**Objective:** This exercise will demonstrate how to connect to two data sources

Figure 1 shows the Tableau Welcome screen after it is launched. The left hand pane, under **Connect**, lists the various data sources to which Tableau can connect. These are split into three groups of data sources:
- To a file
- To a server
- Saved data sources

For this exercise as well as subsequent exercises, we will only use the first option, **To a file**, as the Excel data source we will use is available there. The second option can be used when we need to connect to external data sources, which primarily are databases.
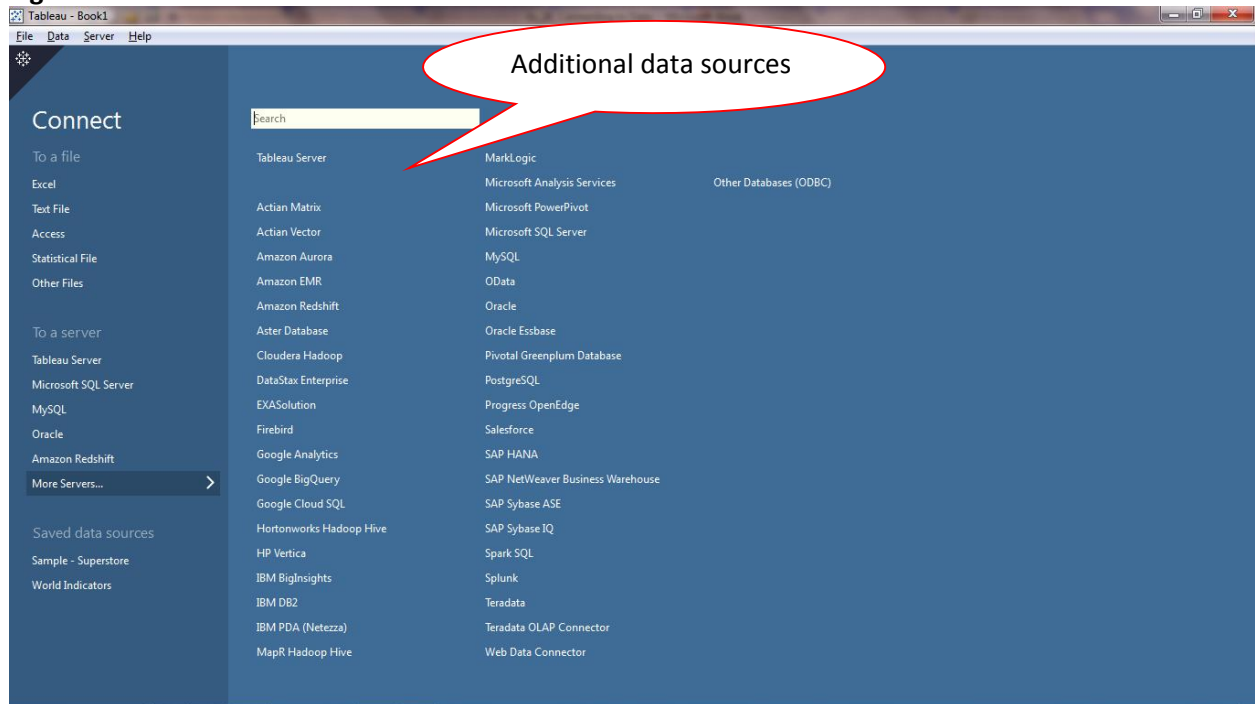
Figure 1
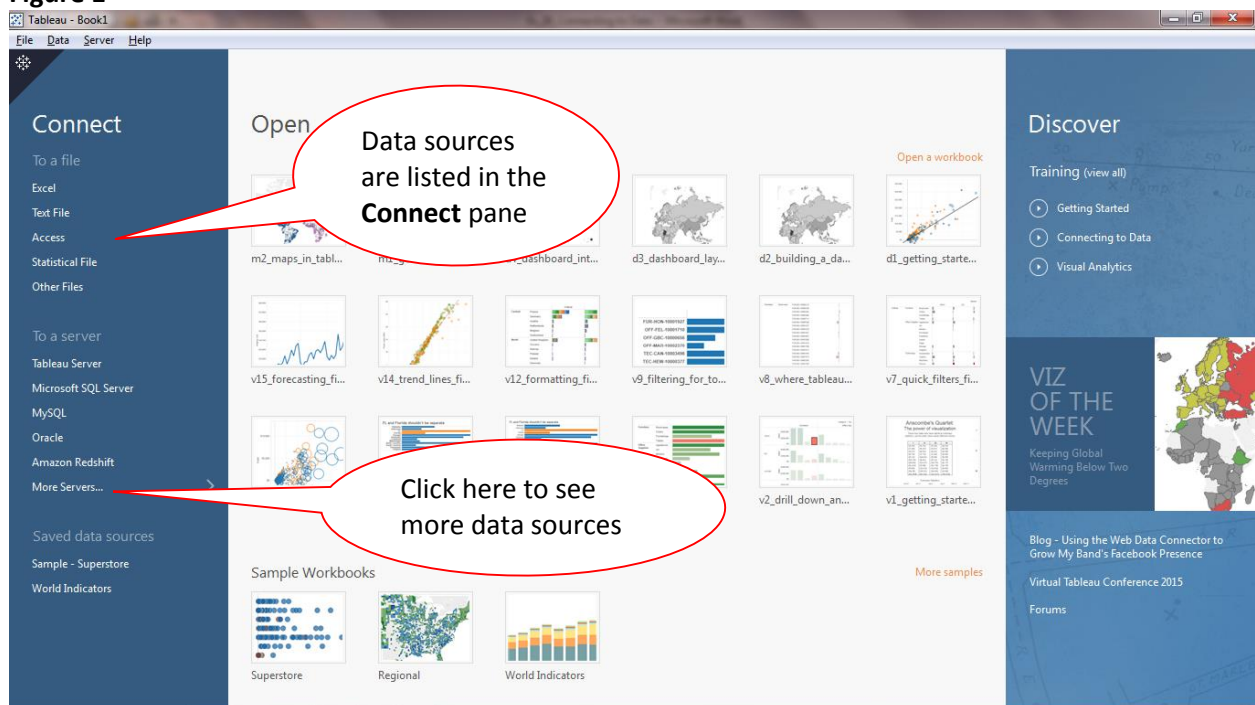
To display more data sources:
- Click on **More Servers** as shown on Figure 1, which will lead to Figure 2 where the additional data sources are listed
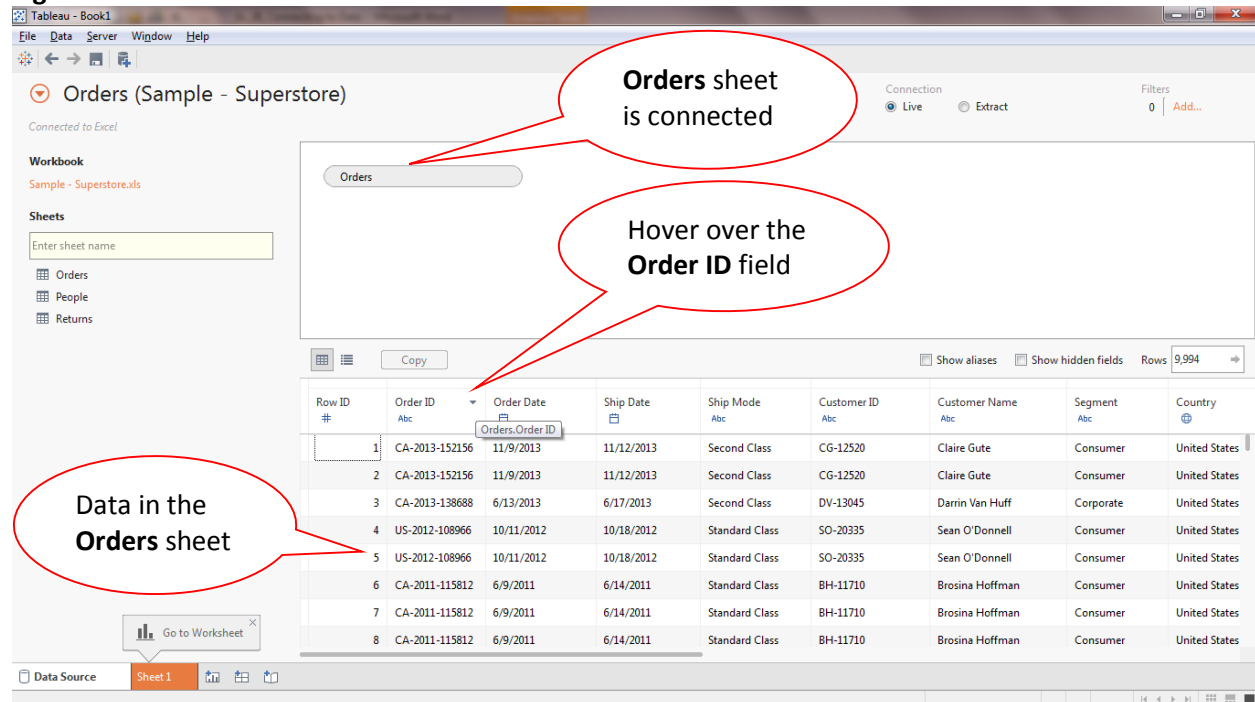
Figure 2

