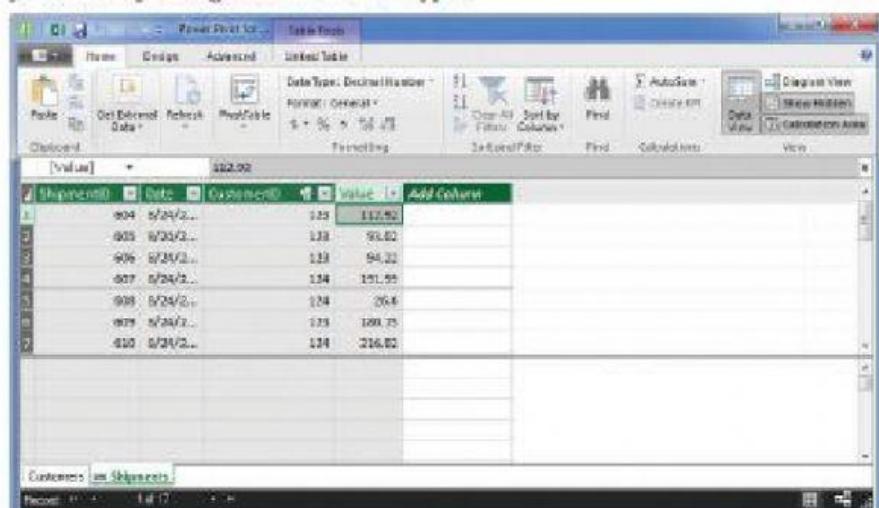


## Lesson 3 Analysing Data by Using Power Pivot.

Originally introduced as an add-in for Excel 2010, Power Pivot is a tool you can use to work with any amount of data, as long as the total file size is less than 2 gigabytes (GB) and takes up less than 4GB of memory. For such large data collections, you'll usually work with summaries of your data you can focus on specific aspects of the data by sorting and filtering.

When you bring a data collection into Power Pivot, Excel attempts to identify the data type of each column. The app is usually accurate, but some data types can be confused. E.g. Excel will occasionally identify currency or accounting data columns as containing regular numbers that include decimal values. If this type of mistake happens you can always change the column's data type.



ShipmentsID	Date	CustomerID	Value	Unit
604	5/24/2...	125	117.50	
605	5/25/2...	126	93.82	
606	5/25/2...	127	94.22	
607	5/24/2...	128	191.55	
608	5/24/2...	129	25.6	
609	5/24/2...	130	100.75	
610	5/24/2...	131	216.00	

Power Pivot identifies some currency and accounting data as decimal numbers.

### IMPORTANT

When you change the data type of a column, it might affect the column values protection and the results of calculations that are performed using the data.

Most large data sets contain raw data, such as sales amounts, and rely on the visualizations or summary software program to calculate values such as sales tax, commissions or profit. To add this type of summary to your Power Pivot data, you can define a calculated column. The formula syntax for creating a calculated column is very similar to creating a formula that refers to an Excel table column, so you already have the skills to create them.

As with columns in Excel tables, you can rename and delete Power Pivot columns, but the real power of Power Pivot comes from creating the Pivot Tables from the large Power Pivot data sets. Creating a Pivot Table from 10,000 rows of data is useful, but

Creating a PivotTable from 10,000,000 rows can provide incredible insight.

To start values in a column in ascending or descending order.

1. In **Power Pivot**, while viewing a table in **Data View**, click a cell in the column by which you want to sort the table.
2. On the **Home** tab, in the **Sort and Filter** group, do either of the following:
  - . Click **Sort Ascending** to sort the column's values in ascending order.
  - . Click **Sort Descending** to sort the column's values in descending order.

