# USING CALCULATIONS IN JOIN CLAUSES

There might be some instances when the common or shared fields do not create an automatic join. In those cases, a join is performed by setting up one or more **join clauses**.

The **join clause** tells Tableau which fields are shared between the tables and how to match the corresponding rows. For example, rows with the same ID are aligned in the results table.

# USING CALCULATIONS IN JOIN CLAUSES

**Join clauses** most often use the equality operator (=) which matches rows with the same values. It is also possible to perform non-equi joins, such as less than (<) and not equal (<>).

**Join clauses** can also contain calculations. For example, the join clause could be the concatenation of the name fields “[First name] + [Last name] = [First name] + [Last name]”. Note that not all data source connections support calculations in join clauses.

# DETAILS OF THE DATA SOURCE USED

We will be using a fictitious spreadsheet Use_calculations_in_join_clauses.xlsx having 2 tables viz Statictics1 and Statictics2 for explaining joins

## Statistics1 Table

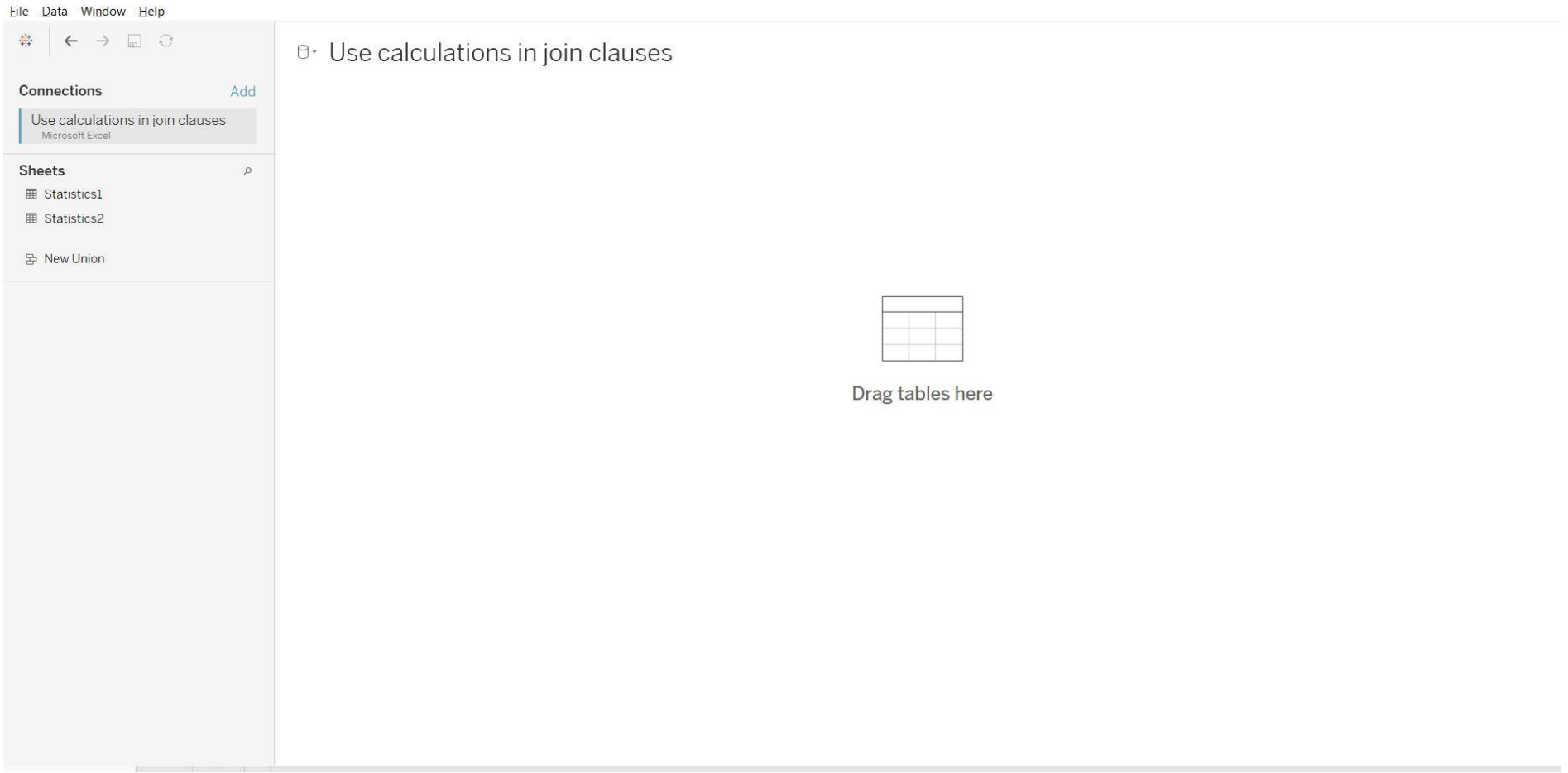
| Full Venue | Runs | Sports |
|---|---|---|
| Edgbaston, England | 2456 | Cricket |
| Old Trafford, England | 1900 | Cricket |
| Trent Bridge, England | 4000 | Cricket |
| Lords, England | 2367 | Cricket |

