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Mastering:  
Microsoft Excel  
PivotTables

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**Talking Points: Grouping Numeric Row And Column Area Values**

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One of the three “rules” when building any PivotTable says that repetitive columns of data are useful in compacting or organizing a PivotTable. The more repetitive fields a set of data has, the more flexibility it offers in the design of a PivotTable.

In data sets where there is only one column of repetition, or none at all, the “rule of repetition” can be quite limiting. While the data can still be pivoted, its lack of a natural grouping structure created through repetitive fields will make it unwieldy and difficult to pivot.

Even in data sets with many repetitive fields, this standard can be a problem: generally, number-based fields are poor candidates for use in the PivotTable’s Row and Column areas because numeric fields are not usually repetitive. This means that the items you can place in the Row and Column areas are almost always limited to text-based information (unless you happen to have a repetitive, number-based field).

To increase the options available to you in designing a PivotTable, you can create groups from numeric data. For example, in the “CR Scoring” data, there is one column that lists the date on which an item was processed.

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Date
03-01-2004
01-12-2004
10-27-2004
09-14-2004
07-05-2004
07-23-2004
01-12-2004
03-17-2004
01-14-2004
07-04-2004
08-16-2004
01-13-2004

Initially, it may appear as if this data is non-repetitive. Looking at it on a date-by-date basis, that’s correct. But numeric data, like a column of dates, may be grouped with some sort of internal logic. Dates, for example, can be

grouped by year, quarter or month. Times can be broken into hours, minutes or seconds. Regular numeric data can be split into groups of 100 or 1,000 or any other pattern you want to use. This means that non-repetitive, number-based data can be extremely useful in creating PivotTables.

Count of Agent's Name	
Date	Total
01-02-2004	3
01-03-2004	6
01-04-2004	5
01-05-2004	4
01-06-2004	2
01-07-2004	3
01-08-2004	1
01-09-2004	3
01-10-2004	4
01-11-2004	3
01-12-2004	10
01-13-2004	3
01-14-2004	5
01-15-2004	2
01-16-2004	5

Using the dates in the Row area leads to a large PivotTable that may not be useful. After grouping the dates by quarter and month, the PivotTable is compact and straight-forward.

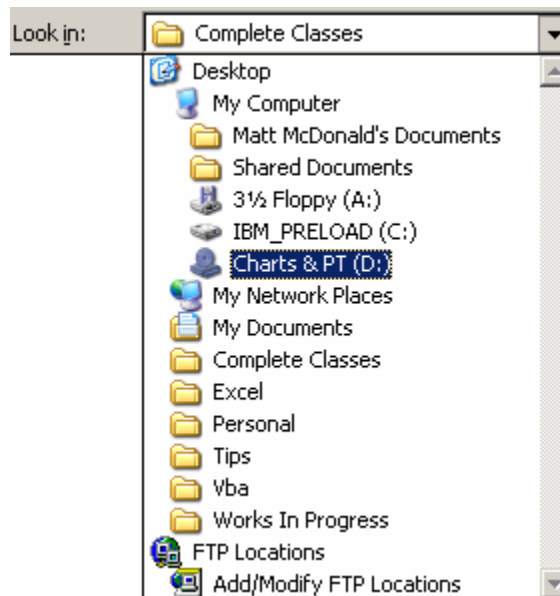
Count of Agent's Name		
Quarters	Date	Total
Qtr1	Jan	85
	Feb	68
	Mar	83
Qtr2	Apr	92
	May	85
	Jun	84
Qtr3	Jul	87
	Aug	82
	Sep	85
Qtr4	Oct	80
	Nov	72
	Dec	95
Grand Total		998

In this section, you'll see that it is easy to create logical groups while using numeric data, making it possible to create PivotTables out of any type of information, regardless of whether the native data has repetitive fields or not.

**Step-By-Step: Grouping Numeric Row And Column Area Values****GOAL:**

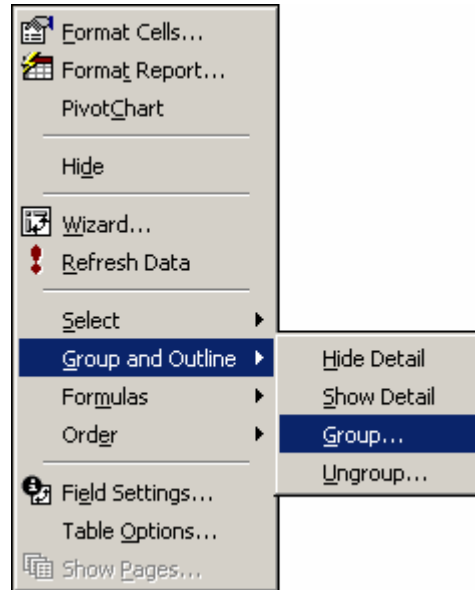
Use non-repetitive, number-based data in the Row and Column areas of a PivotTable by grouping the data into logical components.

1. Place your class CD-ROM in the computer's CD-ROM drive.
2. Start Microsoft Excel.
3. Use the File menu to select "Open...".
4. In the Open dialog box, click the drop-arrow beside the box marked "Look in:" and choose the CD-ROM from the list of locations.

