

# UNDERSTANDING UNIONS

We can **union** data sources to combine two or more tables by **appending** values (rows) from one table to another.

To **union** the data in Tableau data source, the tables must come from the same connection.

Though union is not a type of join, union is another method for combining two or more tables by appending rows of data from one table to another.

# UNDERSTANDING UNIONS

For best results, the tables that we combine using a **union** must have the **same structure**. That is, each table must have the **same number of fields**, and **related fields** must have **matching field names** and **data types**

Thus, **Joins** adds **additional columns** while **Unions** adds **additional rows** to the **resulting data**.

For example, suppose we have the following sales information stored in four tables, separated by Year. The table names are "2016" "2017", "2018" and "2019"  
A union of these tables creates the following single table that contains all rows from all the separate tables.

# DETAILS OF THE DATA SOURCE USED FOR UNIONS

We will be using the below mentioned fictitious spreadsheet having 4 tables

## 2007 Table

Team	Venue	Runs
India	Sabina Park	3500
Sri Lanka	Queen's Park Oval	2700
West Indies	Kensington Oval Cricket Ground	1760
Australia	Sabina Park	4500

## 2011 Table

Team	Venue	Runs
India	Eden Garden	5600
Sri Lanka	Eden Garden	3000
West Indies	Wankhede Stadium	2345
Australia	Wankhede Stadium	1900

## 2015 Table

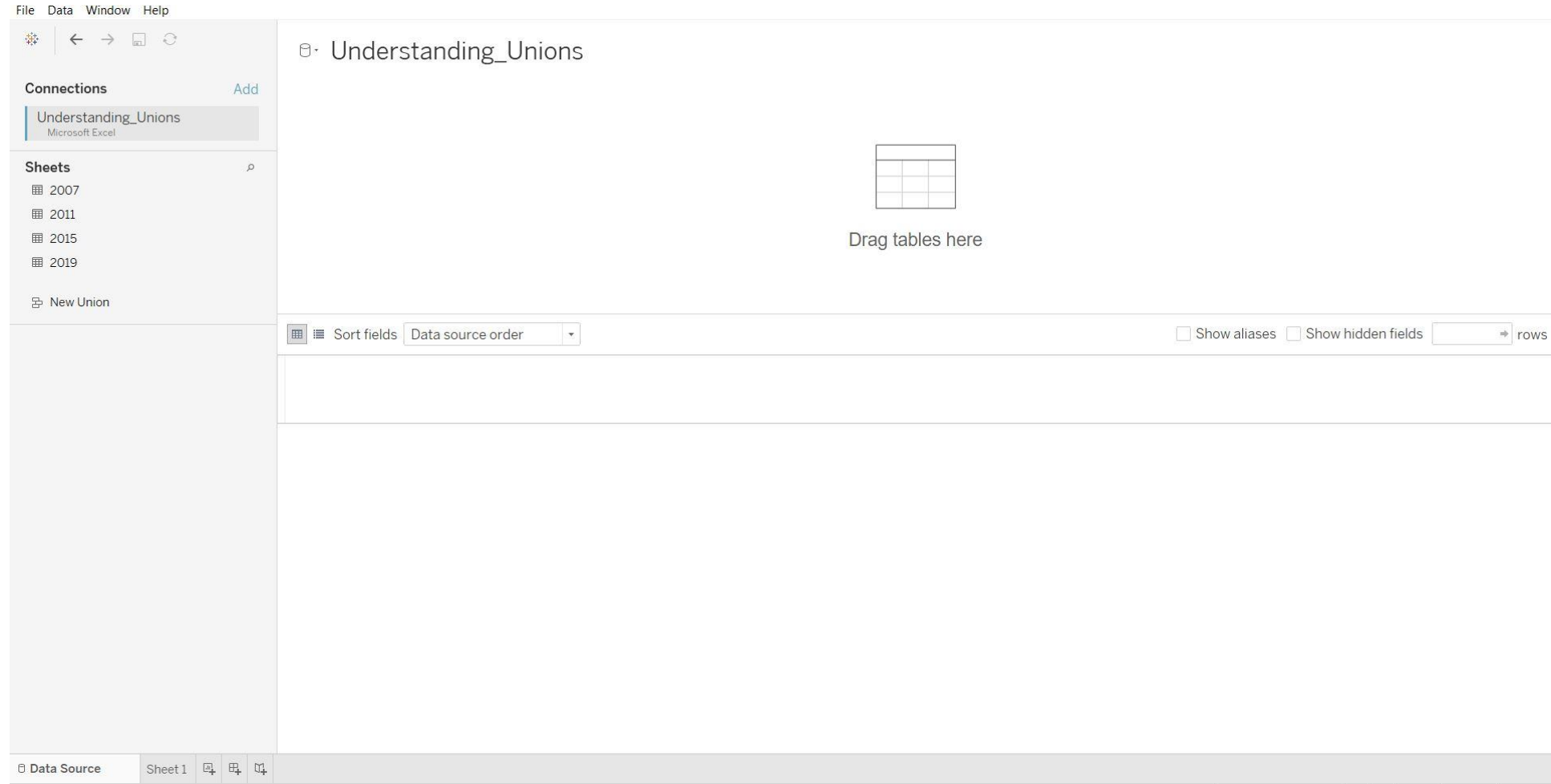
Team	Venue	Runs
India	The Gabba	3567
Sri Lanka	The Gabba	2367
West Indies	Melbourne Cricket Ground	1904
Australia	Melbourne Cricket Ground	3000

