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Digital Area for Networking  
Teachers and Educators



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# Data Analysis Using Pivot Tables

## Sorting and Filtering

WEEK 10

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# Data Analysis Using Pivot Tables

## Sorting the Pivot Table

Sorting rows, but possibly also columns of a pivot table is a simple matter. As you may remember from earlier chapters, you can sort a table by clicking in the column you want to sort the table by, and then on the **DATA** tab, selecting **SORT SMALLEST TO LARGEST** or vice versa. If you would like to sort the table according to the fields located in the **ROW** or **COLUMN** sections of the pivot table, you can also use the combo boxes located at the **ROW LABELS** or **COLUMN LABELS** of the pivot table.

However, the **SORT** button on the **DATA** tab works differently than it is described in earlier chapters. This button opens a dialog box that differs depending on the context, i.e. depending on whether the cursor is placed on some summary value or on a row or column header of the pivot table. If the cursor is placed in the summary value, then the **SORT BY VALUE** dialog box is opened, where, compared to the previous options, there is an additional option to sort the table from left to right. But if the cursor is placed in the row or column header, the **SORT** dialog box is displayed, where you can choose between manual sorting or sorting by one of the fields. Manual sorting is then performed by selecting one value in the row or column header, dragging the edge of the cell with the mouse and moving the value to another position. At the same time, the entire line is moved with it, or pivot table column.



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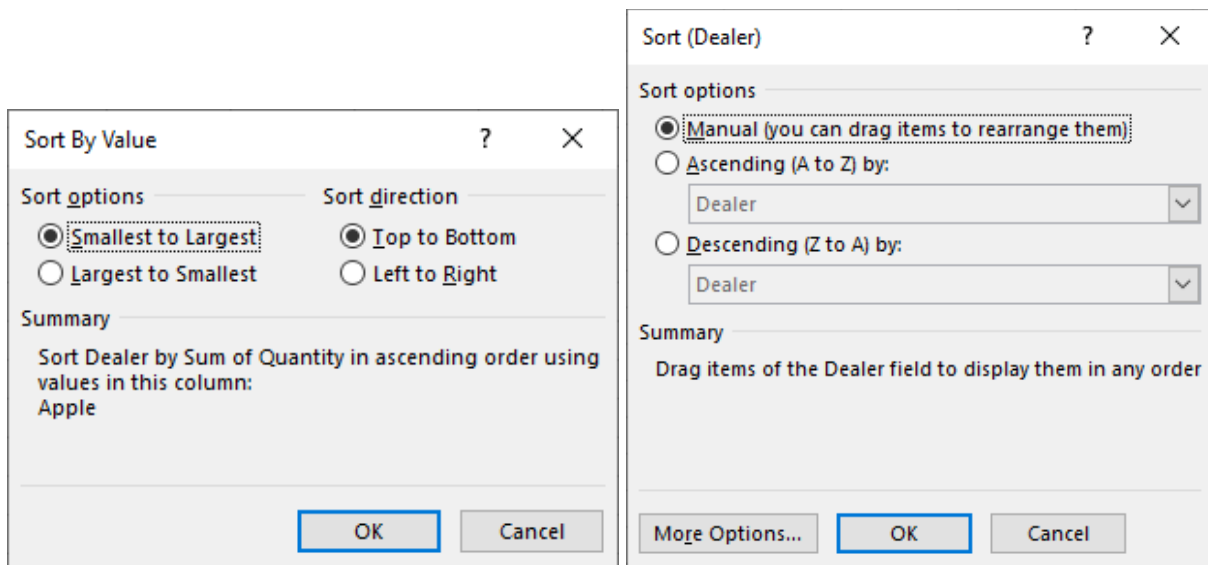


Figure 1 Dialog boxes Sort By Value and Sort

## Filtering the Pivot Table

### Filtering Using Fields Placed in Pivot Table Sections

All fields placed in all sections of the pivot table can be used to filter pivot tables. We will show their use step by step. It is apparently similar to the automatic filter mentioned earlier, because it uses combo boxes placed in individual fields of the pivot table.

### Filtering Using Fields Placed in the ROWS or COLUMNS Sections

This filtering is most similar to using an automatic filter. It uses the combo boxes located next to the ROW LABELS or COLUMN LABELS. After opening the menu for the selected label, all options apply to the given field, except for the VALUE FILTERS option (see Filtering Using Fields Placed in the VALUES Section).

As you can see from the menu, it is possible to filter using specific values, just check the selected values. However, it is also possible to use the **LABEL FILTERS** menu, where there are operators suitable for the data type of the given field. However, if you have placed



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several fields in the ROW or COLUMN section, you must first select the field by which it will be filtered or sorted in the **SELECT FIELD** combo box placed in the first position.