For this exercise, we will need to connect to the **Sample – Superstore** Excel spreadsheet data source:
- Connect to the **Sample - Superstore** data source, using the method demonstrated in Exercise 1
- Drag the **Orders** sheet onto the canvas, which will lead to the display shown on Figure 3
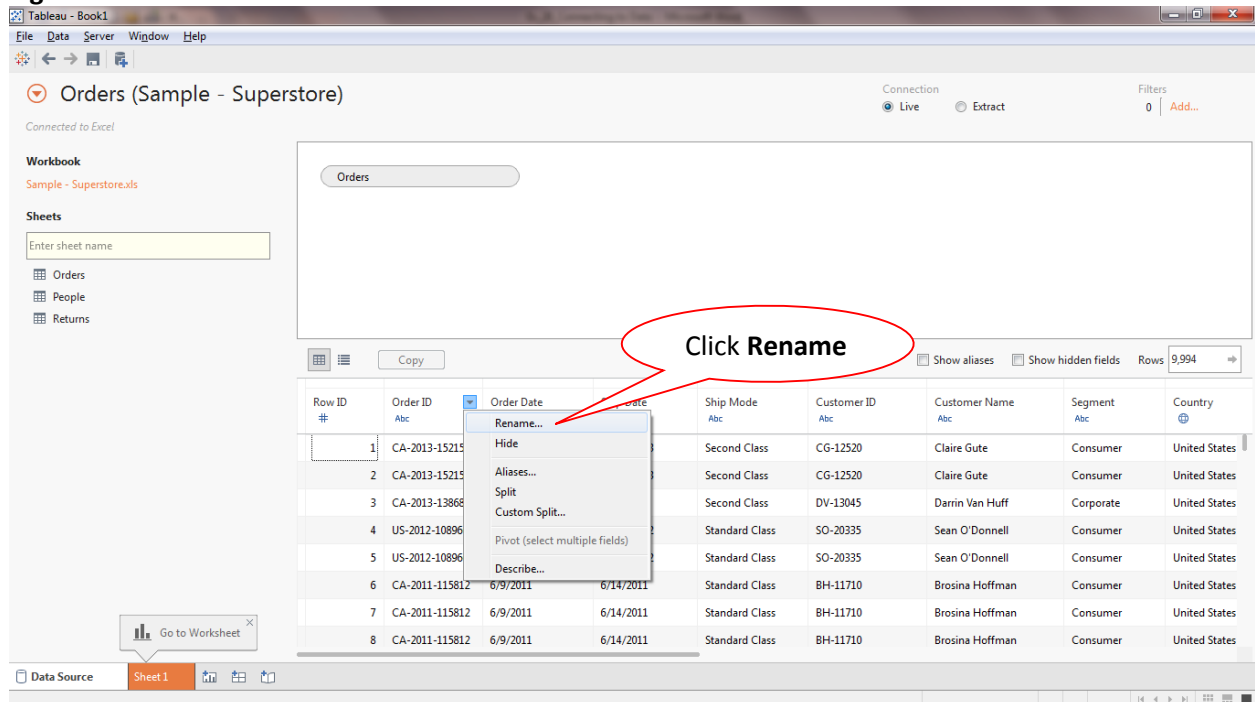
Figure 3