## Statistics2 Table

| Venue | Wickets | Entered By |
|---|---|---|
| Edgbaston | 3000 | Bill |
| Lords | 1500 | Charles |
| Edgbaston | 2678 | David |
| Lords | 1567 | Tory |

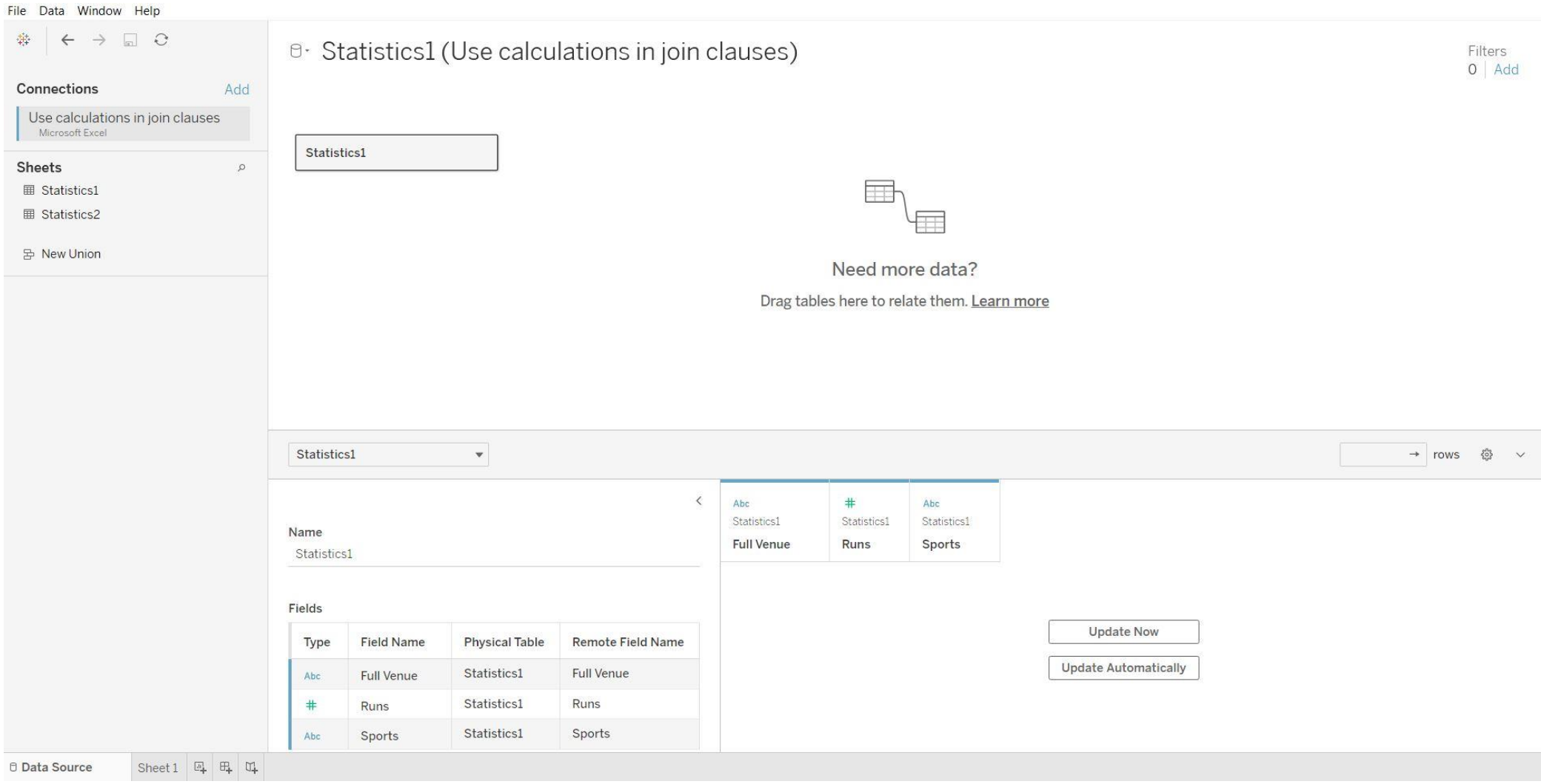
# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 1:** Connect to the relevant data source or sources e.g.: Use_calculations_in_join_clauses.xlsx