## Filtering Using Fields Placed in the FILTERS Section

If we want to filter according to a field that we don't place in the ROWS or COLUMNS section, it is possible to place this field in the **FILTERS** section and use it to filter the pivot table. It is also possible to check **SELECT MULTIPLE ITEMS** checkbox here. However, it is not possible to use any operators here, e.g. relational.

## Filtering Using Fields Placed in the VALUES Section

The pivot table can also be filtered according to the fields located in the VALUES section. It is enough to use the **VALUE FILTERS** menu in the combo box located next to the ROW LABELS or COLUMN LABELS. Note, however, that filtering is not performed in the original rows of the source table in the given column, but is performed in the total column of the pivot table, and only with the use of relational operators. If you would like to filter the pivot table by the values listed in the source table in the given column, we must place this field in the **FILTERS** section.

## Filtering Using Slicers and Timelines

We already know the principle of slicers from the chapter about structured tables. The slicer is a list of unique items from one of the pivot table fields, by selecting which the pivot table is filtered. The timeline also works in a similar way, where by selecting a time interval in a date column, we filter the pivot table for the given time interval.

You can insert a slicer (or timeline) using the **INSERT SLICER** (or **INSERT TIMELINE**) button on the **PIVOT TABLE ANALYZE** context tab. In the **INSERT SLICERS** (or **INSERT TIMELINES**) dialog box, select the field whose values will be filtered. However, only date fields can be used for the timeline.



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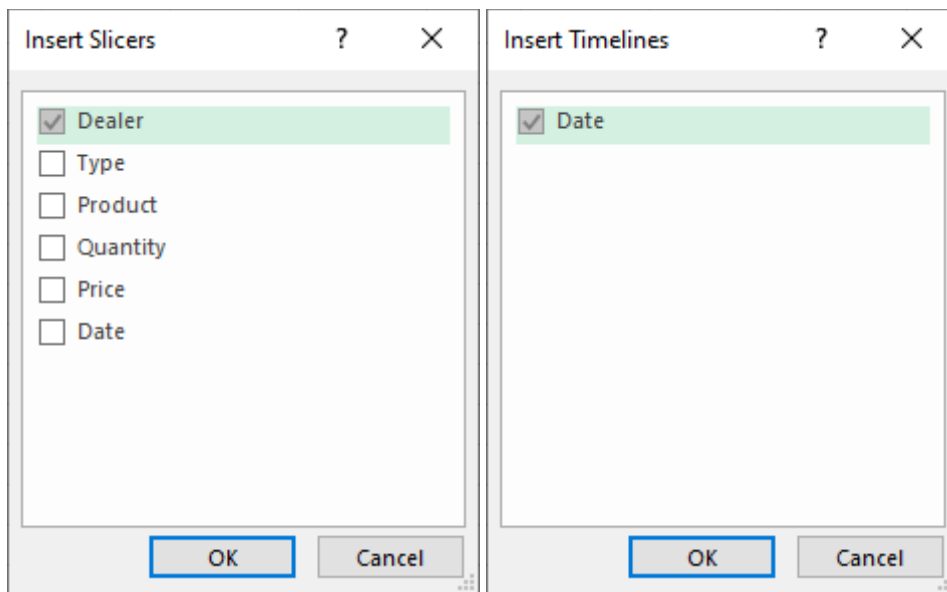


Figure 2 Dialog boxes Insert Slicers and Insert Timeline

Then it is possible to start filtering. If you use multiple slicers or timelines, there is a logical AND relationship between their filters.

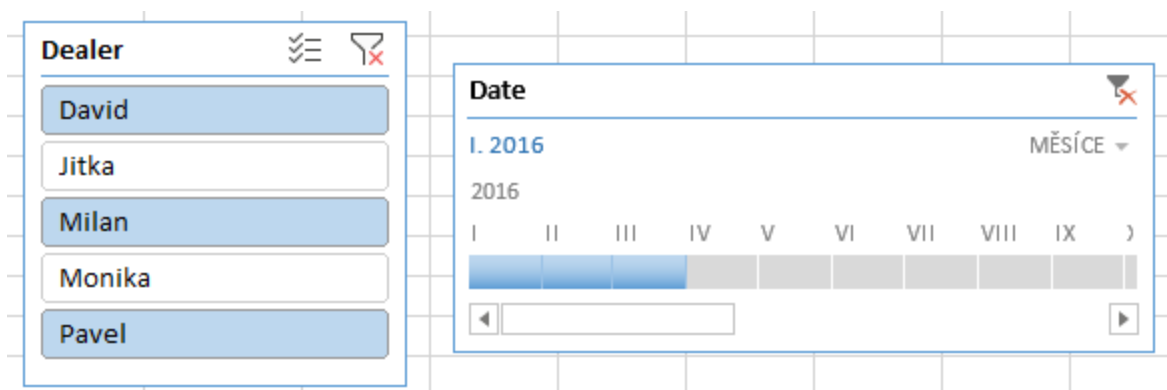


Figure 3 Examples of slicer and timeline

In slicers, it is possible to select several items either by clicking using the **SHIFT** (contiguous block of items) or **CTRL** (non-contiguous block of items) keys or by using the **MULTI-SELECT** button in the upper right corner of the section. On the timeline, only a continuous time period can be selected using the **SHIFT** key, but the time unit can be changed in the combo box in the upper right corner.

