Tableau

Learning Objectives

By the end of this lesson, you will be able to:

- Import data using CSV, Excel, and text files

- Utilize the data pane of Tableau

- Create worksheets, dashboards, and stories

- Understand how to create a data union

Tableau Workspace

Business Scenario

ABC is an HR analytics company that needs to rapidly shift its platform to avoid delays in handling business. The company recently shifted its platform to Tableau for its needs.

Realizing the importance and urgency, also for its full-scale reform and adaptation, the company is training its employees on Tableau.

To achieve this, the employees must understand the Tableau workspace. They must learn how to import data, create a data union, and understand how shelves and cards work in Tableau.

Problem statement:

Import data from the text, CSV, and Excel file types to the Tableau workspace

Assisted Practice Guidelines

Steps to perform:

1. Import the Excel file

2. Import the text file

3. Import the JSON file

Note: Please download the pdf file **4.01_Importing_Data_from_Various_File_Types** from the Reference Material section.

Assisted Practice: Preview and Modify Data

Problem statement:

Use the **superstore-excel** dataset to preview and modify the data in Tableau

Assisted Practice Guidelines

Steps to perform:

1. Import the Excel file

2. Preview the data

3. Modify the data

Note: Please download the pdf file **4.02_Preview_and_Modify_Data** from the Reference Material section.

Creating Data Union: Aggregate Data
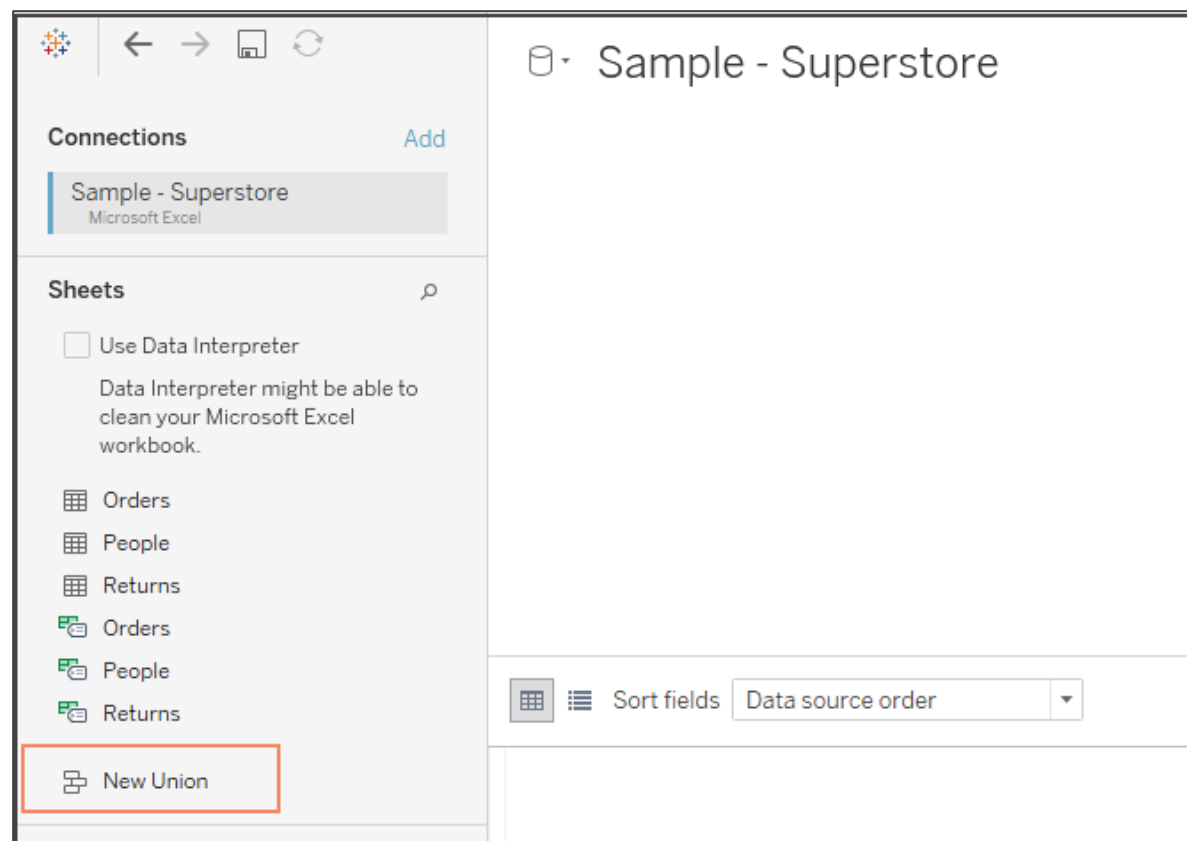
Discussion: Tableau Workspace

Duration: 10 minutes

- How is the Tableau toolbar used, and what are its key functions?