The source data can be used as-is. However, in some cases, data may need to be prepared so that it can enable better and/or easier analysis. For example, field names can be renamed so that they are easily understood by the business users. In some cases, a complex field may need to be split.
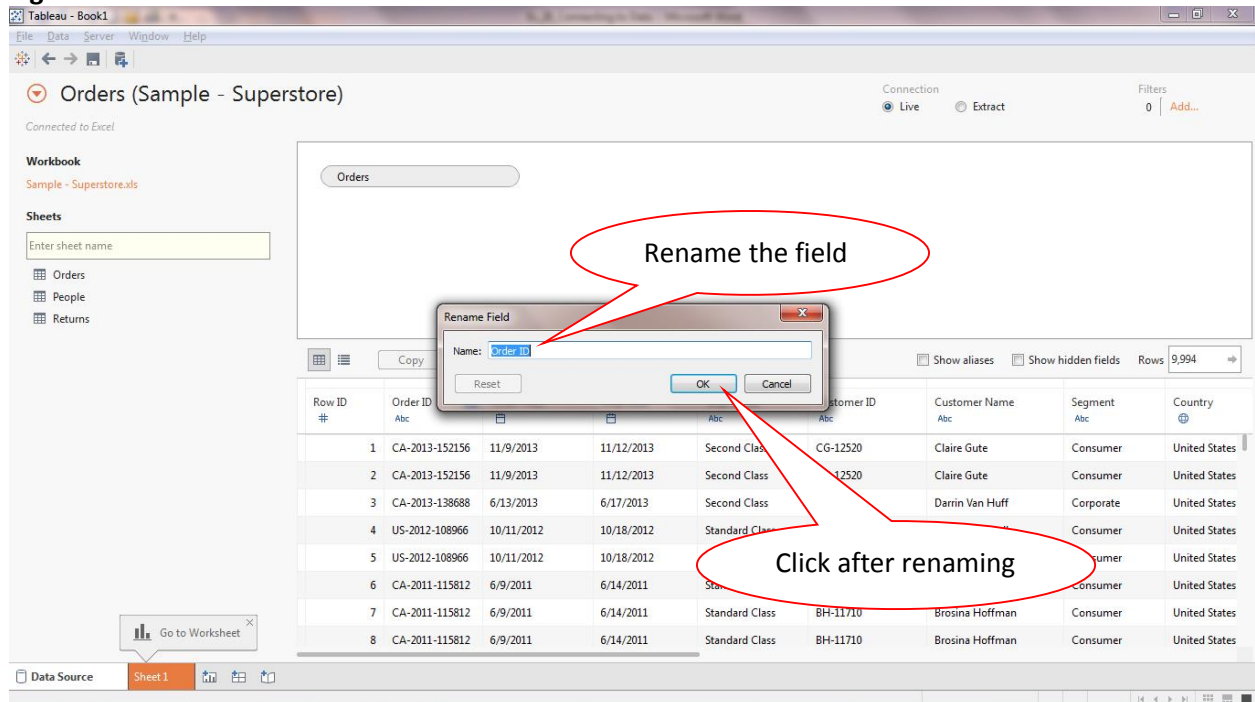
To rename the **Order ID** field:
- Hover over the **Order ID** field as shown on Figure 3, which will display the pulldown arrow (shown next to the field name)
- Click the pulldown arrow for the **Order ID** field, which will popup the menu tree displayed on Figure 4

Figure 4

- Click **Rename** as shown on Figure 4, which will popup the **Rename Field** window displayed on Figure 5
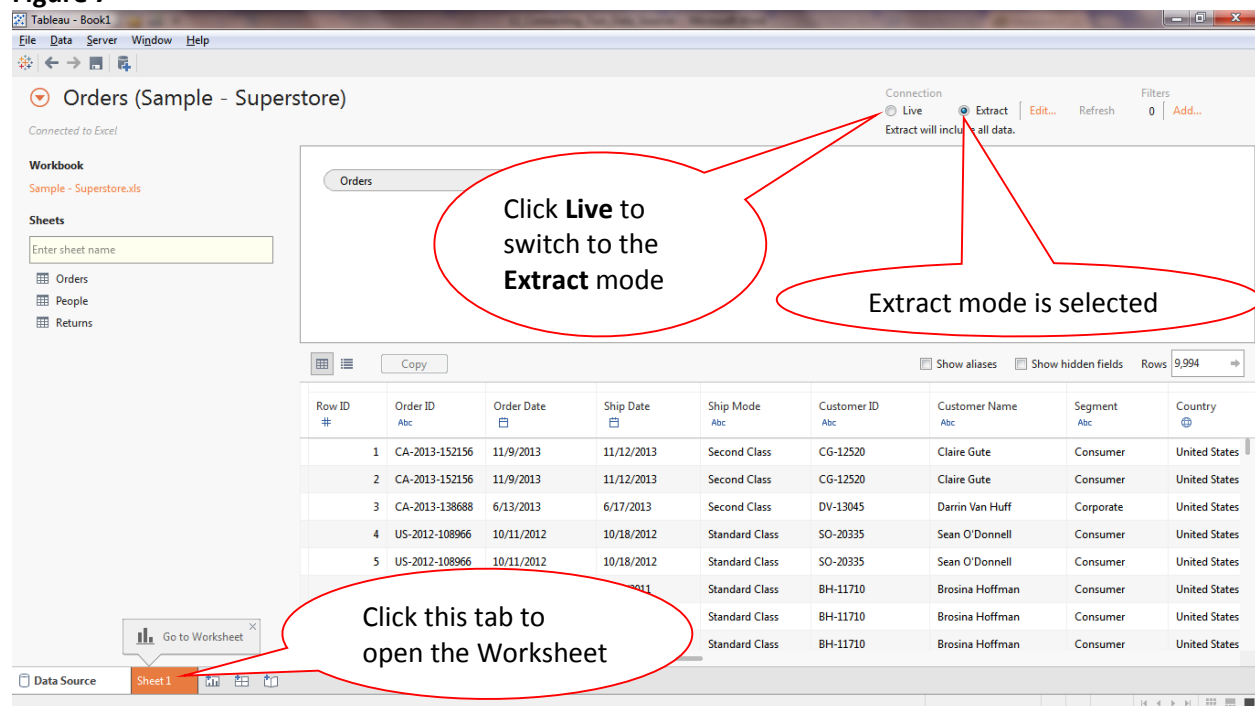
Figure 5

