

NON-EQUI JOINS

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 (<>)

We will go through a simple example where the non-equi operators are used to assign a Rank to a score range.

NON-EQUI JOINS

Given below are the details of the data set that is planned for understanding non-equi joins

File Name: Player_and_Rank_Non_Equi_Joins.xlsx

Worksheet Names: Player and Rank

Given below are the contents of the 2 worksheets

Player

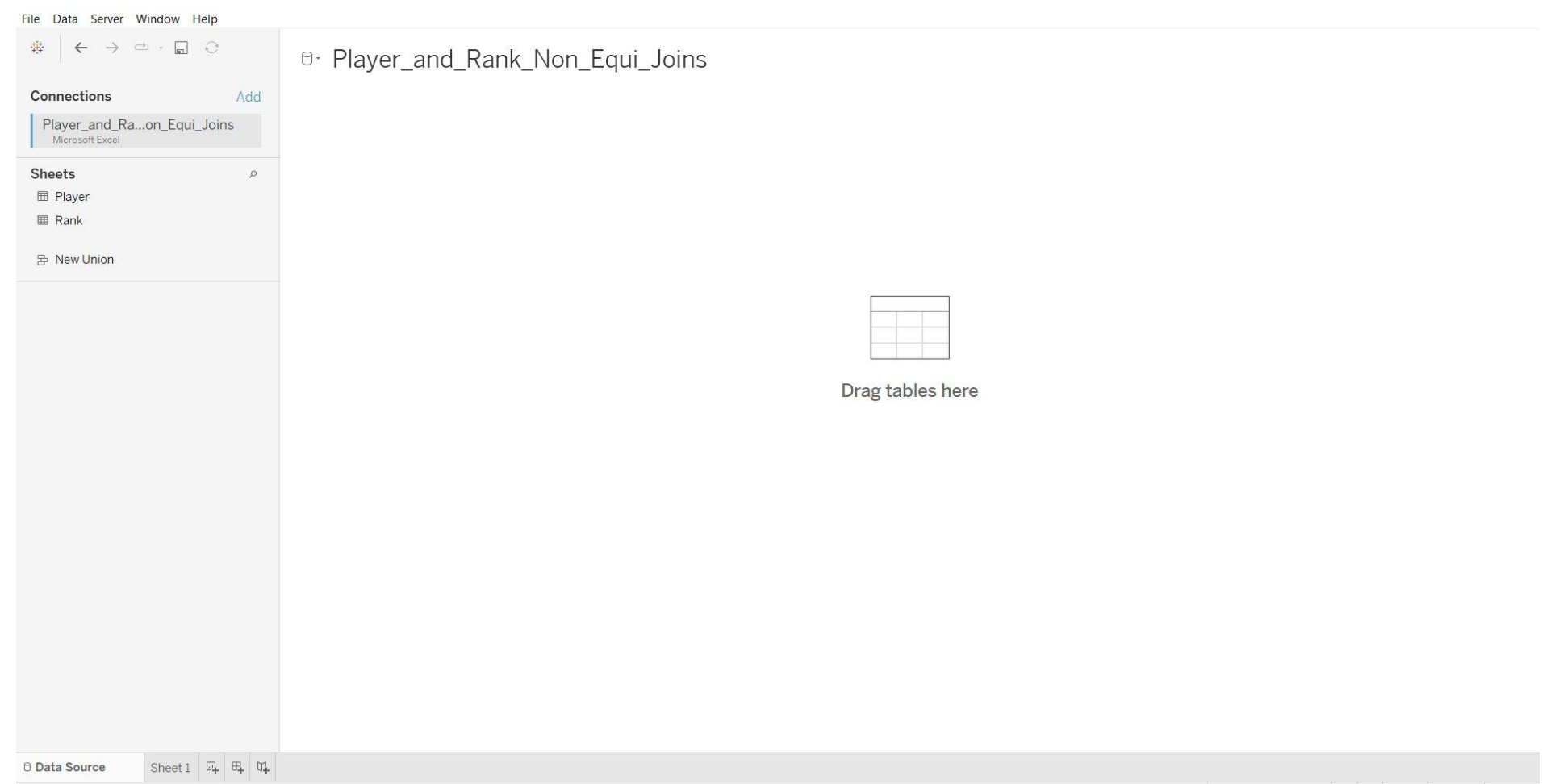
| Name | Score |
|--------|-------|
| Sachin | 145 |
| Virat | 89 |
| Dhoni | 60 |
| Sehwag | 33 |

Rank

| High Score | Low Score | Rank |
|------------|-----------|------|
| 50 | 30 | 4 |
| 75 | 51 | 3 |
| 100 | 76 | 2 |
| 200 | 101 | 1 |

NON-EQUI JOINS

Step 1: Connect to the data source **Player_and_Rank_Non_Equi_Joins.xlsx**



NON-EQUI JOINS

Step 2: Drag and drop **Player** sheet into the canvas

Connections

Add

Player_and_Ra...on_Equi_Joins

Microsoft Excel

Sheets

Player

Rank

New Union

Player (Player_and_Rank_Non_Equi_Joins)

Connection

Live

Extract

Filters

0

Add

Player

Need more data?

