Tableau Interview Questions

Note: *These questions are very important in interview point of view and were asked in companies like myntra, shaadi.com, affine, flutura, musigma, navi, capgemini, ford, flipkart etc.*

1. Compare QlikView with Tableau.

Criteria	Tableau	QlikView
Data integration	Exceptional	Good
Working with multidimensional data	Very Good	Good
Support for PowerPoint	Available	Not available
Visual Drilldown	Good	Very Good
Scalability	Good	Limited by RAM

2. How is the Context Filter different from other Filters?

- Whenever we create a Context Filter, Tableau will create a temporary table for this particular Filter set and other Filters will be applied on the Context Filter data like cascade parameters.
- Suppose, we have created a Context Filter on countries, USA and India, Tableau will create a temporary table for these two countries' data and if we have any other Filters other will be applied on these two countries' data if we don't have any Context Filter, each record will check for all Filters.

3. What is the disadvantage of Context Filters?

- The Context Filter is not frequently changed by the user—if the Filter is changed, the database must be recomputed and the temporary table has to be rewritten, slowing performance.
- When we set a dimension to context, Tableau creates a temporary table that will require a reload each time the view is initiated. For Excel, Access, and text data sources, the temporary table created is in an Access table format. For SQL Server, MySQL, and Oracle data sources, we must have permission to create a temporary table on our server. For a multidimensional data source, or cubes, temporary tables are not created, and Context Filters defined which Filters are independent and which are dependent.

4. What are the five main products offered by Tableau?

Tableau offers five main products:

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

- Tableau Public

5. What is the latest version of Tableau Desktop?

Tableau Desktop 2021.2 (as of June 23, 2021)

6. What is data visualization?

Data visualization refers to the techniques used to communicate data or information by encoding it as visual objects (e.g., points, lines, or bars) contained in graphics.

7. Why Tableau?

Whether our data is in an on-premise database, a database, a data warehouse, a cloud application, or in an Excel file, we can analyze it with Tableau. We can create views of our data and share it with colleagues, customers, and partners. We can use Tableau to blend it with other data, and we can keep our data up to date automatically.

8. What are Filters? How many types of Filters are there in Tableau?

This is one of the most frequently asked Tableau developer interview questions. Have a clear idea on this! A Filter restricts unnecessary data; it shows the exact data we want. Basically, Filters in Tableau are of three types:

- Quick Filter
- Context Filter

- Datasource Filter

9. What is aggregation and disaggregation of data?

Suppose, we have data like below:

```
Eid Ename Salary Dept
1.abc 2000 java
2.bbc 3000 .net
3.Krishna 2500 java
Madhu 300
5.Vamshi 3000 mainframes
1.abc 1000 testing
2.bbc 3000 tableau
3.krishna 5000.net
4.Madhu 7000 testing
vanshi 9000 tableau
1 abc 11000 Mainframes
2 bbc 13000testing
3 krishna 15000 java
4 Madhu 17000 .nte
5 vamshi 19000.net
```

Aggregation: To display aggregate data

Sum/avg salary by each individual employee

Drag ename on column and salary on rows, and we will get the sum (salary) of each and individual employee

Now, change the measure type as Avg

Choose salary option: choose measure types as ‘Avg’

Disaggregation: To display each and every transaction

When we look at the aggregated data in the views above, each bar represents all transactions for a specific employee summed up or averaged into a single value. Now, say, we want to see the individual salary transactions for each employee. We can create a view like that by selecting Analysis > Aggregate Measures.