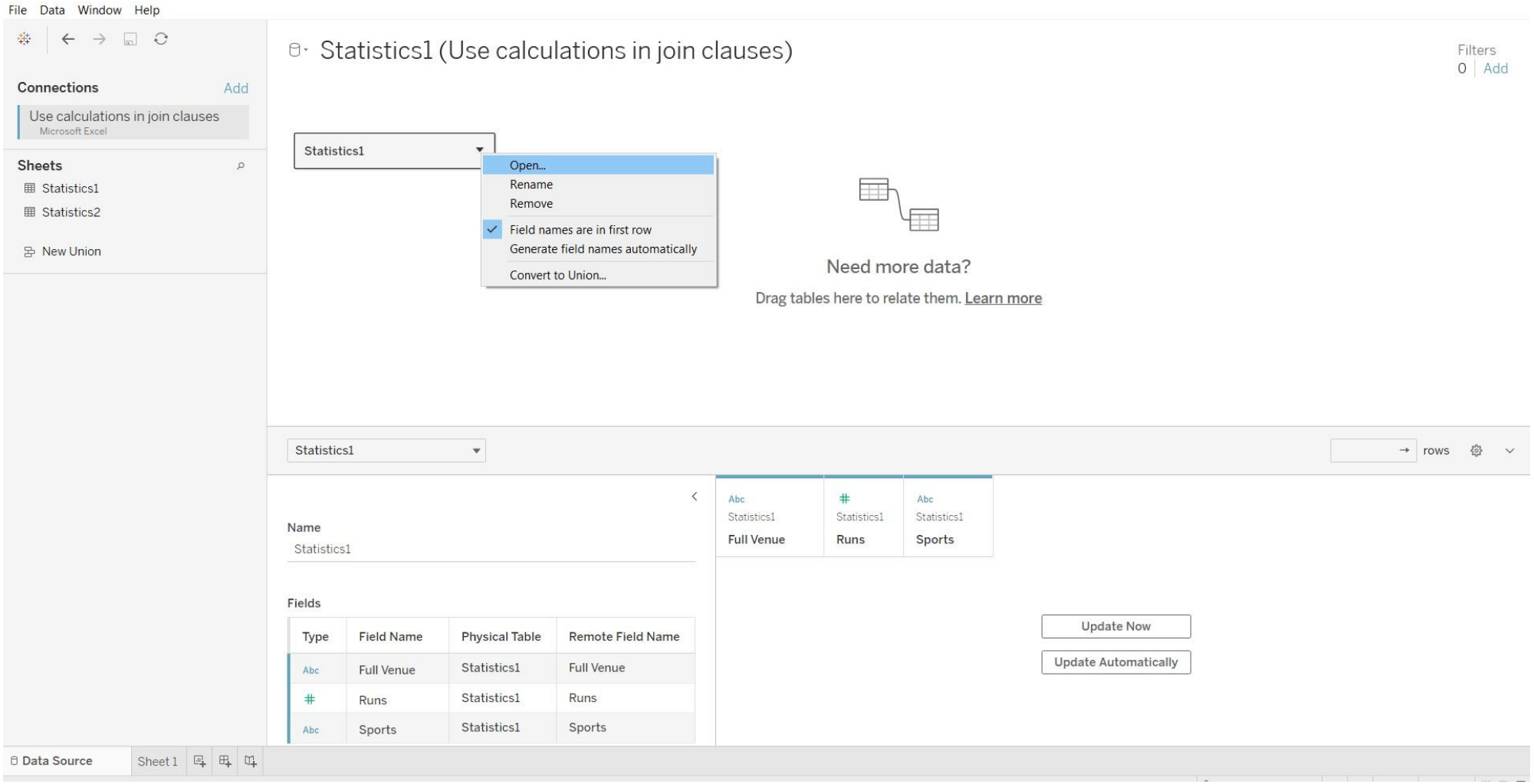
# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 2:** Drag the first table **Statistics1** to the canvas