To clear a filter set using a slicer or timeline, it is not enough to just delete the slicer or timeline (DEL key on the selected slicer or timeline), because the filter on the pivot table



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still remains on. To clear the filter, it is necessary to turn off the filter in any way mentioned in the previous chapters, including the **CLEAR FILTER** button in the slicer or timeline.

## Sharing Slicers and Timelines Among Multiple Pivot Tables

The big difference between slicers used in structured tables and pivot tables is the ability to share slicers and timelines among multiple pivot tables or charts. This means that one slicer or timeline can filter multiple pivot tables and charts at once. As a result, you can create a dashboard in Excel. A condition for sharing slicer or timeline among multiple pivot tables and charts is that these pivot tables and charts must have the same data source.

If you want to share a slicer or timeline among multiple pivot tables or charts, create a slicer or timeline for only one pivot table or chart, and then connect the slicer or timeline to other pivot tables or charts. Connecting a slicer or timeline to another pivot table or chart is possible in two ways:

- Click into pivot table without connected slicer and click the **FILTER CONNECTIONS** button on the **PIVOT TABLE ANALYZE** context tab, and in the **FILTERS CONNECTIONS** dialog box, select the required ones from the offered filters (slicers, timelines).

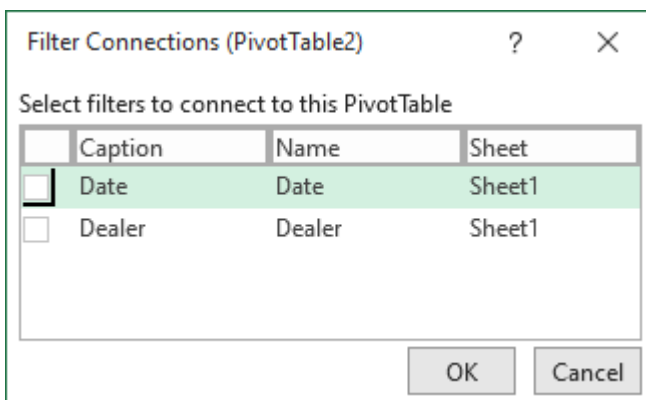


Figure 4 Dialog box Filter Connections



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- Select a slicer or timeline and click the **REPORT CONNECTIONS** button on its **SLICER** or **TIMELINE** context tab. In the **REPORT CONNECTIONS** dialog box, select which pivot table or chart should be filtered by the selected slicer or timeline.

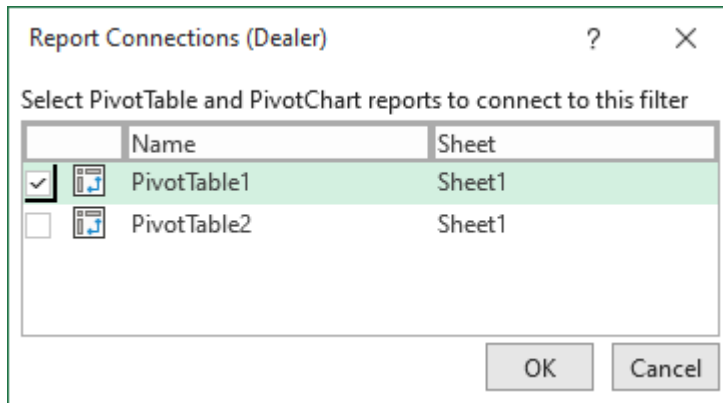


Figure 5 Dialog Box Report Connections

To disconnect a slicer or timeline, it is necessary to use the **FILTERS CONNECTIONS** or **REPORT CONNECTIONS** dialog box again and uncheck the given filter or report. It disconnects from the slicer or timeline, but the filter remains on. If you want to see the data unfiltered, you must cancel the filter.



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	A	B	C	D	E	F	G	H	I
1									
2									
3	<b>Row Labels</b>	<b>Sum of Quantity</b>							
4	Apple	1743							
5	Banana	2156							
6	Carrot	1905							
7	Potato	1982							
8	Tomato	2162							
9	<b>Grand Total</b>	<b>9948</b>							
10									
11	<b>Row Labels</b>	<b>Sum of Quantity</b>							
12	David	3550							
13	Milan	2968							
14	Pavel	3430							
15	<b>Grand Total</b>	<b>9948</b>							
16									
17									
18									

**Dealer**

- David
- Jitka
- Milan
- Monika
- Pavel

**Date**

I. 2016

2016

MĚSÍCE

I II III IV V VI VII VIII IX

Figure 6 Example of sharing slicers and timelines among several pivot tables



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