10. How to remove the Show All option from a Tableau Auto Filter?

Right-click on Filter > Customize > uncheck the Show All option

11. Can we use non-used columns (columns that are not used in reports but used in data source) in Tableau Filters?

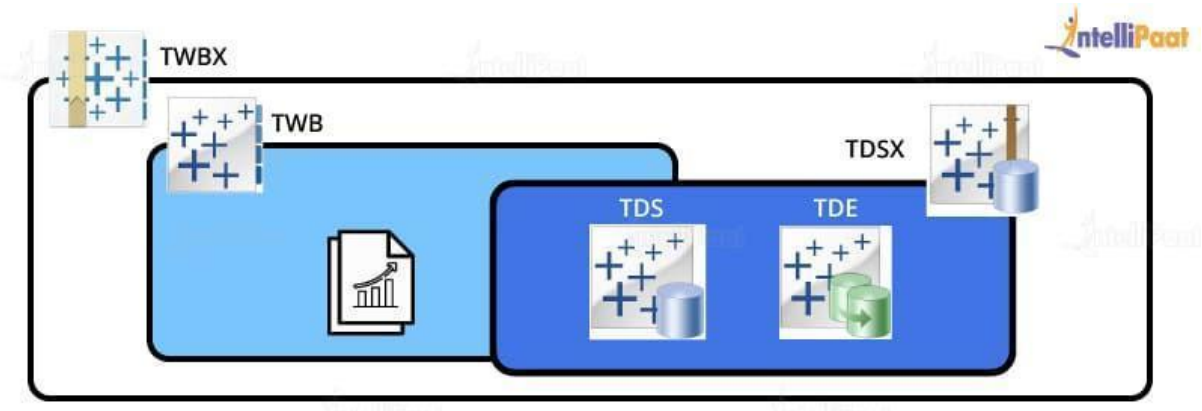
Yes! For example, in a data source, if we have columns like EmpID, EmpName, EmpDept, EmpDsignation, EmpSalary, and in reports we are using EmpName on columns and EmpSalary on rows, we can use EmpDesignation on Filters.

12. What is the benefit of Tableau Extract file over the live connection?

Extract can be used anywhere without any connection, and we can build our own visualizations without connecting to a database.

13. What is the different between twb and twbx file extensions. Please explain.

The file extension .twb is a live connection; it points to the data source. The user receiving .twb needs permission to access the said data source and no data is included.



On the other hand, .twbx takes the data offline and stores it as a package or zip-like file, thereby eradicating the need for permissions.

14. How to combine two Excel files with the same fields but different data (different years)?

Suppose, we have five different Excel files (2007.xls, 2008.xls, … 2011.xls) with the same fields (film name, genre, budget, rating, profitability, etc.) but with data of different years (2007 to 2011). Can someone tell me how can I combine the film name, genre, and profitability so that I can see the visualization of 2007 to 2011 in a single chart?

15. What is the maximum number of tables we can join in Tableau?

We can join a maximum of 32 tables; it is not possible to combine more than 32 tables.

Go through the Tableau Course in London to get a clear understanding of Tableau!

Intermediate Tableau Interview Questions

16. What is the difference between joining and blending in Tableau?

Joins in Tableau

Suppose, our client is in the healthcare domain and using SQL Server as their database. In SQL Server, there may be many Tableau-like Claims Tables, Rejected Claims Table, Customer Table, etc. Now, the client wants to know the customer-wise claims and the customer-wise rejected claims table using the Joins. Join is a query that combines the data from two or more tables by making use of the Join condition.

We can join a maximum of 32 tables; it is not possible to combine more than 32 tables.

In Tableau, Joins can be performed in two ways:

- By making use of common columns
- By making use of common data types

If we create Joins on the fields, in Tableau, all the table names are suffixed with $. While performing Joins on multiple tables, always go with the less amount of data tables, so that we can improve the performance.

In Tableau, Joins are divided into two types:

- Equi Join
- Non-equi Join

Equi Join

In the Join condition, if we are using equality (‘=’) operator, then such a kind of join is called Equi Join. Equi Join is further divided into three types:

- Inner Join: Inner Join will load the only matching records from both tables. Below is the Inner Join condition:

```
Tableaa.id = Tableb.id
```

Outer Join: Outer Join is further divided into three types:

Left Outer Join: Displays the complete data from the left table + matching records from the right

Condition:

```
tablea.id(+)
```

Right Outer Join: Displays the complete data from the right table + matching records from the left

Condition:

```
tablea.id(+)=tableb.id
```

Full Outer Join: Loads the complete data from the left table and the right table

Condition:

```
Table A full outer join Table B ON tablea.id= tableb.id
```

Self-join: If we are performing Join to a table with itself such a kind of Join is called a Self-join.

Non-equi Join

In the Join condition, if we are using operators apart from the equality (‘=’) operator (such as, <, >, <=, >=, and =!), then such a kind of Join is called Non-equi Join.

Data Blending in Tableau

Consider the same client. Suppose, they are operating their services in Asia, Europe, NA, and so on, and they are maintaining Asia data in SQL, Europe data in SQL Server, and NA data in MySQL.