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

Player

2 fields 4 rows

4

rows

Name

Player

Fields

| Type | Field Name | Physical Table | Remote Field Name |
|------|------------|----------------|-------------------|
| Abc | Name | Player | Name |
| # | Score | Player | Score |

| Abc | # |
|--------|--------|
| Player | Player |
| Name | Score |
| Sachin | 145 |
| Virat | 89 |
| Dhoni | 60 |
| Sehwag | 33 |

Go to Worksheet

Data Source

Sheet 1

NON-EQUI JOINS

Step 3: Right-click **Player** sheet, Select **Open**

Connections

Player_and_Ra...on_Equi_Joins

Sheets

Player

Rank

New Union

Player (Player_and_Rank_Non_Equi_Joins)

Connection: Live | Filters: 0

Player

Open...
Rename
Remove
Field names are in first row
Generate field names automatically
Convert to Union...

Need more data?

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

Player

2 fields 4 rows

4 rows

Name

Player

Fields

| Type | Field Name | Physical Table | Remote Field Name |
|------|------------|----------------|-------------------|
| Abc | Name | Player | Name |
| # | Score | Player | Score |

| Abc | # |
|--------|--------|
| Player | Player |
| Name | Score |
| Sachin | 145 |
| Virat | 89 |
| Dhoni | 60 |
| Sehwag | 33 |

Go to Worksheet

Data Source | Sheet 1

NON-EQUI JOINS

Step 4: Now we are in the Physical Layer

Connections

Add

Player_and_Ra...on_Equi_Joins

Microsoft Excel

Sheets

Player

Rank

New Union

Player (Player_and_Rank_Non_Equi_Joins)

Connection

Live

Extract

Filters

0

Add

Player is made of 1 table. ⓘ

Player

Player

2 fields 4 rows

4

→

rows

⚙

▼

Name

Player

Fields

| Type | Field Name | Physical Table | Remote Field Name |
|------|------------|----------------|-------------------|
| Abc | Name | Player | Name |
| # | Score | Player | Score |

| Abc | # |
|--------|--------|
| Player | Player |
| Name | Score |
| Sachin | 145 |
| Virat | 89 |
| Dhoni | 60 |
| Sehwag | 33 |

Go to Worksheet

Sheet 1

NON-EQUI JOINS

Step 5: Drag and drop Rank sheet next to Player sheet

Player_and_Ra...on_Equi_Joins

Microsoft Excel

Player

Rank

New Union

Player+ (Player_and_Rank_Non_Equi_Joins)

Connection

Live

Extract

Filters

0

Add

Player is made of 2 tables.

Player

Rank

Join

Inner

Left

Right

Full Outer

Data Source

Rank

Search

Name

Score

Create Join Calculation...

Player

rows

Name

Player

Fields

| Type | Field Name | Physical Table | Remote Field Name |
|------|------------|----------------|-------------------|
| Abc | Name | Player | Name |
| # | Score | Player | Score |
| # | High S... | Rank | High Score |

Data preview unavailable

Data Source

Sheet 1

NON-EQUI JOINS

Step 6: Select **Score** as the Join field for the Left-Side Sheet

Player is made of 2 tables. ⓘ

Player — [Venn Diagram with Red Exclamation Mark] — Rank

Join

Inner Left Right Full Outer


| Data Source | | Rank |
|------------------|---|------|
| Search | = | |
| Name | | |
| Score | | |
| Create Join Q... | | |

Score


NON-EQUI JOINS


Step 7: Select \geq as the join operator
i.e., **Greater than or equal to**


Player is made of 2 tables. ⓘ


Player —  Rank

Join

 Inner

 Left

 Right

 Full Outer

| Data Source | | Rank |
|-------------|--|---|
| Score | <div><div>=</div><div><></div><div><</div><div><=</div><div>></div><div>>=</div></div> | <div><div></div><div></div><div></div><div></div><div></div><div></div></div> |