- Type in the new field name in the **Name** field in the **Rename Field** popup box, as shown on Figure 5
- Click **OK**, which will rename the field

There are two ways in which data can be accessed and used by Tableau. In **Connect Live**, a direct connection is made with the data source. In this mode, if the source data changes, it is immediately reflected in the visualizations and any analysis being performed.

Tableau also supports the **Extract** mode in which data is pulled into the Tableau data engine, which takes the data offline. No live connection is maintained with the source system (from which the querying load is offloaded). However, in the extract mode, analysis can only be performed upto the time when the extract was pulled. When real-time data needs to be analyzed, this option will not work.

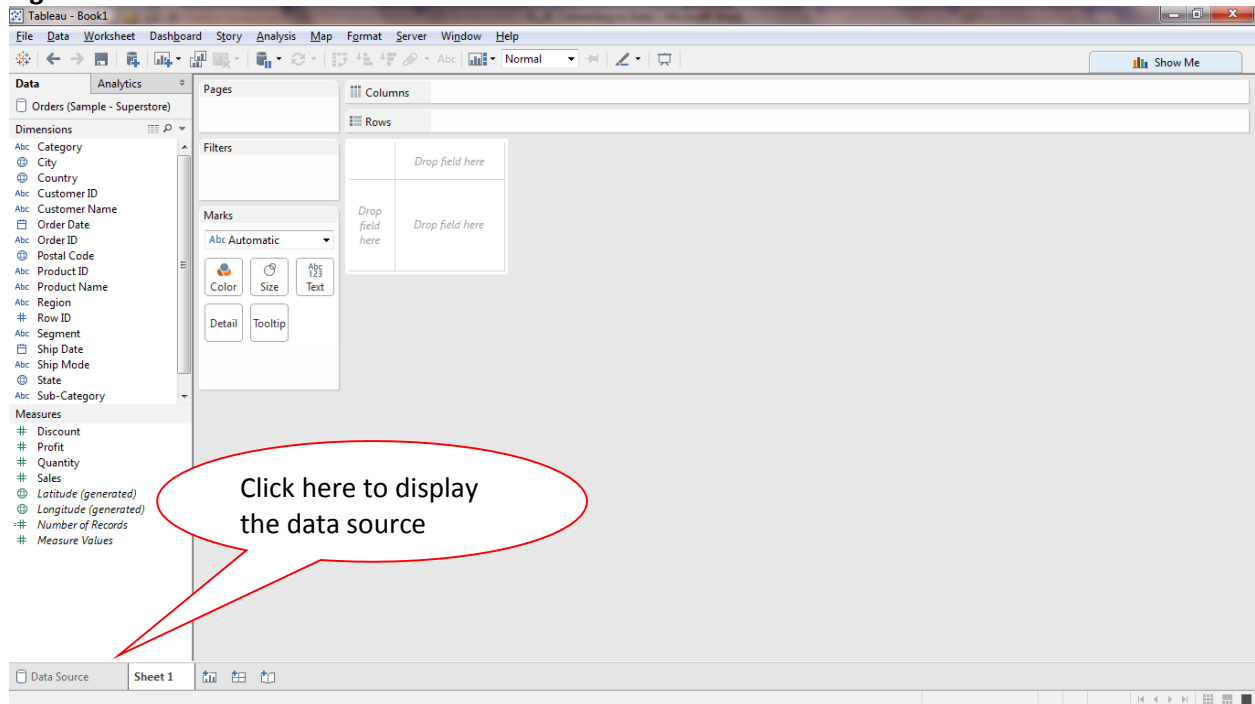In Figure 7, the extract mode is selected.

Figure 7

To switch to **Live** mode:
- Click on the **Live** radio button as shown on Figure 7