## 2019 Table

Team	Venue	Runs
India	Edgbaston	2456
Sri Lanka	Lords	1900
West Indies	Edgbaston	4000
Australia	Lords	2367

# STEPS TO CREATE AN UNION

## Step 1: Connect to the source e.g.: Understanding\_Unions.xlsx



# STEPS TO CREATE AN UNION

## Step 2: Drag the first table **2007** to the canvas area

FileDataWindowHelp

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ConnectionsAdd

Understanding\_Unions  
Microsoft Excel

Sheets

2007

2011

2015

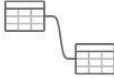
2019

New Union

2007 (Understanding\_Unions)

Filters  
0Add

2007



Need more data?  
Drag tables here to relate them. [Learn more](#)

📄

Sort fields

Data source order

▼

☐ Show aliases☐ Show hidden fields

4

→ rows

Abc	Abc	#
2007	2007	2007
Team	Venue	Runs
India	Sabina Park	3,500
Sri Lanka	Queen's Park Oval	2,700
West Indies	Kensington Oval ...	1,760
Australia	Sabina Park	4,500

# STEPS TO CREATE AN UNION

## Step 3: Press Shift and select all the remaining tables 2011, 2015 & 2019

FileDataWindowHelp

Connections

Add

Understanding\_Unions

Microsoft Excel

2007

2011

2015

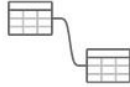
2019

New Union

2007 (Understanding\_Unions)

Filters  
0 | Add

2007



Need more data?  
Drag tables here to relate them. [Learn more](#)

Sort fields

Data source order

☐ Show aliases

☐ Show hidden fields

4

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2007	2007	2007
Team	Venue	Runs
India	Sabina Park	3,500
Sri Lanka	Queen's Park Oval	2,700
West Indies	Kensington Oval ...	1,760
Australia	Sabina Park	4,500

# STEPS TO CREATE AN UNION

**Step 4:** Drag the tables from the left pane and drag and drop it directly below the first table when you see the **Union** orange color box

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Connections

Add

Understanding\_Unions

Microsoft Excel

Sheets

🔍

2007

2011

2015

2019

New Union

2007 (Understanding\_Unions)

Filters  
0 | Add

2007

Union

📊

Need more data?