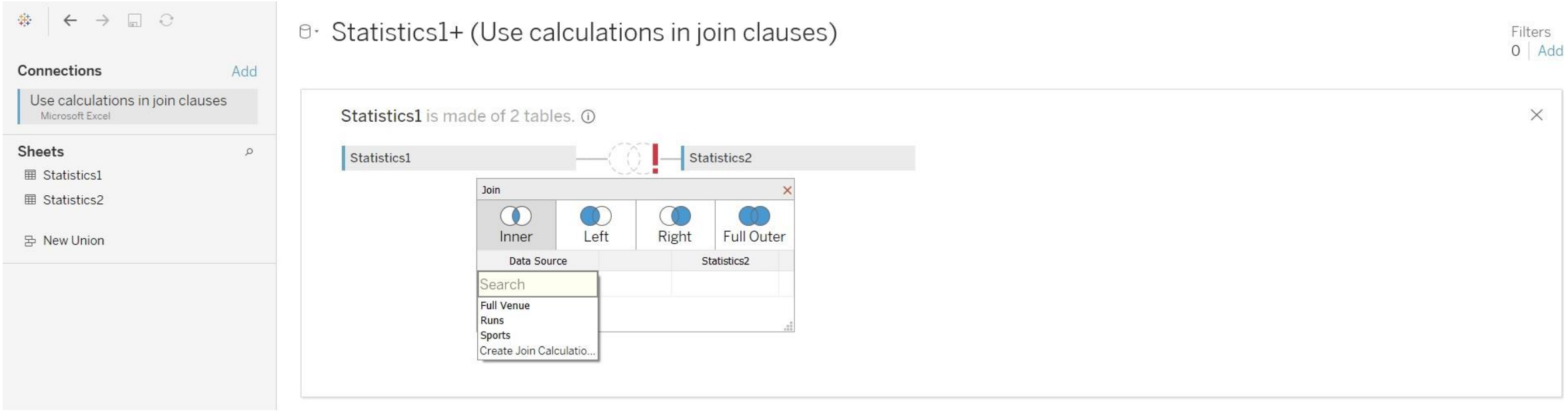
# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 3:** Select **Open** from the menu or **double-click** the first table to open the join canvas (**physical layer**)



# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 4:** Double-click or drag the **Statistics2** table to the join canvas