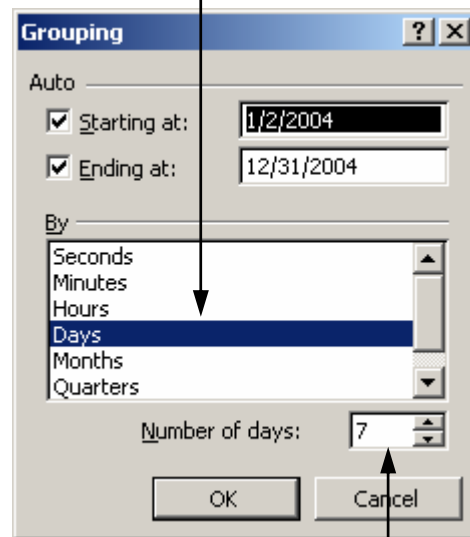


5. Double-click the folder called "Charts And PivotTables Files" to open it.
6. In the list of files, double-click the file called "Number Grouping".
7. Right-click any one of the dates that appears on the left side of the PivotTable.

8. In the right-click menu, point to “Group and Outline ▶” and choose “Group...”.



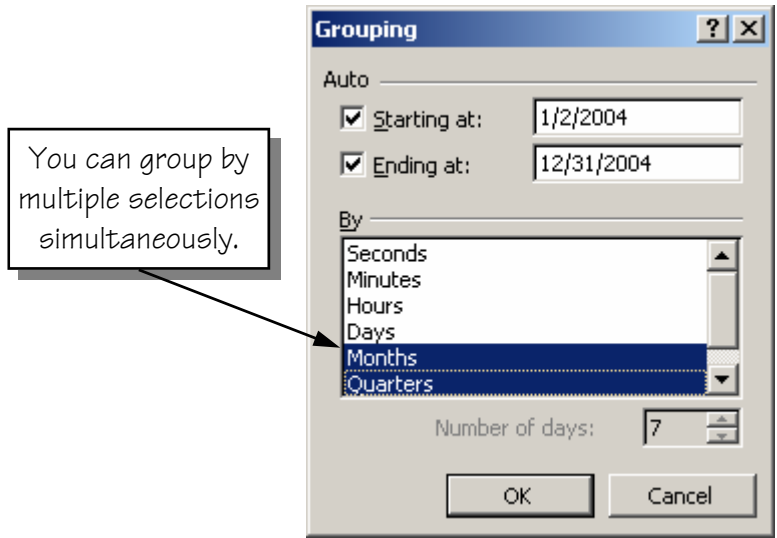
9. In the list of grouping options, choose “Days”.






10. To group the list into week-long segments, set the number of days to 7.

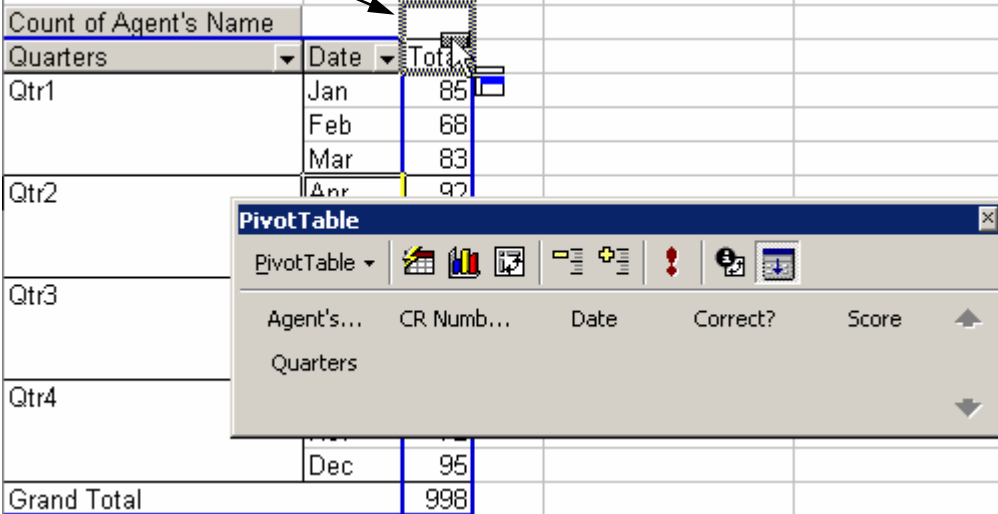
11. Click  to apply the group.

12. Once again, right-click any one of the date ranges on the left side of the screen.
13. Use the right-click menu to point to “Group and Outline ▸”, then choose “Group...”.
14. Click “Days” to deselect it.
15. Click “Months”.
16. Below “Months”, click “Quarters”.

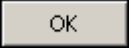



17. Click  to apply the new grouping structure.
18. Place the active cell anywhere in the PivotTable.
19. On the PivotTable toolbar, find the  button, which represents the “Score” field in the data list.