Drag tables here to relate them. [Learn more](#)

📊

Sort fields

Data source order

▼

☐ Show aliases

☐ Show hidden fields

4

→

rows

2007	2007	2007
Team	Venue	Runs
India	Sabina Park	3,500
Sri Lanka	Queen's Park Oval	2,700
West Indies	Kensington Oval ...	1,760
Australia	Sabina Park	4,500

# STEPS TO CREATE AN UNION

## Step 5: Now all tables 2007, 2011, 2015 and 2019 are unioned

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Connections Add

Understanding\_Unions  
Microsoft Excel

Sheets p

2007

2011

2015

2019

New Union

2007+ (Understanding\_Unions) Filters 0 | Add

2007

Logical Table: 2007  
Unioned Tables: 2007, 2011, 2015, 2019  
Double-click this logical table to see its physical tables.

Need more data?  
Drag tables here to relate them. [Learn more](#)

Sort fields Data source order

☐ Show aliases ☐ Show hidden fields 16 rows

2007+	2007+	2007+	2007+	2007+
Team	Venue	Runs	Sheet	Table Name
India	Sabina Park	3,500	2007	2007
Sri Lanka	Queen's Park Oval	2,700	2007	2007
West Indies	Kensington Oval ...	1,760	2007	2007
Australia	Sabina Park	4,500	2007	2007
India	Eden Garden	5,600	2011	2011
Sri Lanka	Eden Garden	3,000	2011	2011
West Indies	Wankhede Stadi...	2,345	2011	2011
Australia	Wankhede Stadi...	1,900	2011	2011
India	The Gabba	3,567	2015	2015
Sri Lanka	The Gabba	2,367	2015	2015
West Indies	Melbourne Crick...	1,904	2015	2015



# STEPS TO CREATE AN UNION

## Step 6: The newly created columns Sheet and Table Name can be hidden

The screenshot shows the Power BI Desktop interface. On the left, the 'Connections' pane shows 'Understanding\_Unions' from 'Microsoft Excel'. The 'Sheets' pane lists '2007', '2011', '2015', '2019', and 'New Union'. The main area displays a table named '2007+ (Understanding\_Unions)' with 16 rows. A context menu is open over the 'Table Name' column header, with the 'Hide' option selected. The table data is as follows:

Team	Venue	Runs	Sheet	Table Name
India	Sabina Park	3,500	2007	2007
Sri Lanka	Queen's Park Oval	2,700	2007	2007
West Indies	Kensington Oval ...	1,760	2007	2007
Australia	Sabina Park	4,500	2007	2007
India	Eden Garden	5,600	2011	2011
Sri Lanka	Eden Garden	3,000	2011	2011
West Indies	Wankhede Stadi...	2,345	2011	2011
Australia	Wankhede Stadi...	1,900	2011	2011
India	The Gabba	3,567	2015	2015
Sri Lanka	The Gabba	2,367	2015	2015
West Indies	Melbourne Crick...	1,904	2015	2015

# STEPS TO CREATE AN UNION

**Step 7:** This is the final unioned structure with **16 rows**  
A **union** has created a **single table** that contains  
**all rows** from all the **separate tables**

The screenshot shows the Power BI interface. On the left, the 'Connections' pane shows 'Understanding\_Unions' from 'Microsoft Excel'. Below it, the 'Sheets' pane lists '2007', '2011', '2015', '2019', and 'New Union'. The main area displays a table named '2007+ (Understanding\_Unions)'. Below the table name, there is a diagram showing a single table icon labeled '2007' and a message: 'Need more data? Drag tables here to relate them. [Learn more](#)'. At the bottom, a table with 16 rows is displayed. The table has three columns: 'Team', 'Venue', and 'Runs'. The data is as follows:

Team	Venue	Runs
India	Sabina Park	3,500
Sri Lanka	Queen's Park Oval	2,700
West Indies	Kensington Oval ...	1,760
Australia	Sabina Park	4,500
India	Eden Garden	5,600
Sri Lanka	Eden Garden	3,000
West Indies	Wankhede Stadi...	2,345
Australia	Wankhede Stadi...	1,900
India	The Gabba	3,567
Sri Lanka	The Gabba	2,367
West Indies	Melbourne Crick...	1,904