Now, our client wants to analyze their business across the world in a single worksheet. In this case, we can’t perform a Join. Here, we have to make use of the data blending concept.

Normally, in Tableau, we can perform the analysis on a single data server. If we want to perform the analysis of data from multiple data sources in a single sheet, then we have to make use of this new concept called data blending.

Data blending mixes the data from different data sources and allows users to perform the analysis in a single sheet. ‘Blending’ means ‘mixing’ and when we are mixing the data sources, then it is called data blending.

Rules to Perform Data Blending

In order to perform data blending, there are a few rules:

- If we are performing data blending on two data sources, these two data sources should have at least one common dimension.
- In that common dimension, at least one value should be matching.

In Tableau, we can perform data blending in two ways.

- Automatic way: Here, Tableau automatically defines the relationship between the two data sources based on the common dimensions and based on the matching values, and the relationship is indicated in orange.
- Custom or Manual way: In the manual or custom way, the user needs to define the relationship manually.

Data Blending Functionality

- All the primary and secondary data sources are linked by a specific relationship.
- While performing data blending, each worksheet has a primary connection, and optionally it might contain several secondary connections.
- All the primary connections are indicated in blue in the worksheet and all the secondary connections with an orange-colored tick mark.
- In data blending, one sheet contains one primary data source and it can contain n number of secondary data sources.

17. What are Dimensions and Facts?

- Dimensions are nothing but the descriptive text columns. Example: product name, city, etc.
- Facts are the measures (numerical values). Example: sales, profit, etc.

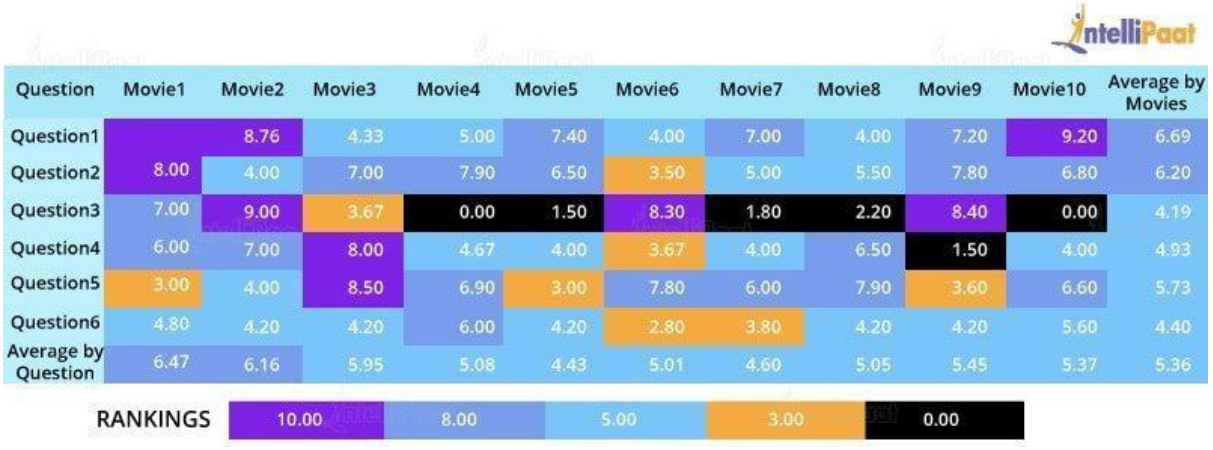
18. Can we place an Excel file in a shared location and use it to develop a report and refresh it in regular intervals?

Yes, we can do it, but for better performance we have to use Extract.