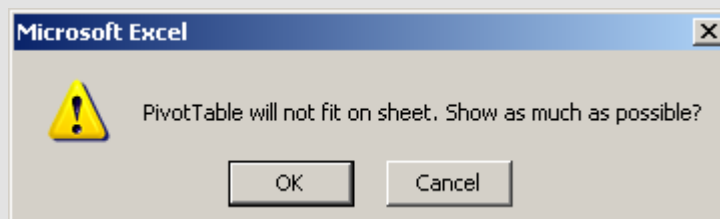
20. Click-and-drag the  button to the PivotTable, placing it in the Column area.



Count of Agent's Name	Date	Total
Qtr1	Jan	85
	Feb	68
	Mar	83
Qtr2	Apr	97
	May	82
	Jun	78
Qtr3	Jul	75
	Aug	70
	Sep	65
Qtr4	Oct	60
	Nov	55
	Dec	95
Grand Total		998

21. Click  in the message box that appears.

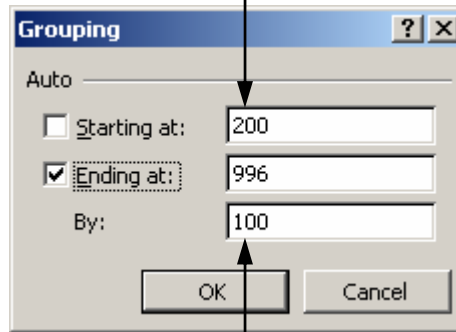
 There are more than 500 different scores and only 255 columns on the worksheet. By placing the “Score” field in the Column area, you are creating a PivotTable that is wider than the sheet. As a result, an error message appears and offers to show as many columns as possible while hiding the rest.



22. Right-click any one of the scores that now appears along the top of the PivotTable.

23. Use the right-click menu to point to “Group and Outline ▸”, then choose “Group...”.

24. In the box marked “Starting at:”, remove the 0 and replace it with 200.



25. If necessary, make the grouping value 100.

26. Click  to apply the grouping system.

Because you chose to start grouping at 200, ignoring scores lower than that value, the first group pertains to items that fall below the minimum value.

Count of Ag		Score	<200	200-299	300-399	400-499	500-599	600-699	700-799	800-899	900-999	Grand Total
Qtr1	Jan		7	7	10	9	15	8	12	12	5	85
	Feb		5	10	5	11	10	6	10	6	5	68
	Mar		7	6	11	7	7	9	14	14	8	83
Qtr2	Apr		5	14	13	9	9	17	7	8	10	92
	May		5	11	12	13	9	9	8	10	8	85
	Jun		7	13	6	10	11	11	10	10	6	84
Qtr3	Jul		6	7	10	14	13	11	13	10	3	87
	Aug		8	13	15	8	8	9	4	9	8	82
	Sep		8	8	10	8	14	15	12	7	3	85
Qtr4	Oct		8	8	13	6	6	15	9	11	4	80
	Nov		6	8	7	8	9	10	5	10	7	72
	Dec		6	10	8	14	12	16	10	11	8	95
Grand Total			78	115	120	117	123	135	119	113	78	998

27. Place the cell pointer anywhere in the PivotTable.

28. At the top left of the PivotTable, point to the  bar.

29. Click-and-drag the **Quarters** field up, into the Page area, and drop it off.

		Drop Page Fields Here						
Count of Agent's Name		Score						
Quarters	Date	<200	200-299	300-399	400-499	500-599	600-699	700-799
Qtr1	Jan	7	7	10	9	15	8	12
	Feb	5	10	5	11	10	6	10
	Mar	7	6	11	7	7	9	12
Qtr2	Apr	5	14	13	9	9	17	7
	May	5	11	12	13	9	9	8
	Jun	7	13	6	10	11	11	10



If a field is **already grouped**, it can be added to the Page area and the grouping will still apply. However, if you add a field to the Page area **and then attempt to group it**, you will not be able to.

In other words, creating a Page area that is grouped by quarters as we've done here only works because the quarterly grouping structure was already in place. If we had added the "Date" field to the Page area and then tried to group the dates by quarter, we would not have been able to.

30. Right-click any one of the month names along the left side of the PivotTable.

31. In the right-click menu, point to "Group and Outline" and select "Ungroup...".

		Drop Page			
Count of Agent's Name		Score			
Date		<200	200-299	300-399	400-499
01-02-2004					1
01-03-2004		1			2
01-04-2004		1	1		
01-05-2004					
01-06-2004			1		
01-07-2004			1		
01-08-2004					
01-09-2004					

Ungrouping the "Date" field removes all related groups, forcing the "Quarters" and "Months" groups to disappear.

32. Right-click any one of the scores at the top of the PivotTable.

33. In the right-click menu, point to “Group and Outline ▶” and choose “Ungroup...”.

Count of Agent's Name	Score																
Date	0	100	103	106	108	109	110	112	113	115	116	117	119	120	12		
01-02-2004																	
01-03-2004																	
01-04-2004																	
01-05-2004																	
01-06-2004																	
01-07-2004																	
01-08-2004																	
01-09-2004																	
01-10-2004																	
01-11-2004																	

Having removed all of the groups, the PivotTable returns to its default, ungrouped state.