- What is the purpose of the union operation in Tableau?

Union Operation

It is used to integrate the contents of two or more tables. It combines multiple tables or data sources vertically, stacking the rows on top of each other.

A union operation requires the number of columns and their data types to be identical across all tables on which it is performed.

It ensures that duplicate entries in the resultant table are deleted.

Union Operation in Tableau

Consider a dataset of employee information from an organization's HR department

The five tables in the dataset are:

Employee

Leaves

Training

Financial Statistics

Scenario

Performing Union Operation in Tableau

Step 1: Create a connection to the Excel file of the data source

Performing Union Operation in Tableau
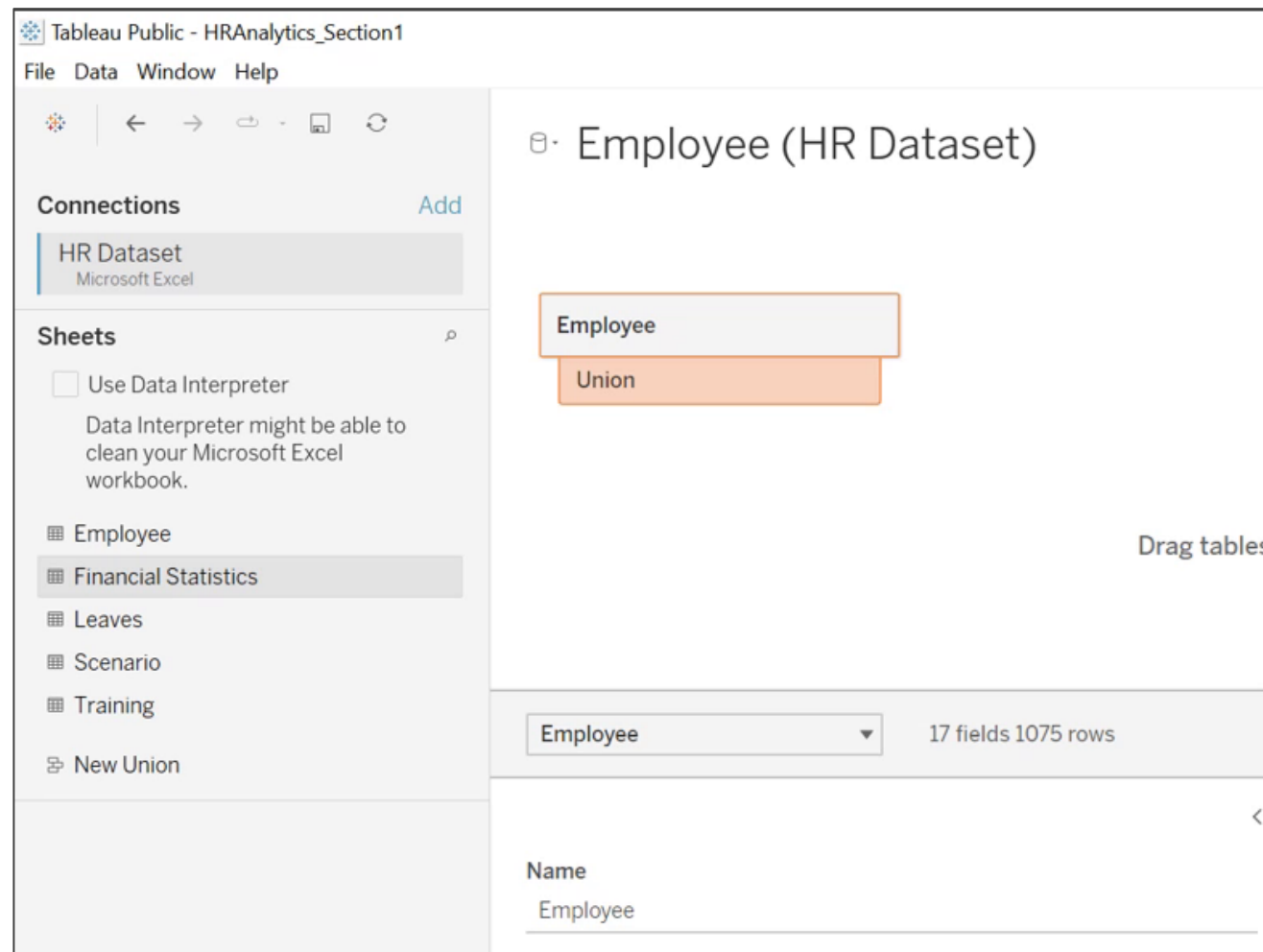
Step 2: Drag the **Employee** detail tab on the left side to the blank canvas on the right side, which says **Drag tables here**
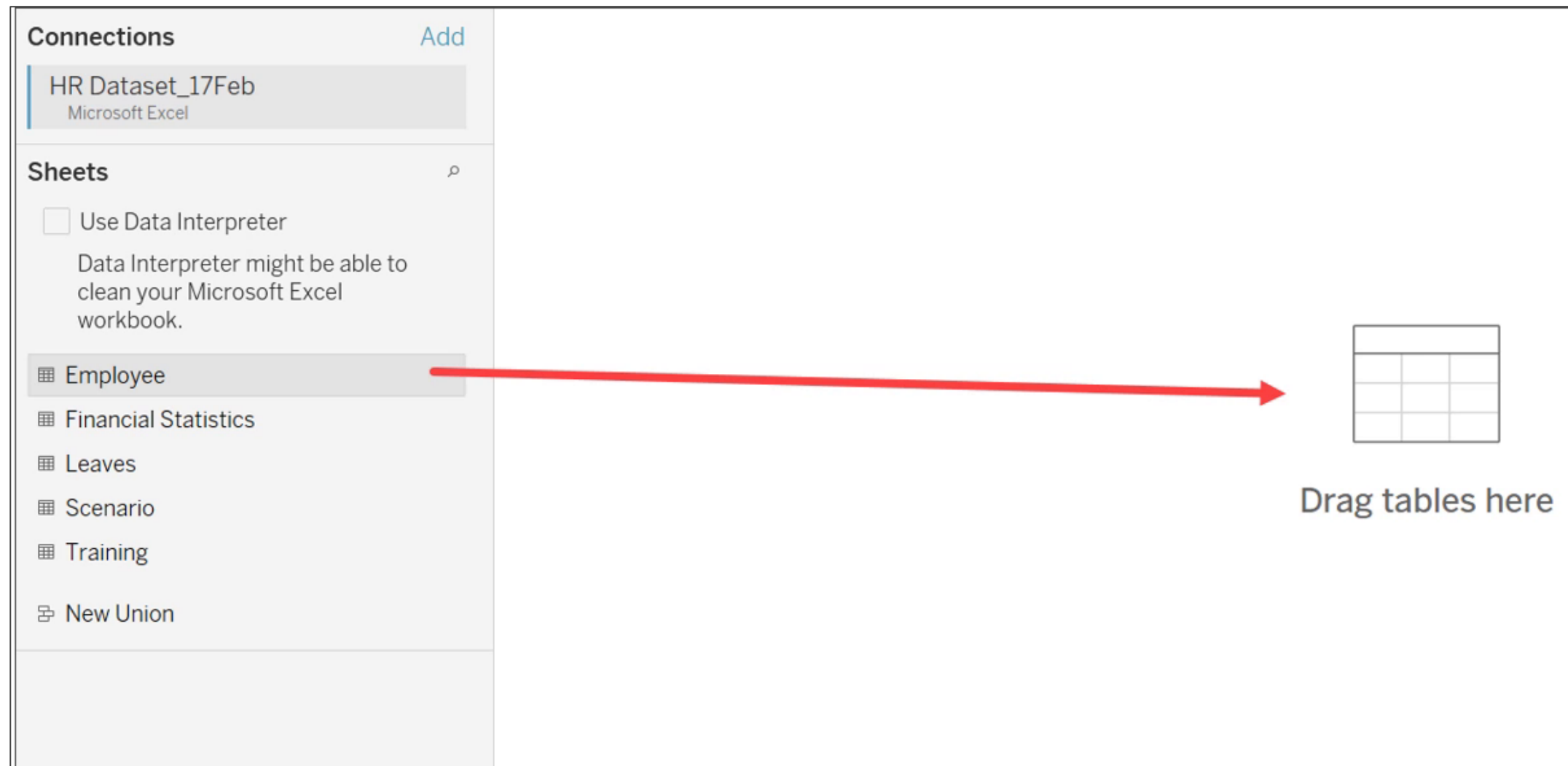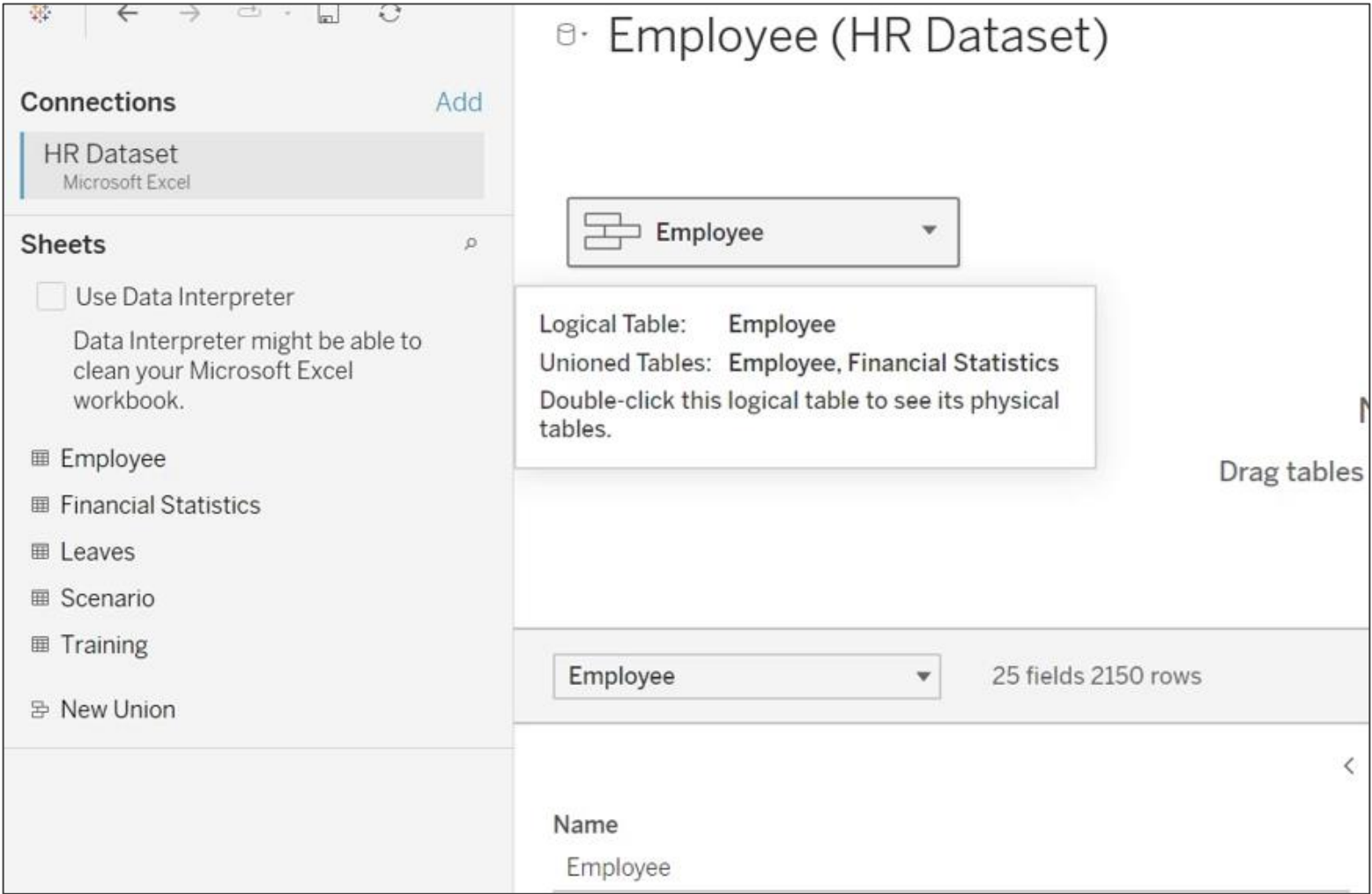
Performing Union Operation in Tableau