Greater than or equal to

NON-EQUI JOINS

Step 8: Select **Low Score** as the Join field for the Right-Side Sheet

Player is made of 2 tables. ⓘ

Player — [Venn Diagram with Red Exclamation Mark] — Rank

Join

Inner Left Right Full Outer

| Data Source | | Rank |
|-------------|----|--|
| Score | >= | <div>Search</div> <div>High Score</div> <div>Low Score</div> <div>Rank</div> <div>Create Join Ca</div> |
| | | <div>Low Score</div> |

NON-EQUI JOINS

Step 9: For the 2nd condition select \leq as the join operator
i.e., **Less than or equal to**

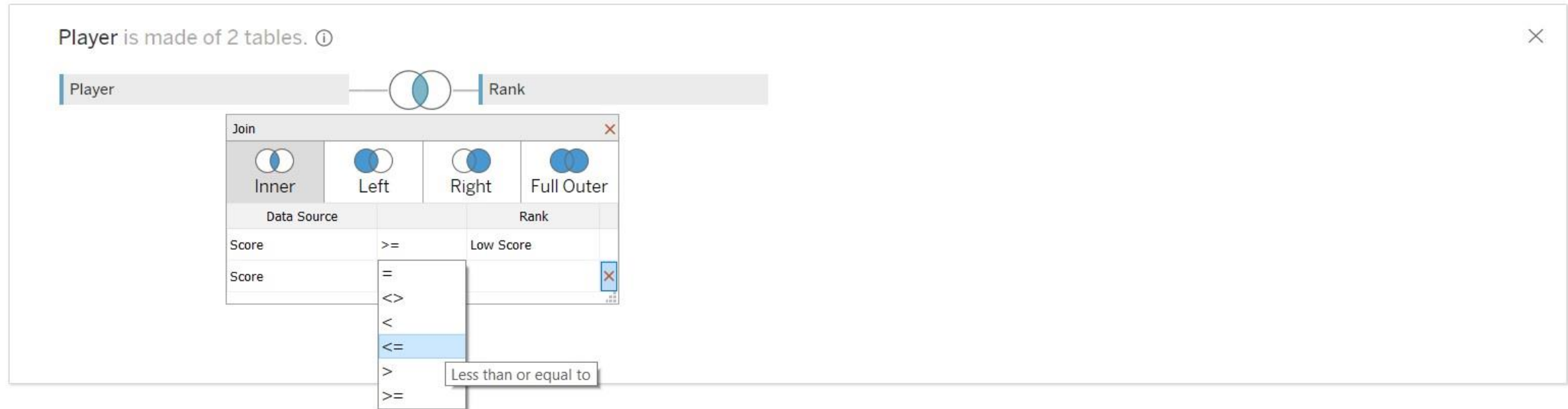
Player is made of 2 tables. ⓘ

Player Rank

Join

| Data Source | | | Rank |
|-------------|--------|--|-----------|
| Score | \geq | | Low Score |
| Score | \leq | | |


Less than or equal to



NON-EQUI JOINS

Step 10: Select **High Score** as the Join field for the Right-Side Sheet

Player is made of 2 tables. ⓘ

Player —  Rank

Join

Inner Left Right Full Outer

| Data Source | | Rank |
|-------------|----|-----------|
| Score | >= | Low Score |
| Score | <= | Search |

High Score

Low Score

Rank

Create Join Calcul...

NON-EQUI JOINS

Step 11: The join is completed as we can see the final combined table in the **Data Grid**

The interface shows a workspace for a query named "Player+ (Player_and_Rank_Non_Equi_Joins)". The query is configured with a non-equijoin between the "Player" and "Rank" tables. The join conditions are:

- Score >= Low Score
- Score <= High Score

The "Data Grid" displays the resulting 4 rows of data:

| Abc | # | # | # | # |
|--------|--------|------------|-----------|------|
| Player | Player | Rank | Rank | Rank |
| Name | Score | High Score | Low Score | Rank |
| Sachin | 145 | 200 | 101 | 1 |
| Virat | 89 | 100 | 76 | 2 |
| Dhoni | 60 | 75 | 51 | 3 |
| Sehwag | 33 | 50 | 30 | 4 |

Below the Data Grid, a "Fields" table lists the fields used in the query:

| Type | Field Name | Physical Table | Remote Field Name |
|------|------------|----------------|-------------------|
| Abc | Name | Player | Name |
| # | Score | Player | Score |
| # | High S... | Rank | High Score |

A yellow arrow points from the text "Step 11" to the Data Grid.