### Tip

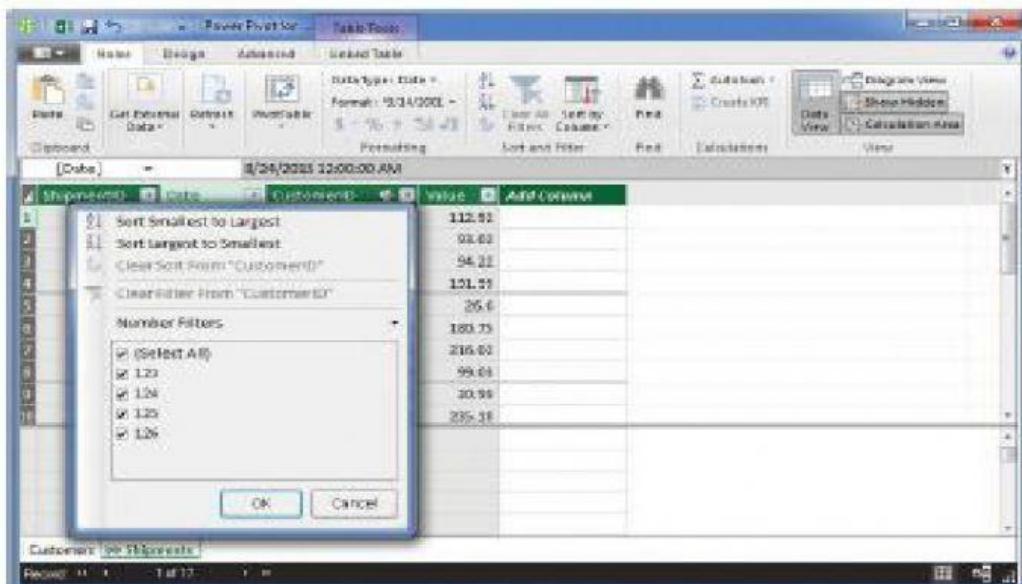
The **Sort Ascending** and **Sort Descending** buttons will have different labels depending on the values in the column. For example, a number field will have the label **Sort Smallest To Largest**, whereas a text field will have the label **Sort A To Z**.

#### To clear a sort from a sorted column

1. In **Power Pivot**, while viewing a table in **Data View**, click a cell in the column by which you have sorted the table.
2. In the **Sort and Filter** group, click **Clear Sort**.

#### To filter values in a column.

1. In **Power Pivot**, while viewing a table in **Data View**, click the **Filter** arrow at the right edge of the header for the column by which you want to *filter the table*.



Filter Power Pivot columns by creating rules or selecting specific values

2. In the filter list, perform either of the following actions:
  - . Click **Data Type Filters**, click the type of filter rule you want to create, *create* the rule, and click **OK**.
  - . Select and clear the check boxes to share or hide individual.
3. Click **OK**.

### To clear filters applied in a Power Pivot sheet.

1. In **Power Pivot**, on the **Home** tab, in the **Sort and Filter** group, click **Clear All Filters**.

Or

1. Click the filter arrow of the column from which you want to remove the filters.
2. In the filter list, click **Clear Filter from "Fieldname."**
3. Click **Ok**.

### To change the format of a column.

1. If necessary, in **Power Pivot**, on the **Home** tab, in the **View** group, click **Data View**.
2. Click a cell in the column you want to format.
3. By using the controls in the **Formatting** group of the **Home** tab, perform any of the following actions:
  - . Click **Data Type**, and then click a new data type in the list.
  - . Click **Format**, and then click a new data format in the list.
  - . Click **Apply Currency Format**, **Apply Percentage format**, or **Thousands Separator** to apply the format in the column.
  - . Click **Increase Decimal** or **Decrease Decimal** to increase the number of digits shown to the right of the decimal point.

### To add a calculated column

1. In **Power Pivot**, while viewing a table in the **Data View**, click the top cell in the **Add Column** column.
2. Enter **=**, followed by the formula you want to create. Add fields in the formula by entering **{** and then selecting the field that contains the values you want to use in your function.

EmployeeID	Date	CustomerID	[Name]	DepartmentID	Value	Add Column
601	6/24/2015	125	Eliza	25	112.50	
605	6/24/2015	126	Eliza	34	98.00	
608	6/24/2015	127	Eliza	25	94.25	
607	6/24/2015	128	Eliza	25	120.50	
608	6/24/2015	129	Eliza	25	16.00	
605	6/24/2015	129	Eliza	34	180.75	
605	6/24/2015	129	Eliza	25	215.00	
611	6/24/2015	129	Eliza	25	90.00	
612	6/24/2015	129	Eliza	25	30.50	
613	6/24/2015	129	Eliza	25	325.10	

*Define a calculated column by using techniques similar to summarizing values in Excel tables.*

3. Press the **Enter** key.

### To rename a column

1. In Power Pivot while viewing a table in Data View, double-click the header cell of the column you want to rename.
2. Enter the new column name.
3. Press **Enter**.

### To delete a column

1. In Power Pivot, while viewing a table in **Data View**, right click the header cell of the column you want to delete.
2. Click **Delete Column**.

### To create a Pivot table from Power Pivot data.

1. In Power Pivot in the **Home** tab, click **PivotTable**.
2. In the **Create Pivot Table** dialog box, click **New Worksheet**.
3. Click **Ok**.



Excel creates a **PivotTable** by using all available data in the Data Model, not just the table that was displayed when you created the **PivotTable**.

**Questions.**

1. What is important when changing data type in a column?
2. Explain the steps in both ways when defining relationships between tables?
3. Explain how to edit an existing relationship?