Step 3: Drag the rest of the tables and drop them into the canvas below the Employee table

- Upon performing step 3, an orange icon is seen that says, **Drag to Union**

- Stack both tables into one

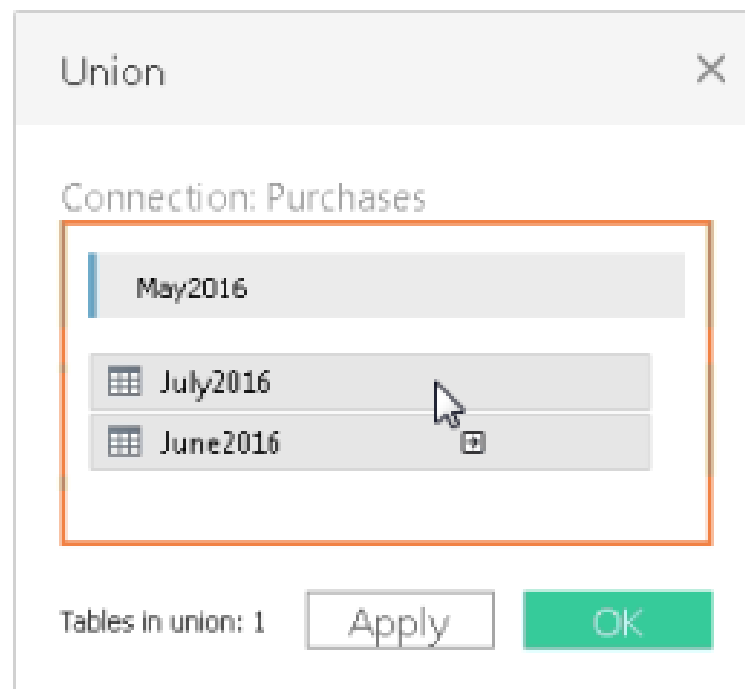- Repeat the steps for the remaining tables

Performing Union Operation in Tableau

Step 4: Observe the updated table

Customizing Union Operation in Tableau

If unions need to be customized, right-click on the **Menu**.

Here, operations like adding or removing tables, or renaming the union can be performed.

Alternative Way to Perform a Union

Use the **New Union** button on the bottom left of the data source page
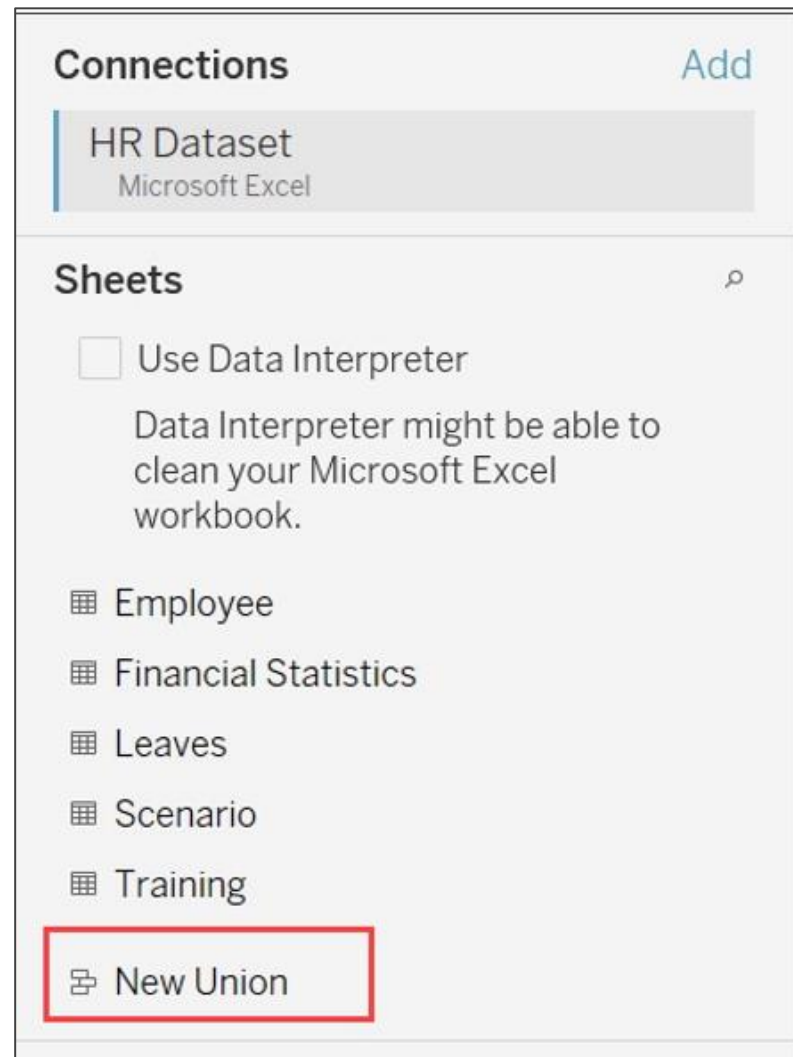
- Double-click on the **New Union** button
- In the newly opened dialog box, tables can be dragged one by one
- Click on **Apply** and then **OK** to get the resulting table

