Program 2 : Connecting to Data Source – Connecting to Database, Different types of TableauJoins.

Dataset used: Tableau Joins File: Contains 3 sheets : Demographics, Salary, Job Title

1. Connecting to Excel Files in Tableau:

- Open Tableau and click on **Connect** in the left pane.
- Under **To a File**, choose **Microsoft Excel**.
- Browse and select your Excel file (Tableau Joins File.xlsx).
- Tableau will display the sheets from the Excel file in the Data Source tab.
- Drag the relevant sheets to the workspace.

2. Tableau Joins File.xlsx Dataset: has three Excel sheets

- **Demographics**:
    - EmployeeID
    - NameofEmployee
    - EmployeeAge
    - EmployeeGender
- **Salary:**
- EmployeeID
- EmployeeSalary

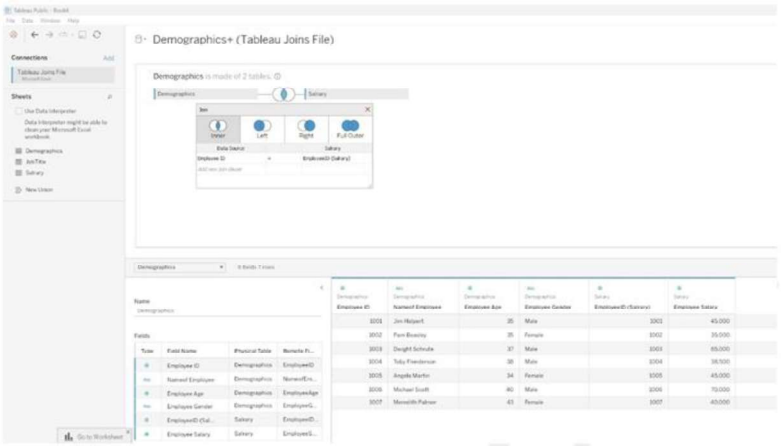
These sheets have a relationship based on the EmployeeID, and you can join them using this field.
Drag and drop Demographics table- Right click-select open- that allows you to do following types of joins.
Now Drag and drop Salary table - That allows you to do join of your choice.

3. Types of Joins in Tableau:

Once both tables are in the Data Source tab, Tableau automatically suggests an inner join, but you can modify the type of join depending on the scenario.

a. Inner Join:

- **Description**: Returns only records where there is a match in both tables.
- How to Create in Tableau**:**
    - Drag Demographics and Salary sheets into the canvas.
    - Tableau automatically detects the common field (EmployeeID). If not, manually select it.
    - Choose **Inner Join** in the **Join Type** options.
    - Result: You will see only employees whose employee id matches in both Demographics and Salary table.

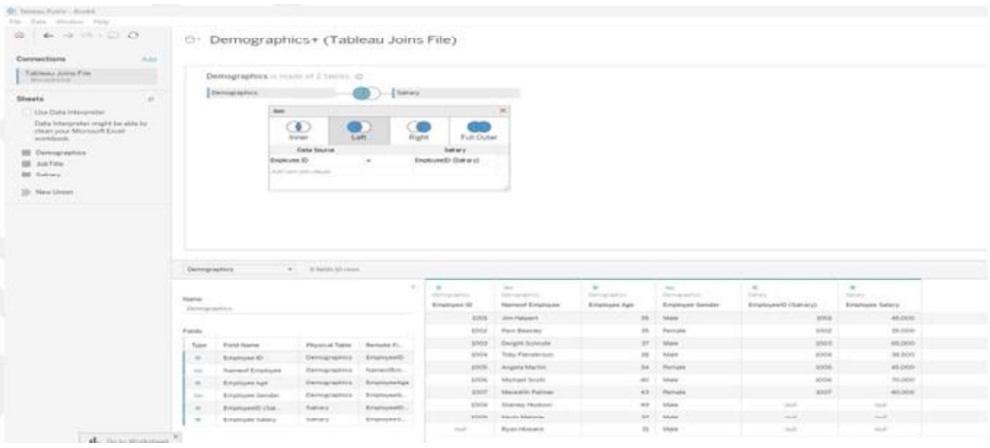


b. Left Join:

a. **Description**: Returns all records from the left table (Demographics), and matched records from the right table (salary). If there's no match, NULL values are returned for fields from theright table.

b. How to Create in Tableau**:**

c. In the join settings, select **Left Join**.
d. Result: All employees will be returned, even if data missing in Salary. Salary information willbe NULL for those without a match.