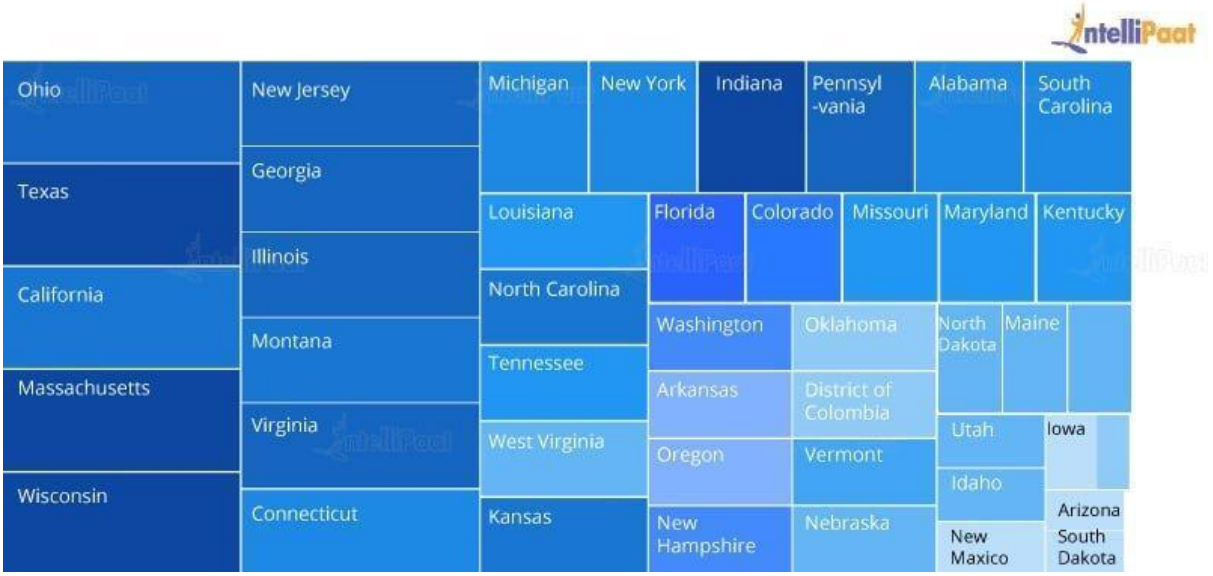
Learn more about Tableau from this Tableau Training in New York to get ahead in your career!

19. What is the difference between heat map and treemap?

- A heat map is a great way to compare categories using color and size. In this, we can compare two different measures.



- A treemap is a very powerful visualization, particularly used for illustrating hierarchical (tree-structured) data and for visualizing a part of or a whole relationship.



20. What is dual axes?

To display two measures in one graph, Tableau uses dual axes.

Related Article: How To Use Tab admin For Administrative Task Automation In Tableau?

Interested in learning Tableau in detail? Check out this online instructor-led Tableau Training in Sydney!

21. What is blended axis?

Here, multiple measures are shown in a single axis and all the marks are shown in a single pane.

- Drag a dimension in a column
- Drag the first measure in the column
- Drag the second measure in the existing axis
- Us/multiplemeasures_blendedaxes.html

22. What makes Tableau stand out?

This is another question which is you see in every Tableau interview questions and answers blogs. Get a clear idea through this answer. Tableau stands out for several reasons:

- First, most of the BI tools are pricey, but Tableau has a free offering (Tableau Public) and a very popular (also free) academic distribution.
- Tableau is well recognized by firms like Forrester Research to be one of the most easy-to-use and agile products currently available.
- On the other hand, unlike some of the other BI tools, Tableau is not a complete technology stack; It is mostly useful for visualization and analytics. We will need other products in addition to Tableau for heavier enterprise data ETL, maintenance, storage, etc.

23. How do we do testing in Tableau?

We can't perform testing in Tableau. It is a data visualization software.

Become a master of Tableau by enrolling in this online Tableau Course in Toronto!

24. Can you get values from two different sources as a single input into parameter?

Tableau currently does not support the multi-valued parameters. Case Study: The "dynamic parameter with a blend" technique can be used to highlight a single value, but not multiple values because of the way it works. As Tableau parameters are not dynamic, we cannot "filter" the list of values at runtime.

25. How do we use parameters in Tableau?

We can use parameters with filters, calculated fields, actions, measure-swaps, changing views, and auto-updates.

26. What is the use of the new custom SQL query in Tableau?

Custom SQL query is written after connecting to data for pulling the data in a structured view. For example, suppose, we have 50 columns in a table, but we need just 10 columns only. So instead of taking 50 columns, we can write a SQL query. The performance will increase.

27. What are the differences between Tableau and other traditional BI tools?

This is another frequently asked Tableau interview questions. Tableau provides easy to use, best in class, visual analytic capabilities, but it does not help with plumbing (data foundation). We could, for example, marry SQL Server with Tableau to get the complete package. Tableau licenses are relatively expensive if we are looking to scale.