Discussion: Tableau Workspace

Duration: 10 minutes

- How is the Tableau toolbar used, and what are its key functions?

Answer: The Tableau toolbar provides quick access to essential functions and options for data visualization and analysis, including data connection, workbook management, view navigation, formatting, filtering, and data manipulation.

- What is the purpose of the union operation in Tableau?

Answer: The purpose of using the union operation in Tableau is to consolidate data from different sources or tables with similar structures. It allows users to analyze and visualize the combined data as a single dataset.

Assisted Practice: Introduction to Tableau Workspace

Problem statement:

Use the **superstore-excel** dataset to get familiar with the Tableau workspace

Assisted Practice Guidelines

Steps to follow:

1. View Tableau Public workspace

2. Check the functionality of the **Back** and **Forward** buttons

3. Familiarize yourself with the other options on the toolbar

4. View the **Highlight** option

Assisted Practice Guidelines

Steps to follow:

5. View the **Show Marks Labels** option

6. Change the size of the charts

7. Explore the **Show/Hide Cards** option

8. Observe the **Sheets** tab

Note: Please download the pdf file **4.03_Introduction_to_Tableau_Workspace** from the Reference Material section.

Assisted Practice: Green vs. Blue Pills in Tableau

Problem statement:

Use the **superstore-excel** dataset to get familiar with the green and blue pills in the **Data** pane

Assisted Practice Guidelines

Steps to follow:

1. Populate the blue pill

2. Populate the green pill

3. Explore the **View** option

4. Change the color and opacity of the bars

5. Choose a border for the graph

Steps to follow:

6. Change the size of the graph

7. Explore the **Label** option

8. Explore the **Tooltip** option

9. Explore the **Show Me** card

Note: Please download the pdf file **4.04_Green_vs_Blue_Pills_in_the_Data_Pane** from the Reference Material section.

Assisted Practice: Introduction to Cards in Tableau

Problem statement:

Duration: 20 mins

Use the **superstore-excel dataset** to get familiar with cards in Tableau

Steps to follow:

1. Explore the **Pages** shelf

2. Explore the **Filters** shelf

3. Customize the **Filters** shelf

Note: Please download the pdf file **4.05_Introduction_to_Cards_in_Tableau** from the Reference Material section.

Assisted Practice: Working with Sheets in Tableau

Problem statement:

Duration: 10 mins

Create a new worksheet, dashboard, and story in Tableau

Assisted Practice Guidelines

Steps to follow:

1. Import the Excel file

2. Observe the **Sheets** tab

3. Build a new dashboard

4. Build a new story

Note: Please download the pdf file **4.06_Working_with_Sheets_in_Tableau** from the Reference Material section.

Key Takeaways

- A union operation is used to integrate the contents of two or more tables.

- Tableau can import data from text, CSV, and Excel file types to its workspace.

- A union operation requires the number of columns and their data types to be identical across all tables on which it is performed.