To access the Worksheet:
- Click the Worksheet tab (Sheet 1) as shown on Figure 7, which will lead to the worksheet displayed on Figure 8
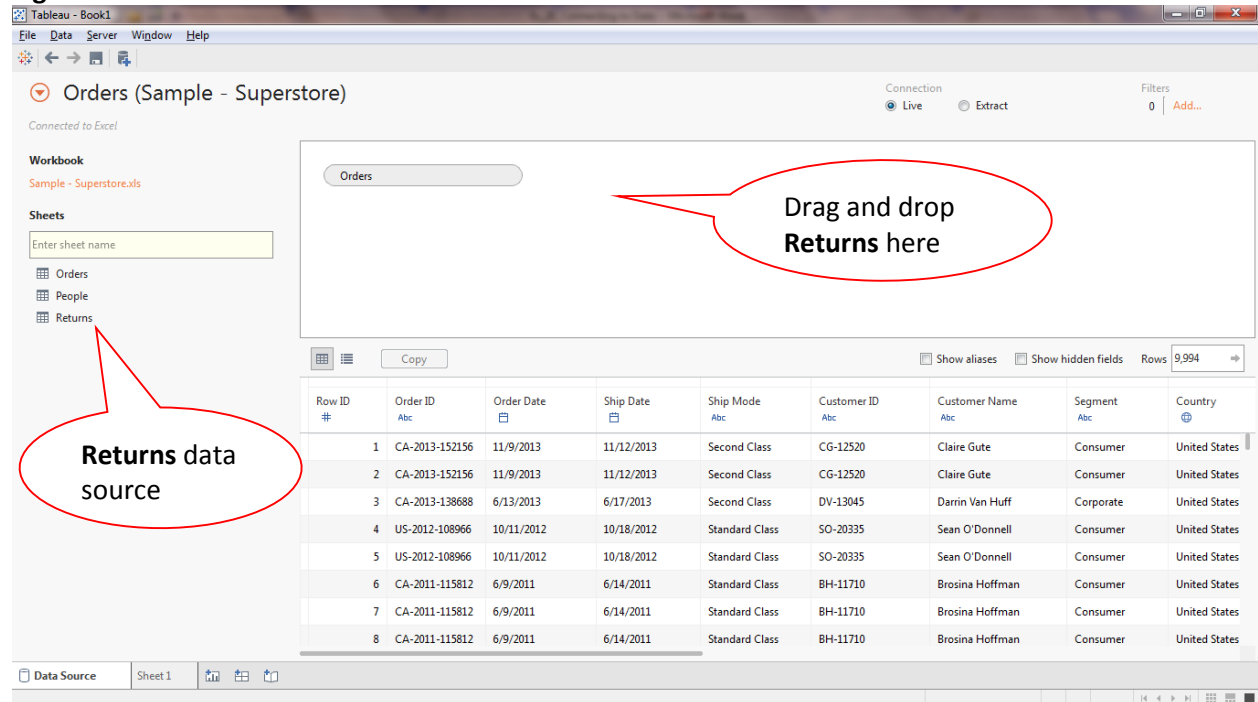
Figure 8

If you are working with a worksheet and need to go back to the data source:
- Click the **Data Source** tab as shown on Figure 8, which will open the data source window

Additional data sources can be added to an existing data source. Figure 9 shows three data sources: Orders, People and Returns. Orders has already been connected.

Figure 9

To add the second data source, **Returns:**
- Drag and drop the **Returns** sheet onto the canvas next to **Orders** as shown on Figure 9, which will lead to the display shown on Figure 10
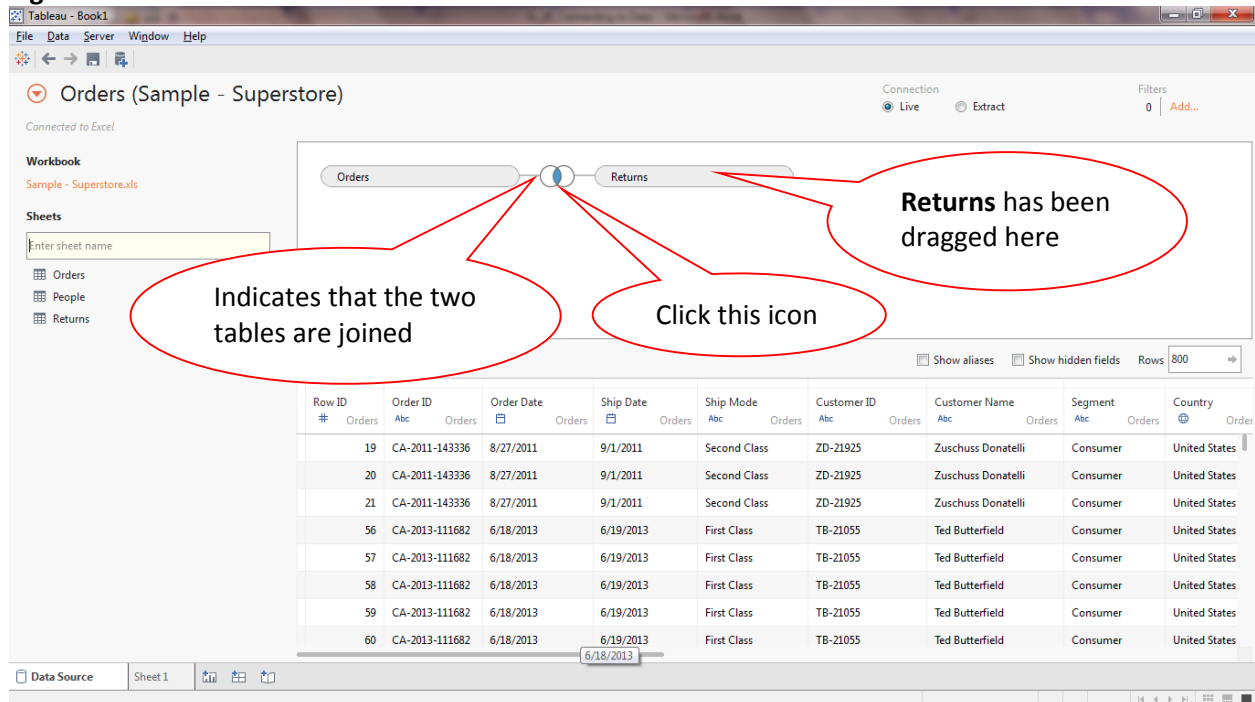
Figure 10

Tableau automatically joined the two tables, **Orders** and **Returns**, as an inner join.