Traditional BI can handle it all but with significant upfront costs, higher consulting, hardware, and software costs. Among the mega-vendors, only Microsoft can provide a reasonable value proposition. Open-source vendors like Pentaho and Jaspersoft do not have an abundant-enough talent pool, yet.

28. What are the similarities and differences between Tableau and Palantir?

Palantir and Tableau are very different. Palantir has its roots in large data computer science problems involving security, payments, fraud detection, and the like. Its customers/investors include PayPal, CIA, and others.

Tableau is a visualization player, with roots in Stanford University Research. Its Visual Query Language (VizQL) allows users to build visualizations on top of the standard data warehouses or spreadsheets.

29. How to create cascading filters without using context filter?

Here, say, we have Filter1 and Filter2. Based on Filter1, we need to use Filter2 on the data. For example, consider Filter1 as ‘Country’ and Filter2 as ‘States.’

Let’s choose Country as ‘India’ and hence Filter2 should display only the states of India.

Choose options of Filter2 states:

select option of ‘Only relevant values’

30. Is Tableau good for a strategic acquisition?

Yes, for sure! It gives us data insights much more than the others. It helps us plan and point the anomalies and improvise our process for betterment.

31. How to display the top five and the last five sales in the same view?

Using filters or calculated fields, we can display the top five and the last 5 sales in the same view.

32. Suppose, without using a line/bar chart, I want to design a view to show the region-wise profit and sales. How should I go about doing it? Explain.

- Generate a map using cities
- Then, drag the profit and sales to Details
- Add the state as Quick filter

33. Design a view in a map such that if a user selects any state, the profit and sales in the cities under that state would show up.

If we want to show the sales and profit of each and every city under the states in the same worksheet, first, we should have State, City, Sales, and Profit fields in our dataset.

1. Double-click on the State field
2. Drag City and drop into Marks card (under the State field)
3. Drag Sales and drop into Size
4. Drag Profit and drop into Color
5. Click on Size legend and increase the size (75%)
6. Right-click on the State field and select Show Quick filter
7. Select any state and check whether we got the required view or not.

8. In this, the view size indicates the number of sales and the color indicates the profit values.

Are you interested in learning Tableau from experts? Enroll in our Tableau Course in Bangalore today!

34. How to add custom color in Tableau?

Create Custom Color code in 'Preferences.tps'

```
Documents » My Table Repository » Preferences.tps
```

Then, add custom color code

Note: In Tableau 9.0, we have a color picker option.

35. How can we combine a database and the flat file data in Tableau Desktop?

- Connect data twice, once for database tables and then for the flat file. The Data->Edit Relationships
- Give a Join condition on the common column from DB tables to the flat file

36. What does Tableau do?

This is another most asked question which will help you in Tableau interview preparation. Tableau's major goal is to help people see and understand data. Its software products put the power of data into the hands of everyday people, allowing a broad population of business users to engage with their data, ask questions, solve problems, and create values.

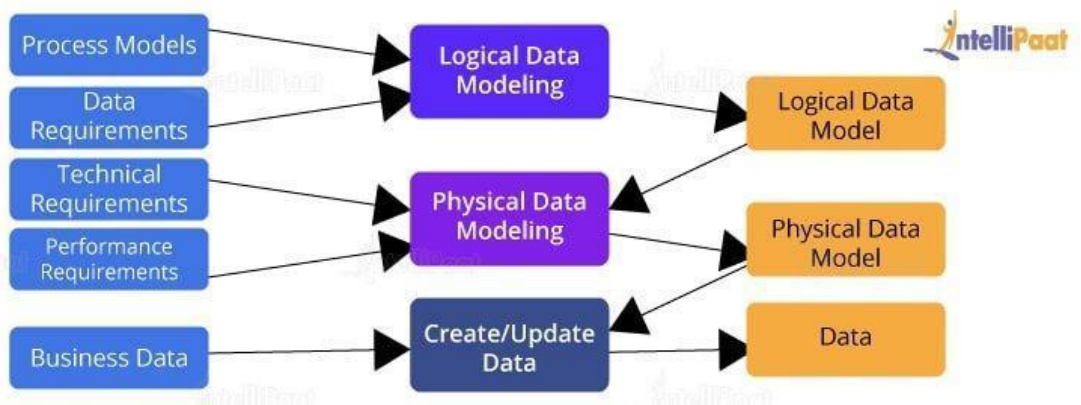
Related Article: Learning To Leverage Tabcmd In Tableau

37. What is Tableau Public?

Tableau Public is a free service that lets anyone publish interactive data to the web. Once on the web, anyone can interact with the data, download it, or create their own visualizations for it. No programming skills are required here. We can also check out the gallery to see some of the things people have been doing with it.