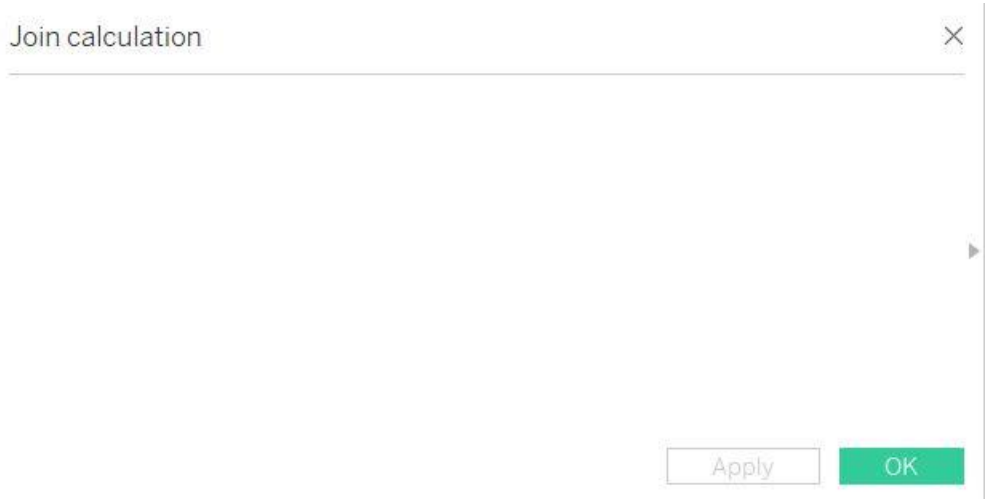


# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 5:** Select the **Create Join Calculation** from the drop-down of Left side table

# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 6: Join Calculation** dialog box appears



# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

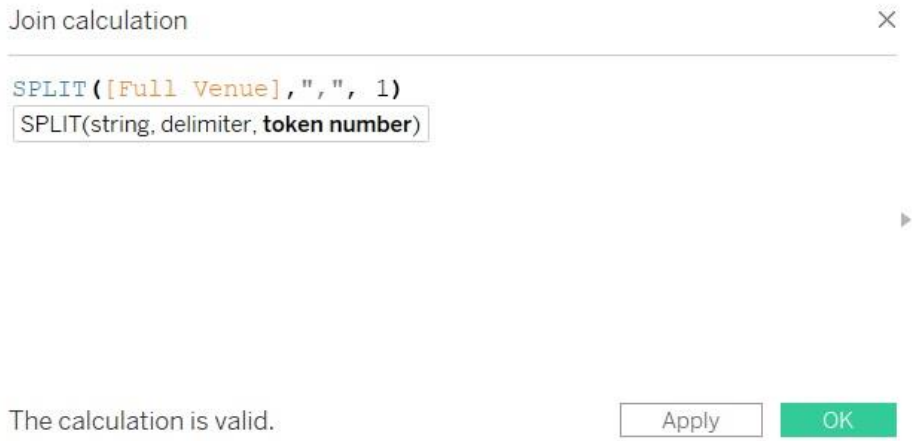
**Step 7:** Enter the formula as per the requirement

For this example, the formula is

SPLIT([Full Venue],",", 1)

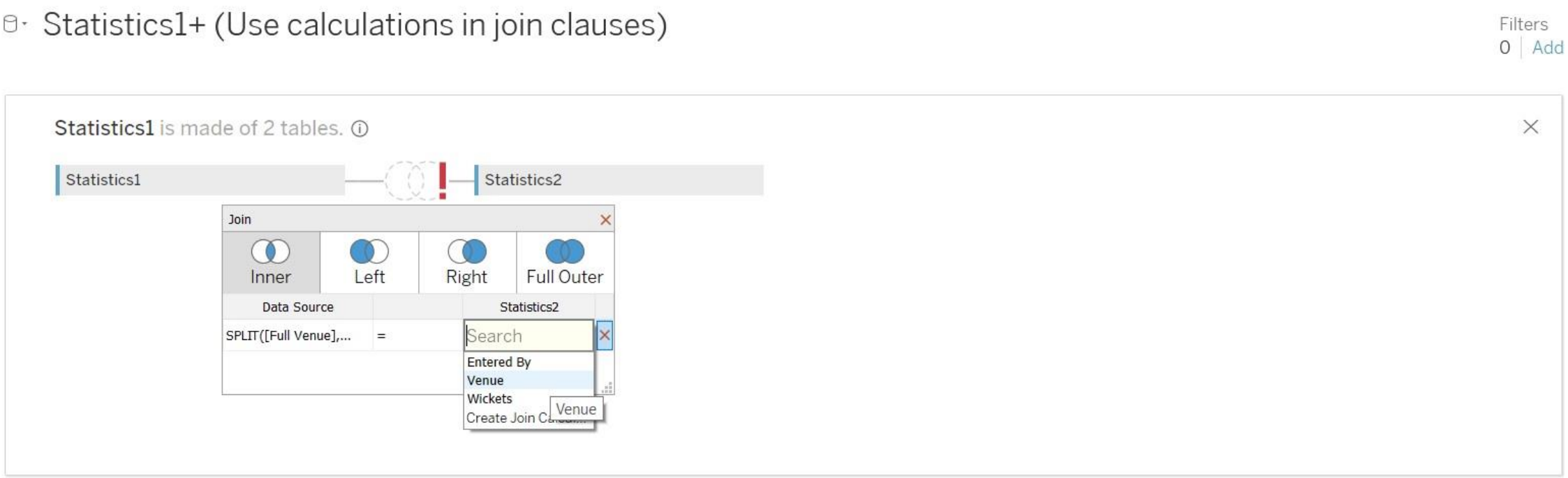
Confirm that a **"The calculation is valid"** message is seen