- Click the **Join** icon as shown on Figure 10, which will display the join details as shown on Figure 11
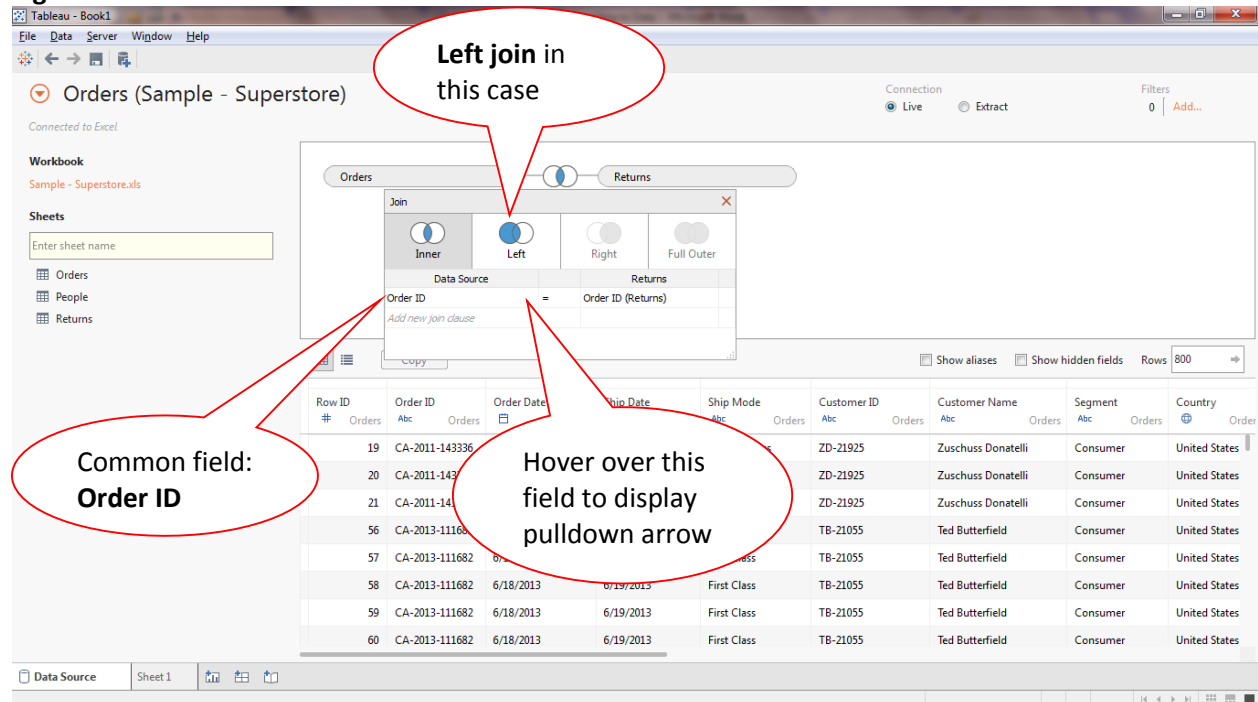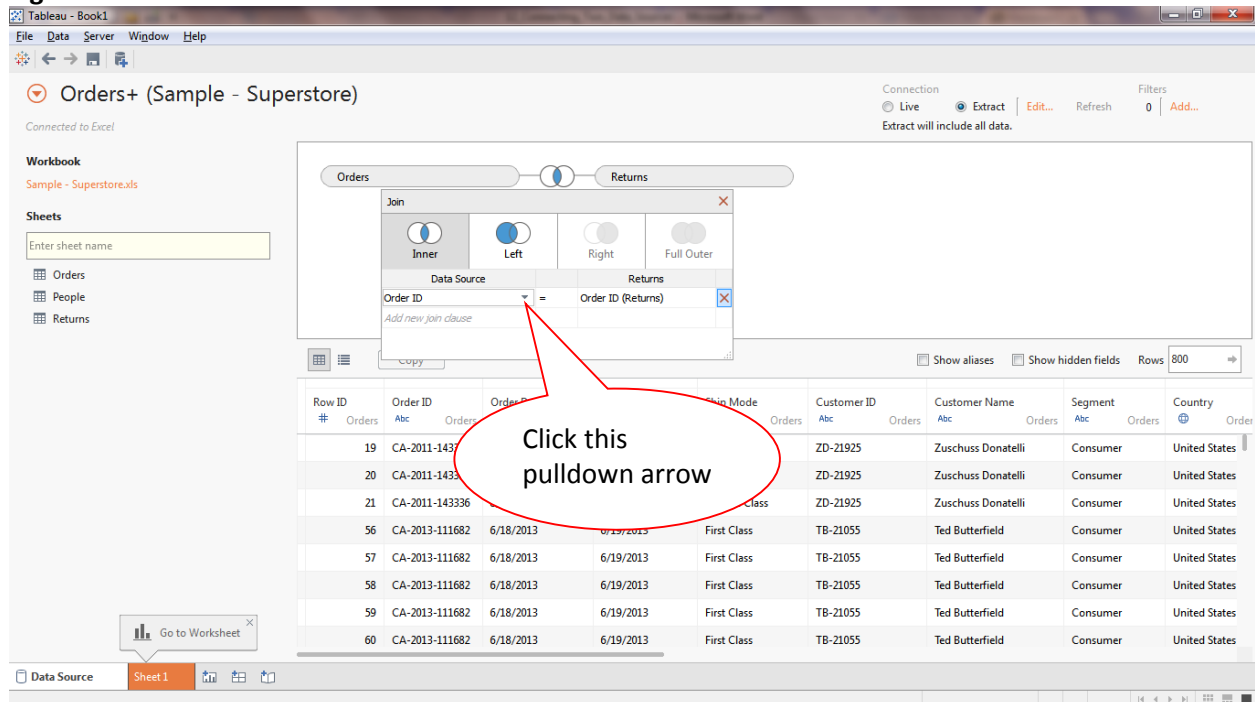
Figure 11

Tableau automatically determined that **Order ID** is a common field in the two tables, **Orders** and **Returns**, as shown on Figure 11. It also provides the option to select a different field to join two tables.

