**Video Project 41: Excel 2013 Basics 23: Data Analysis: Sort & Filter**

**Goal in video:** Learn how to use the Sort and Filter features to do basic Data Analysis.

Topics Covered in Video:

1. Data Analysis: Converting Raw Data into Useful Information
2. Proper Data Set:
	1. field names at top in first row of table
	2. Empty cells all around data set (or Excel row or column headers)
3. Sort
	1. Most sorting is done on a Proper Data Set
	2. Click in single cell and then sort
	3. Sort Button:
		1. A to Z (Small to Big, Ascending)
		or
		2. Z to A (Big to Small, Descending)
		3. Sort buttons (commands):
			1. Editing group in Home Ribbon
			2. Sort and Filter group in Data Ribbon
			3. Right-click menu
	4. Sort dialog box:
		1. Gives you more options like “Sort by Color”
	5. KEY IDEA: When you sort: whole data set is sorted, not just selected column
	6. If you want to sort upon more than 1 column:
		1. Buttons: Major Sort is last
		2. Sort dialog box, Major Sort on top.
	7. Sorting can be done on a set that does not have a field name. Be sure to highlight the whole set and make sure to uncheck the “My data set has headers” checkbox.
4. Filter
	1. Filter Button in:
		1. Editing group in Home Ribbon
		2. Sort and Filter group in Data Ribbon
		3. Right-click menu
	2. Filter dropdown arrows:
		1. Check boxes
		2. Date Filter
		3. Number Filter
		4. Text Filter
		5. Search
	3. Filter is perfect for extracting records that meet a set of conditions or criteria. For example, your boss asks you to send her all the records for Jeri in the West Region.
	4. Multiple Criteria for extracting records:
		1. OR Criteria: use check boxes and check a number of items in one field
			1. For two names in one column, OR Criteria means:
				1. One or the other
		2. AND Criteria: select criteria from more than one column.
			1. When selecting criteria from two columns have to get a match in both columns (two TRUEs) in order for the record to get extracted.
			2. When selecting criteria from three columns have to get a match in all three columns (three TRUEs) in order for the record to get extracted.
			3. AND Criteria means:
				1. All Conditions must be met
				2. All Criteria must be met
				3. For three it would be: TRUE, TRUE, TRUE
		3. When you get a Filter Result with NO RECORDS, it means:
			1. There are no records that match your criteria
			2. Your questions was incorrect, meaning, the criteria you applied when creating the filter were incorrect.
5. Table feature:
	1. Convert Proper Data Set to Excel Table:
		1. Inset Ribbon Tab, Table group, Table
		2. Ctrl + T
	2. Table feature shows dropdown arrows with sorting and filtering options
	3. Add a Totals Row in the TableTools Design Ribbon Tab, Table Styles Options group
		1. Totals Row allows calculations that will change depending on how you filter the data set.
	4. When you scroll down and can no longer see the Field Names, the Excel Column Headers (A, B, C, D) will show the Excel Table Field Names.
	5. Adding Records to Excel Tables: Click in last cell in last record and hit the TAB key. Using this method will work even though you have a Totals Row!
6. New Keyboard Shortcut:
	1. Toggle for Filter: Ctrl + Shift + L

**Video Project 42: Excel 2013 Basics 23: Data Analysis: PivotTables or Formulas**

**Goal in video:** Learn how to use the Sort and Filter features to do basic Data Analysis.

Topics Covered in Video:

1. What does a PivotTable do?
	1. Makes calculations with criteria.
	2. PivotTables create reports that contain calculations with criteria.
2. How to create PivotTable:
	1. Must have Proper Data Set: 1) Field Names in first rows, 2) empty cells or row/column headers all around data set, 3) Records in rows.
	2. Visualize the PivotTable first, see the row headers and column headers, see the values.
	3. Click in one cell in Proper Data Set
	4. Insert Ribbon Tab, Tables group, PivotTable button
		1. Keyboard: Alt, N, V
	5. From Field List, drag field name to Row Area or Column Area
	6. From Field List drag field to values area
		1. You can make calculation like Sum and Average on Number Fields
		2. You can use the Count function (count non-empty cells) to count Text Fields
	7. Formatting:
		1. Design, Report Layout, Show in Tabular Form
		2. Value Field Settings to add Number Formatting (so format follows the field if you Pivot)
		3. PivotTable Styles
	8. Inside the Pivot:
		1. Pivot: drag and drop fields
		2. Filter from dropdown arrows
		3. Change function: Value Field Settings
	9. Value Field Settings dialog box:
		1. Change Name
		2. Change Function
		3. Change Number Formatting
			1. Add number Formatting in the Value Field Settings dialog box instead of Format Cells dialog box so that Number Formatting will follow the field as you pivot it.
	10. Show empty cells as zeroes:
		1. Right-click PivotTable
		2. Click “PivotTable Options”
		3. On the Layout and Format tab, type 0 into “For empty values show” textbox
	11. “Show items with no data”:
		1. Right-click PivotTable
		2. Click “PivotTable Options”
		3. On the Display tab, check “Show items with no data”
	12. If your Field List goes away:
		1. It may be that your cursor is not inside the PivotTable, try clicking back inside the PivotTable
		2. Right-click the PivotTable and point to “Show Field List”
	13. If source data changes, you must Refresh the PivotTable
		1. Right-click PivotTable, Refresh
		2. Refresh PivotTable keyboard: Alt + F5
	14. Group Dates by Month and Year:
		1. Drag Date field to Row area
		2. In the PivotTable, right-click the date and point to “Group”
		3. Select Year and Month
		4. Click Okay
	15. Filter area of PivotTable User Interface will filter the whole report
		1. Use Slicers or Timelines to add a “better looking” and more professional Filter
			1. Insert Slicers or Time Lines:
				1. PivotTable Tools Analyze Ribbon Tab, Filter group
3. New Keyboard Shortcut:
	1. Open PivotTable dialog box; Alt, N, V
	2. Refresh PivotTable: Alt + F5