When finished, Click **OK**




# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 8:** Select the connecting field i.e., **Venue** from the drop-down of Right-side table

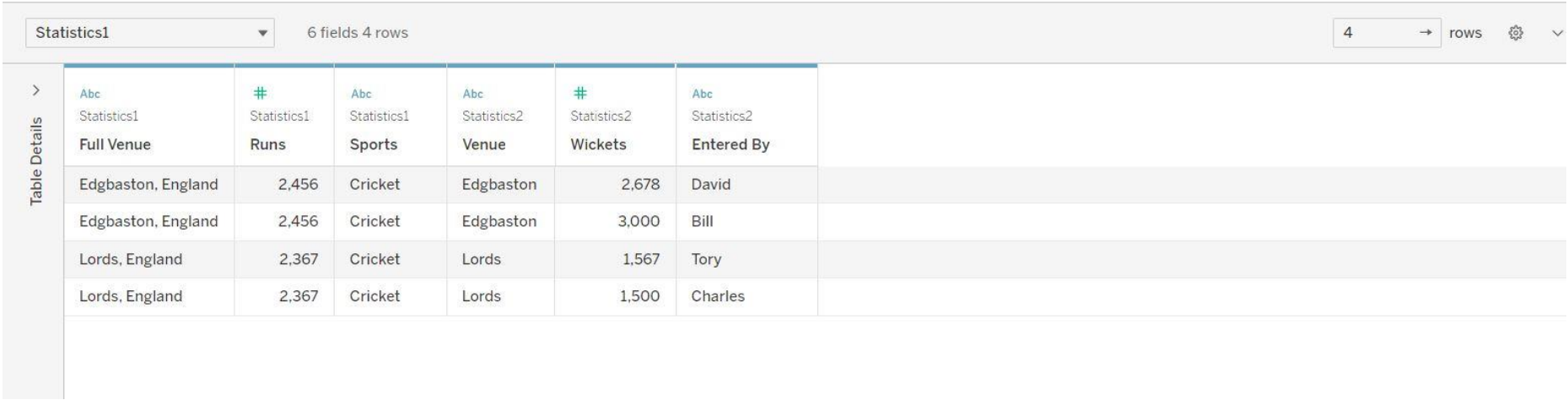


# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 9:** When finished, close the join dialog and join canvas.


# STEPS TO CREATE A JOIN USING CALCULATIONS IN JOIN CLAUSE

**Step 10:** Now we see the final join created via a Join Calculation Clause


| Abc Statistics1 Full Venue | # Statistics1 Runs | Abc Statistics1 Sports | Abc Statistics2 Venue | # Statistics2 Wickets | Abc Statistics2 Entered By |
|---|---|---|---|---|---|
| Edgbaston, England | 2,456 | Cricket | Edgbaston | 2,678 | David |
| Edgbaston, England | 2,456 | Cricket | Edgbaston | 3,000 | Bill |
| Lords, England | 2,367 | Cricket | Lords | 1,567 | Tory |
| Lords, England | 2,367 | Cricket | Lords | 1,500 | Charles |