- A union can be customized to add or remove tables or rename the union.
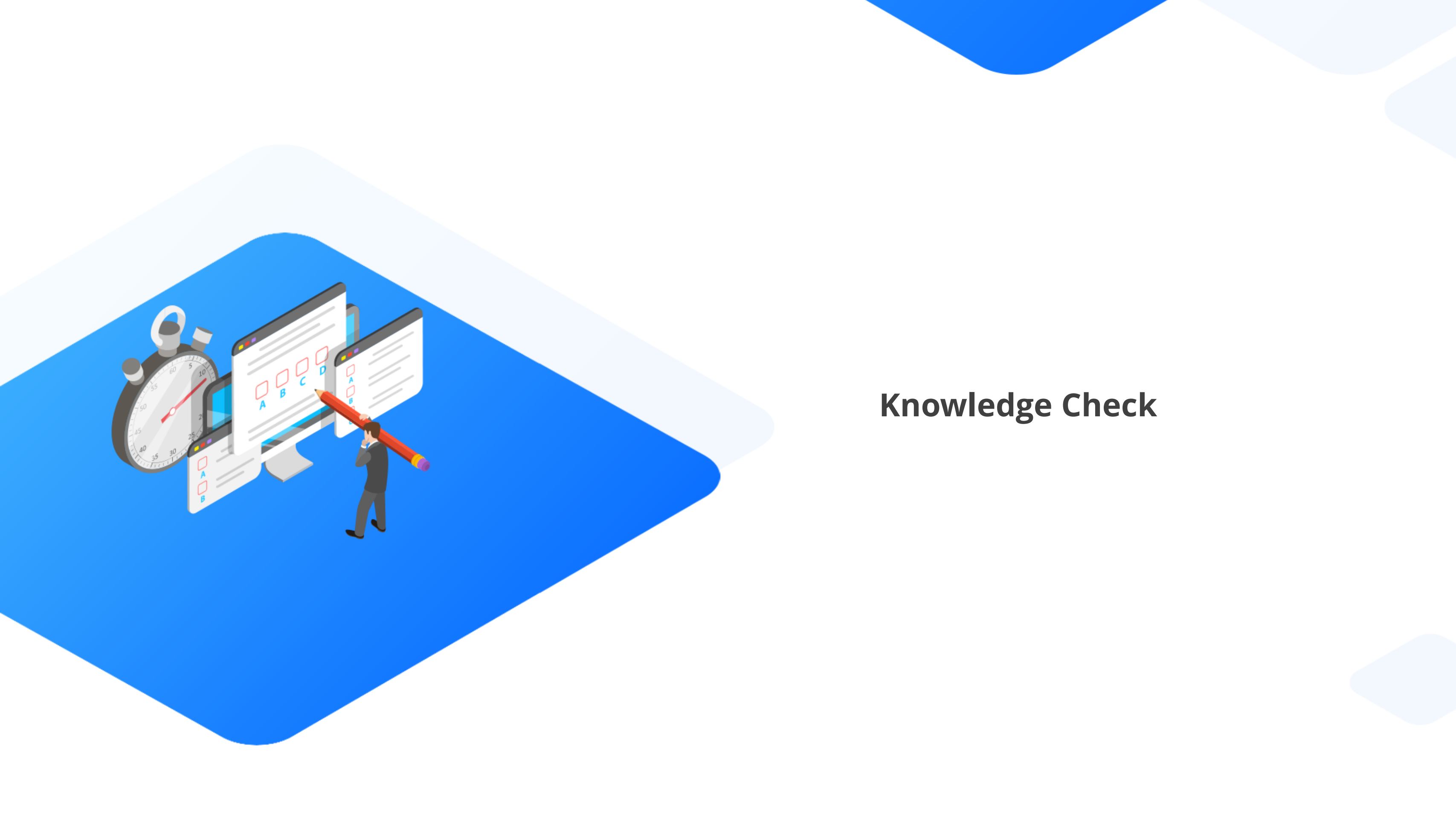
Knowledge Check

A union operation is used to_____.

A.   Visualize the content of two or more tables effectively

B.   Integrate the contents of two or more tables

C.   Filter the data

D.   None of the above

A union operation is used to_____.

A.   Visualize the content of two or more tables effectively

B.   Integrate the contents of two or more tables

C.   Filter the data

D.   None of the above

The correct answer is **B**

A union operation is used to integrate the contents of two or more tables.

After the union of the two tables, duplicate entries are_____.

A.   Added

B.   Subtracted

C.   Deleted

D.   Retained

After the union of the two tables, duplicate entries are_____.

A.   Added

B.   Subtracted

C.   Deleted

D.   Retained

The correct answer is **C**

After the union of the two tables, duplicate entries are deleted and only one value is retained.

Knowledge Check 3

The structures of two tables should be same to perform the union.

A. True

B. False

The structures of two tables should be same to perform the union.

A.   True

B.   False

The correct answer is **A**

The two tables must have the same number of columns to perform the union of tables.

Thank You