To use a different field for joining the two tables:
- Hover over the **Order ID** field as shown on Figure 11, which will display its pulldown arrow shown on Figure 12
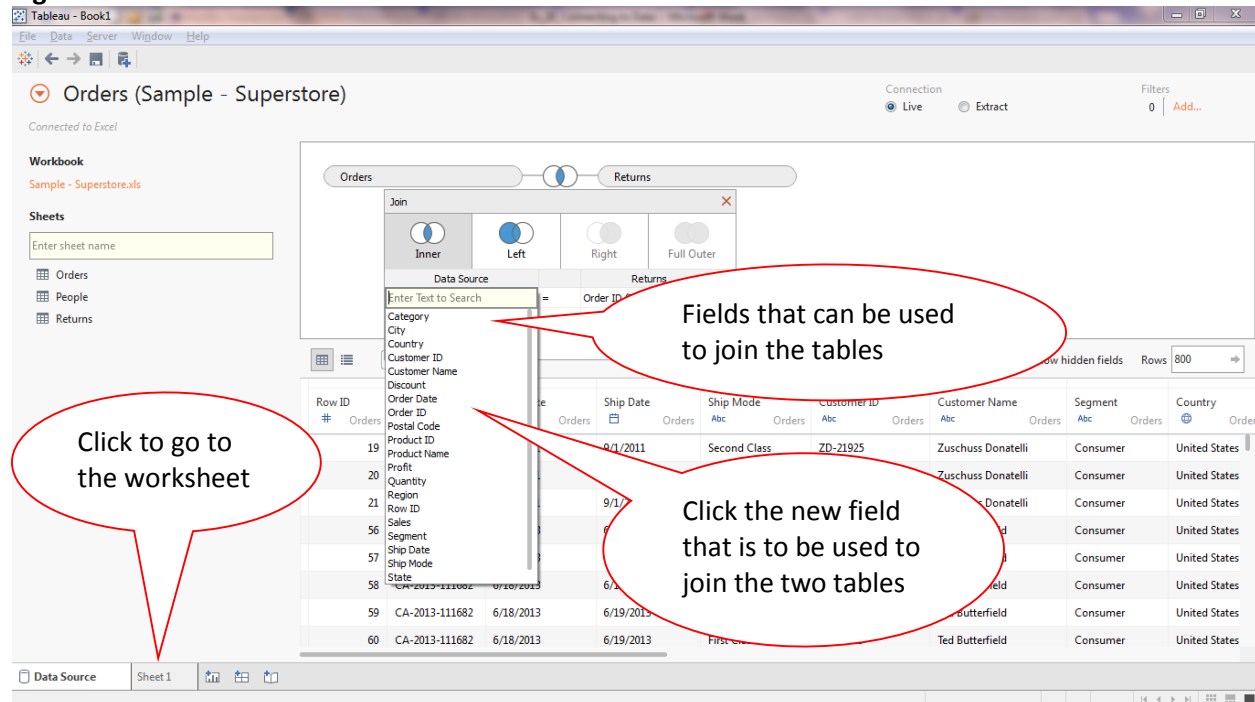
Figure 12

To use a different field for joining the two tables:
- Click the **Order ID** pulldown arrow shown on Figure 12, which will lead to the display on Figure 13
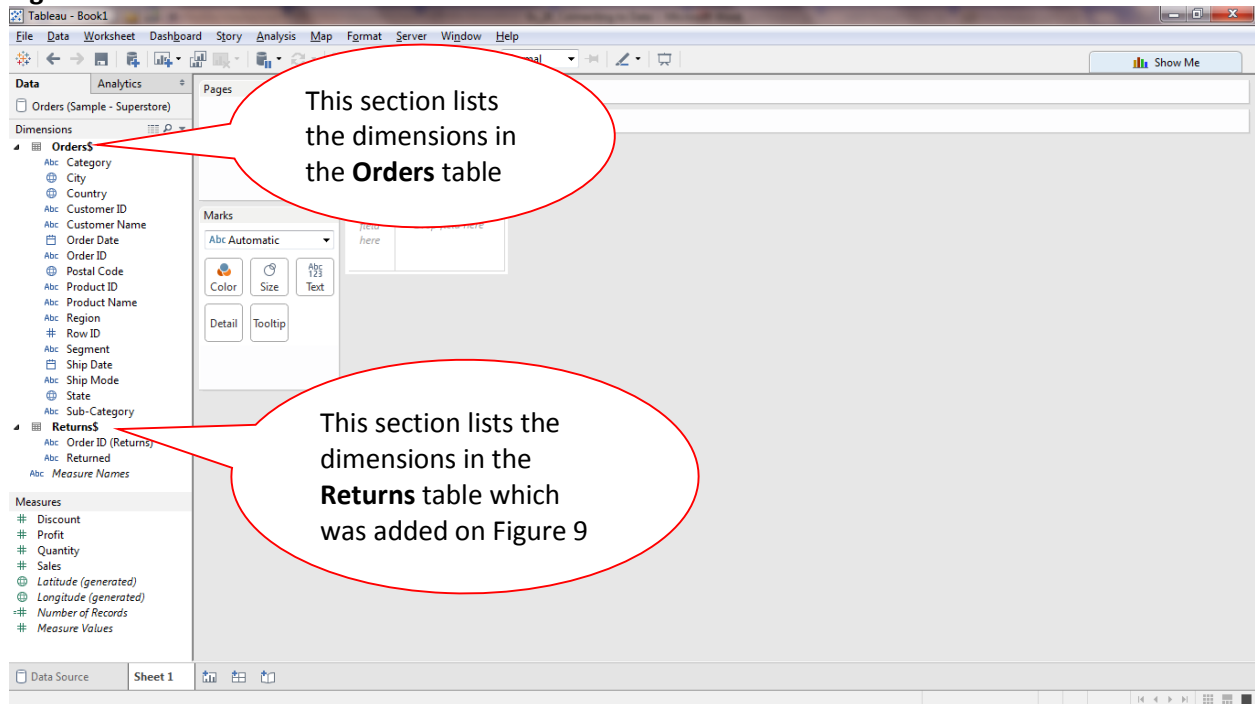
Figure 13

To select a different field to join the two tables:
- Click the desired field from the list displayed on Figure 13, which will change the join field to the field that is clicked (instead of **Order ID)**

This step was performed on the **Data Source** tab. To see how the worksheet was impacted due to the addition of the second data source:
- Click the **Sheet 1** tab as shown on Figure 13, which will lead to the display on Figure 14

Figure 14

This section lists the dimensions in the **Orders** table

This section lists the dimensions in the **Returns** table which was added on Figure 9