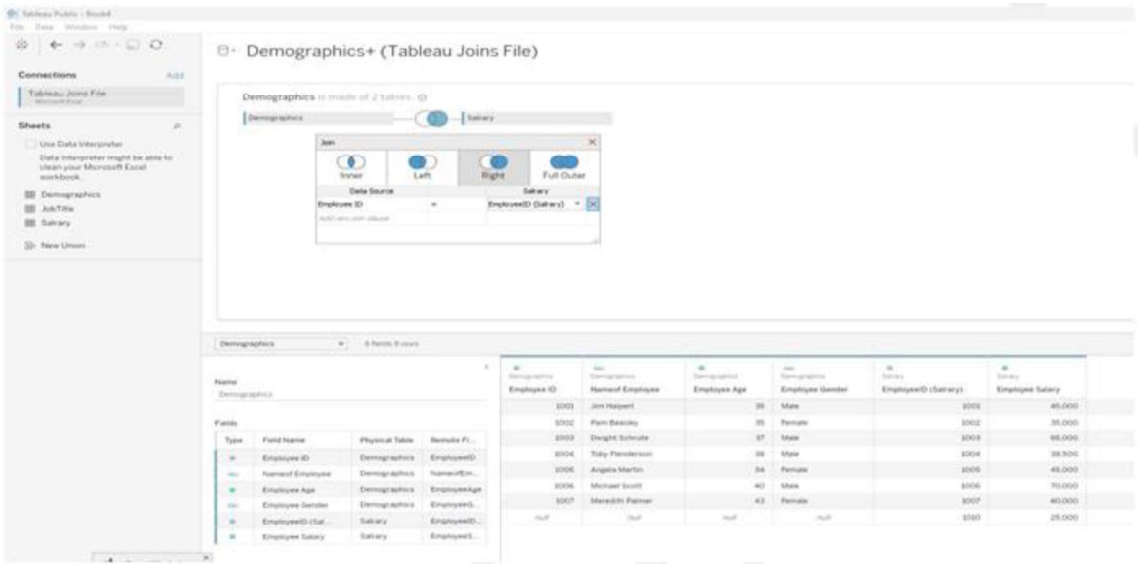
c. Right Join:

Description: Returns all records from the right table (Salary), and matched records from the left table (Demographics). If there's no match, NULL values are returned for fields from the left table.

How to Create in Tableau:

- Select **Right Join**.

- Result: You will see all salary, even if they don't have employee id. Employee information will be NULL for those salary with no matching employee id.



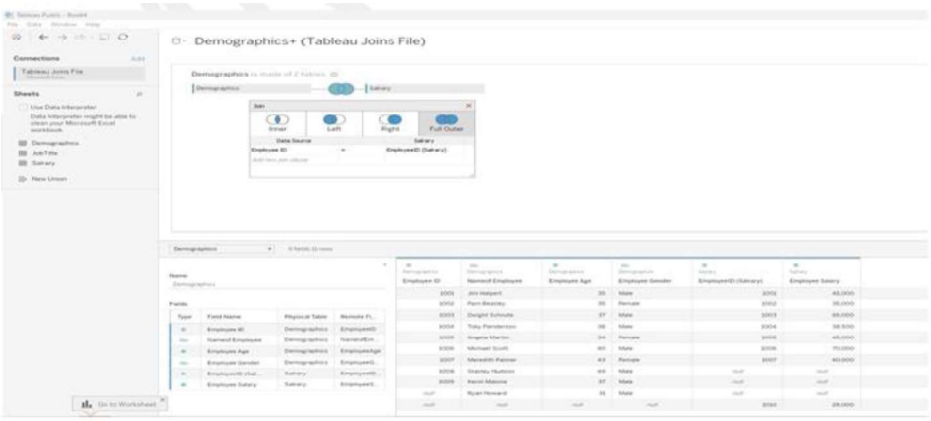
Full Outer Join:

- **Description**: Returns all records when there is a match in either the left (Demographics) or right (Job Title) table. If there's no match, NULL values are returned for the missing side.

- How to Create in Tableau**:**

  - Select **Full Outer Join**.

  - Result: You will see all employees and all salary, even if they don't have a match in the other table. NULL values will appear where there's no corresponding record.



1. Creating a Visualization Based on Joins:

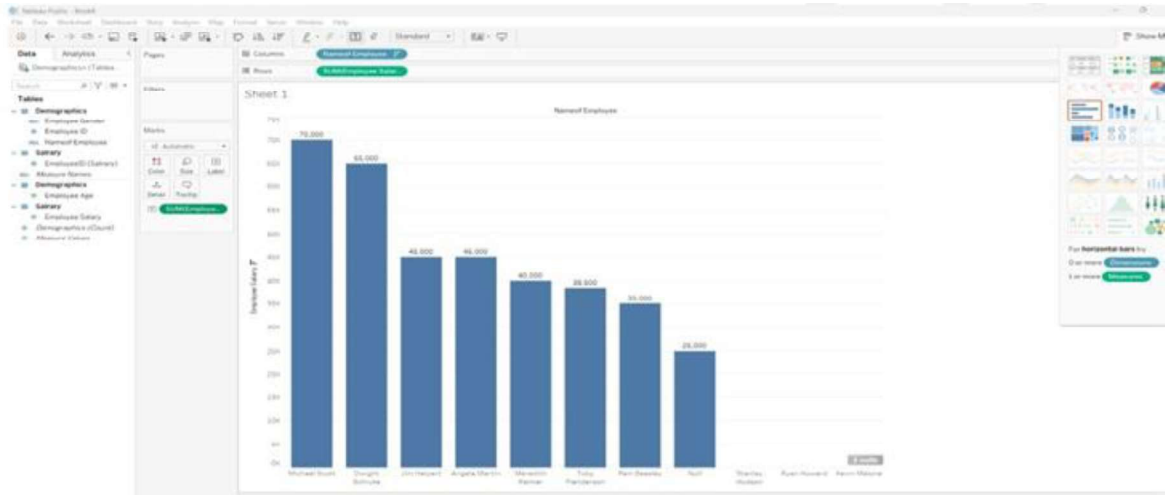
After performing the joins, you can build different visualizations.

