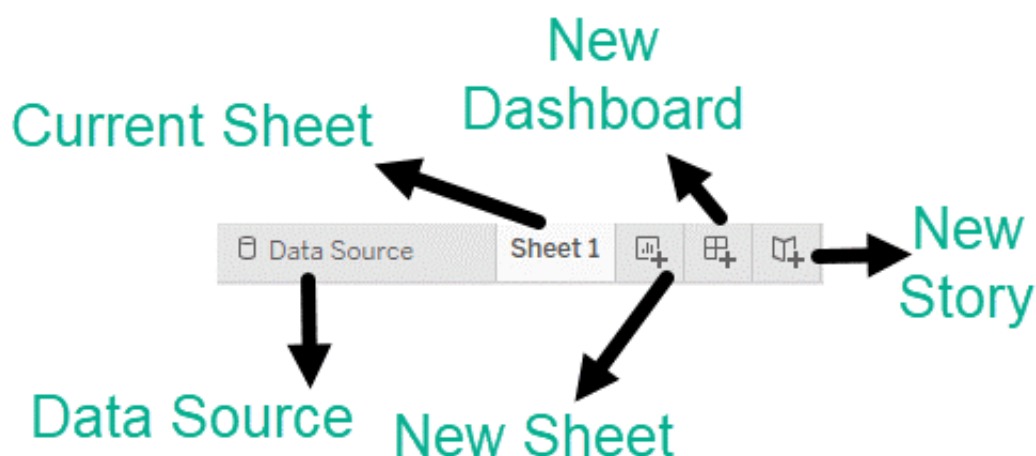
- **Data Source:** The addition of a new data source of modification of existing data sources can be done using the 'Data Source' tab present at the bottom of the Tableau Desktop Window.

- **Current Sheet:** Current Sheet can be viewed with the name of the sheet. All the sheets, dashboards, and storyboard present in the workbook can be viewed here.
- **New Sheet:** The new sheet icon present in the tab can be used to create a new worksheet in the Tableau Workbook.
- **New Dashboard:** The new dashboard icon present in the tab can be used to create a new dashboard in the Tableau Workbook.
- **New Storyboard:** The new storyboard icon present in the tab can be used to create a new storyboard in the Tableau Workbook.

95) What are the types of Level of Detail?

There are three main types of LOD expressions.

- **Fixed LOD**: It is a LOD expression that computes values using the mention dimensions without reference to any dimensions.
- **Include LOD:** This expression compute values using the mention dimensions along with those who are present in view.
- **Exclude LOD:** These LOC expressions subtract dimensions from the view.

96) What are the ways to sort out data in Tableau?

The ways to sort out data in Tableau are:

Computed sorting: It is a sort that can be applied on an axis using a sort button.

Manual sorting: It can be used to rearrange the dimension field order by dragging them to each other in an ad hoc manner.

97) What is the data server?

The data server is used to manage and store the data from external data sources. It is a central data management system. It provides metadata management, data security, data storage, data connection, and driver requirements. It stores the relevant details of data set such as metadata, calculated fields, sets, groups, and parameters. The data source could extract data as well as make live connections to external data sources.

98) What is the use of trend lines?

Trend lines are used to know the continuation of a trend of variables. It helps users to search the correlation between two or more variables. There is a wide range of mathematical models for establishing trend lines. These models are 1) Logarithmic, 2) Linear, 3) Exponential, and 4) Polynomial.

99) Explain alias in Tableau

Alias in Tableau can refer as an alternative name that the user can assign to a dimension

member a field.

100) What are Data Labels in Tableau Reports?

Data Labels in Tableau reports or any other Business Intelligence reports play a vital role in understanding the report data.

101) What is Tableau Crosstab Report?

Table Crosstab in Tableau is the best way to display data in multi-level.

102) What is the waterfall Chart?

Waterfall Chart can visualize the cumulative effect of a measure over dimension. It can show the contribution of growth or decline by each member in a dimension. For example, you can see the contribution of profit by each sub-category using a waterfall chart.

103) Explain measure names

Measure names and Measure values are the two fields created in Tableau by default. These fields are created when a data set is imported into Tableau.