38. What is data modeling?

This question is present in any of the Tableau interview questions blogs. Get an idea on this. Data modeling is the analysis of data objects that are used in a business or other context and the identification of the relationships among these data objects. Data modeling is the first step in performing object-oriented programming.



39. What is your daily work process in Tableau?

I think we all work on different projects using Tableau, so the work begins from understanding the requirement, and then we have to get the required data, create a storyboard, create visualizations in Tableau, and then present it to the client for review.

40. What is parameters in Tableau? How do they work?

Parameters are dynamic values that can replace constant values in calculations, and they can serve as filters.

Advanced Tableau Interview Questions

41. How does Tableau work with huge datasets?

Tableau's performance is based on the performance of the data source. If the data source takes more time to execute a query, then Tableau must wait up to that time.

42. How will you publish and schedule a workbook in Tableau Server?

- First, create a schedule for a particular time and then create Extract for the data source and publish the workbook on the server.
- Before we publish it, there is an option called 'Scheduling and Authentication'. Click on that and select the schedule from the drop-down and then publish. Also publish data source and assign the schedule. This schedule will automatically run for the assigned time and the workbook will get refreshed on a regular basis.

43. Distinguish between Parameters and Filters.

- Parameters are dynamic values that can replace constant values in calculations. Parameters can serve as Filters as well.
- Filters, on the other hand, are used to restrict the data based on a condition that we have mentioned in the Filters shelf.

44. How to view a SQL generated by Tableau Desktop?

Tableau Desktop Log files are located in C:UsersMyDocumentsMy Tableau Repository. If we have a live connection to the data source, we need to check the log.txt and tabprotosrv.txt files. If we are using Extract, have to check the tdeserver.txt file. The tabprotosrv.txt file often shows detailed information about queries.

Related Article: What Kinds Of Tasks Can Be Done With Tabcmd In Tableau?

45. What is Page shelf?

Page shelf is a powerful part of Tableau that we can use to control the display of the output and the printed results of the output.

46. What are the major differences between Tableau 7.0 and Tableau 8.0?

1. New visualizations are introduced like treemap, bubble chart, and box and whisker plot.
2. We can copy worksheet directly from one workbook to another workbook
3. Introduced R script

47. How to create filled maps?

- Step 1: Build a Map View, double-click on a geographic field such as State, Area Code, Zip Code, etc.
- Step 2: Select the Filled Map Mark Type The Automatic mark type will show this type of view as circles over a map. On the Marks card, select Filled Map to color the geographic areas.
- Step 3: Drag a Field to the Color shelf, define how the locations are colored by dragging another field to the Color shelf.

48. Does a parameter have its own drop-down list?

Yes, it may have its own drop-down list. The entries we make in the Parameter while creating it can be viewed as items in the drop-down list.

49. How to rectify SQL performance for developed dashboards?

After the creation of dashboards, if we get a problem from the SQL side it means Custom SQ. How to Rectify the SQL performance from custom SQL.

50. How is data blending different from data joining?

Data blending is the combining of data from two or more different sources. We can combine the data between two sources, such as Oracle, SQL Server, Excel, and others.

Example:

Consider the admission data given in a relational database and the admission target data given in an Excel spreadsheet. Now, to compare the actual admissions with the target admissions, we can perform data blending. Here, we will blend the data based on some common dimensions of both sources to access the measure of the Admissions target. We list the two sources involved in data blending as the primary and secondary sources of the data. A left join is performed between the primary data source and the secondary data source, wherein all the data rows from the primary data source and only the matching data rows from the secondary data source are fetched.

Each data source in data blending includes its own collection of dimensions and measures. Data blending is useful when combining data from a variety of sources.

Data joining, on the other hand, is also combining data but from two or more tables or sheets within the same data source.

Example:

Combining two tables from the same SQL Server or Oracle Database or DB2 or any other data source. Combining two worksheets or more in the same Excel package will also fall under data joining.

Data joining is useful when combining data from a single source with several tables, sheets, or others.