Press on Sheet 1:

For Example,

Bar Chart:

- Number of employees and their salary.Drag NameofEmployee o **Columns**.
- Drag EmployeeSalary to **Rows.**
- This chart will display the number of employees and their salary based on the type of join.
- Sort it in decending
- Drag EmployeeSalary to Marks - Select color Color, Label



Reference Video Link -

https://www.youtube.com/watch?v=A4SVUF-fTwc&list=PLUaB-1hjhk8GwbqoVmo_5zuhOa0Tcl3xC&index=4

This same procedure we can do by connecting to any database server

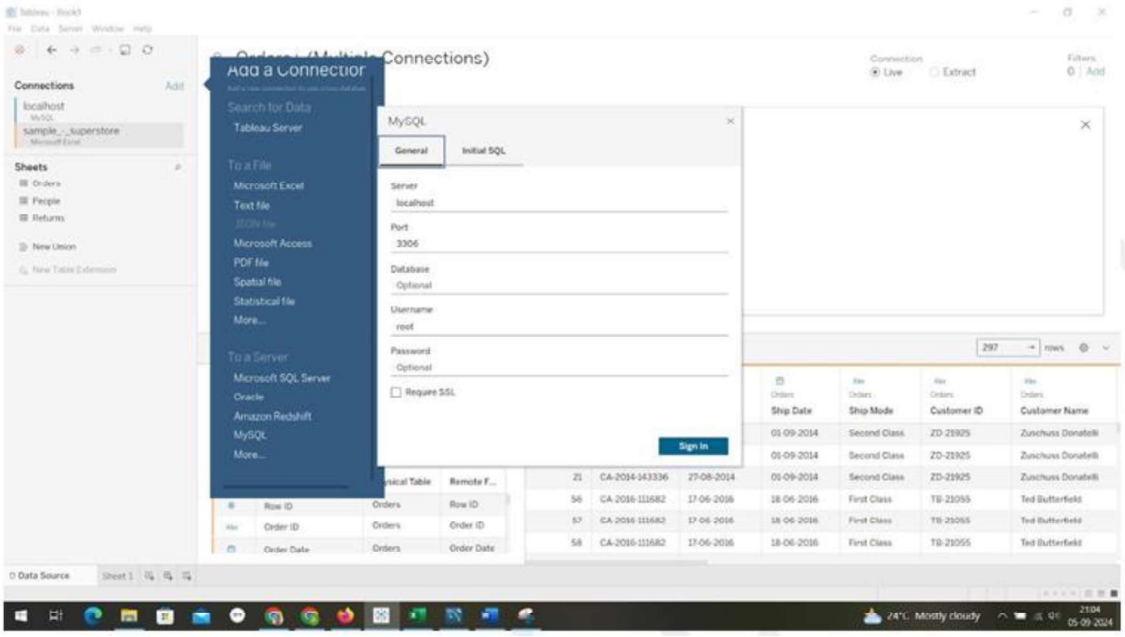
We should initially connect to driver by installing it for example if you are planning for mysql

- **Install mysql driver connector as in link below:**
- **https://dev.mysql.com/downloads/connector/odbc/**

  It is available in Drive Link also

  https://drive.google.com/drive/folders/1kG25wextZcEOsjfXdr5VcrwW3Dp53jBf?usp=drive_link

After installing it
We have to connect to Mysql



For More Info : Refer Tableau Handouts and Tableau Tutorial

Program 3. Creating a View - formatting charts, adding filters, creating calculated fields anddefining parameters

Step 1: Connect to Data

1. Open Tableau Desktop.
2. **Connect to Your Data Source**:

   a)Click on Connect on the left sidebar.

   b)Choose your data source by selecting text file and load your vgsales dataset into Tableau.

Step 2: Create a Basic Visualization

- **Create a New Worksheet**:

  a)Click on the Sheet tab at the bottom of the screen.

- **Drag Fields to Shelves**:

  a) Drag Year to the Columns shelf.

  b) Drag Global Sales to the Rows shelf.

  c) Drag EU Sales to the Rows shelf.