You can search for a field, which is a useful feature when a table has many dimensions or measures. Figure 15 shows a worksheet which has two sources: Orders and Returns.
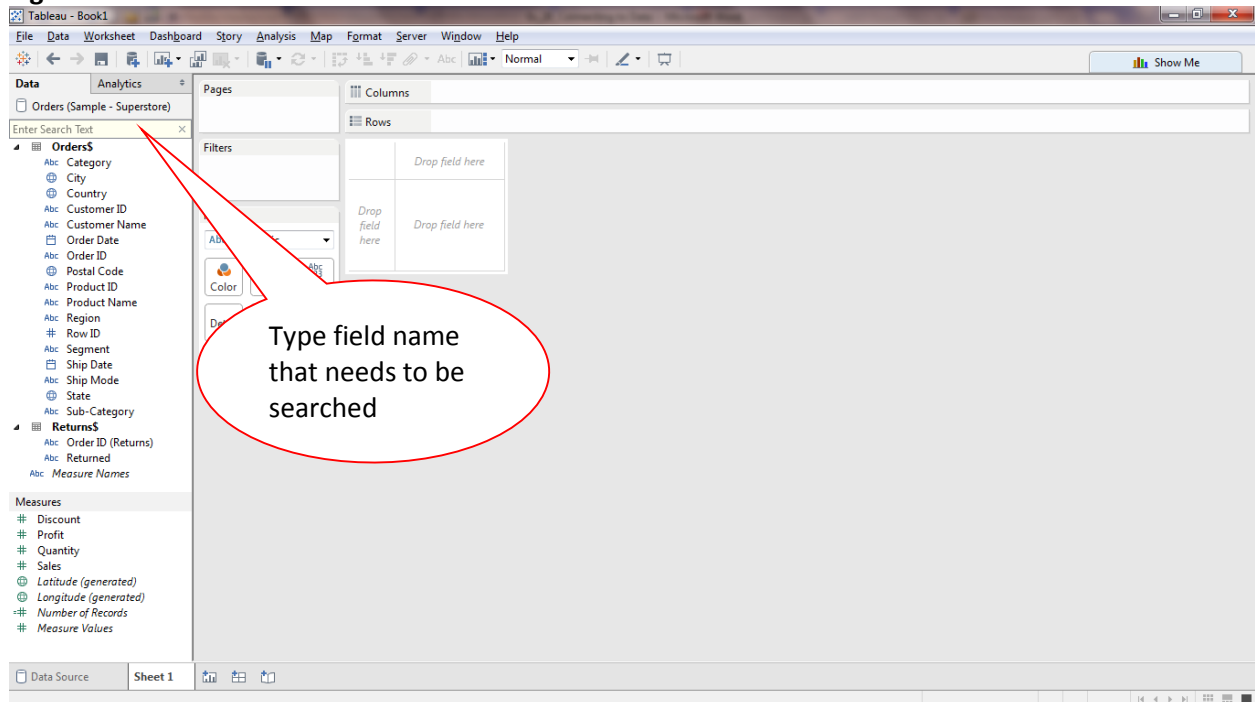
Figure 15
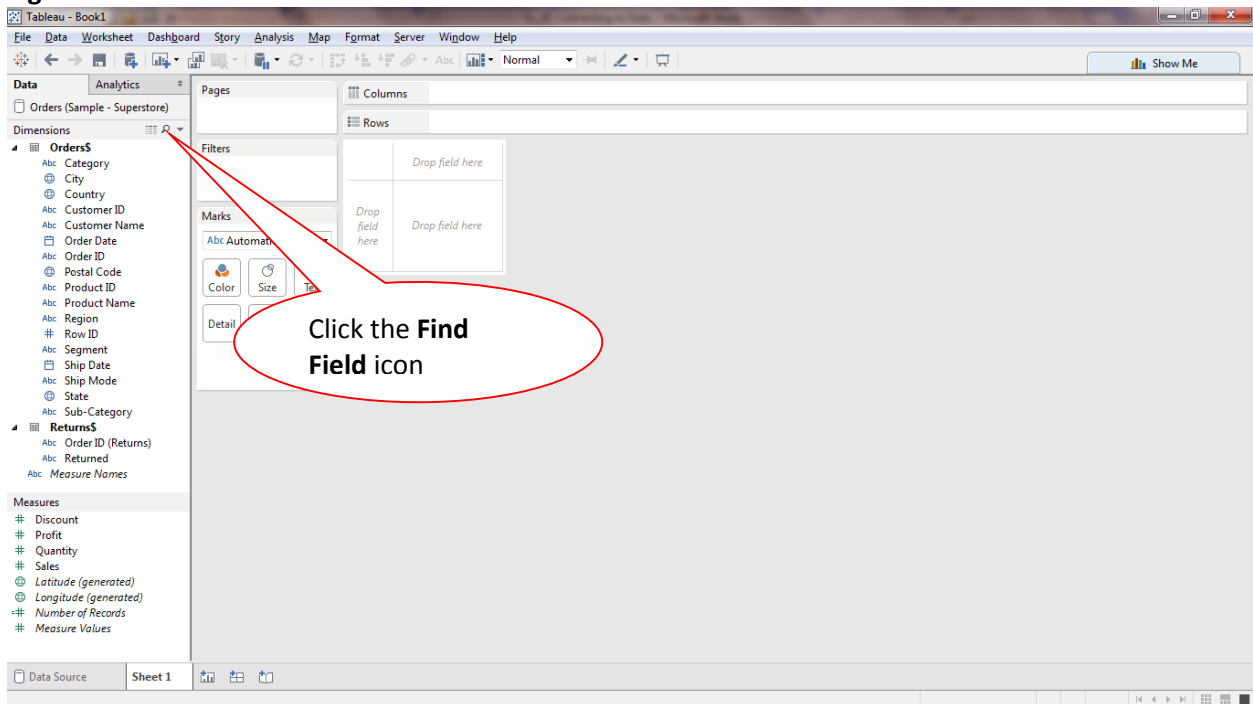
To search for a dimension:

- Click the **Find Field** icon shown on Figure 15, which will lead to Figure 16, where the search box is displayed (with the prompt **Enter Search Text**)

Figure 16

- Type the field name in the search box, which is highlighted in Figure 16
- Hit **Enter**, which will highlight the field(s) matching the search criteria