

# Excel Pivot Tables

If you maintain data in an Excel Database, it is easy to prepare summary tables using the Pivot Table feature of Excel. A Pivot Table is a special kind of table that displays summary information from particular fields of an Excel database.

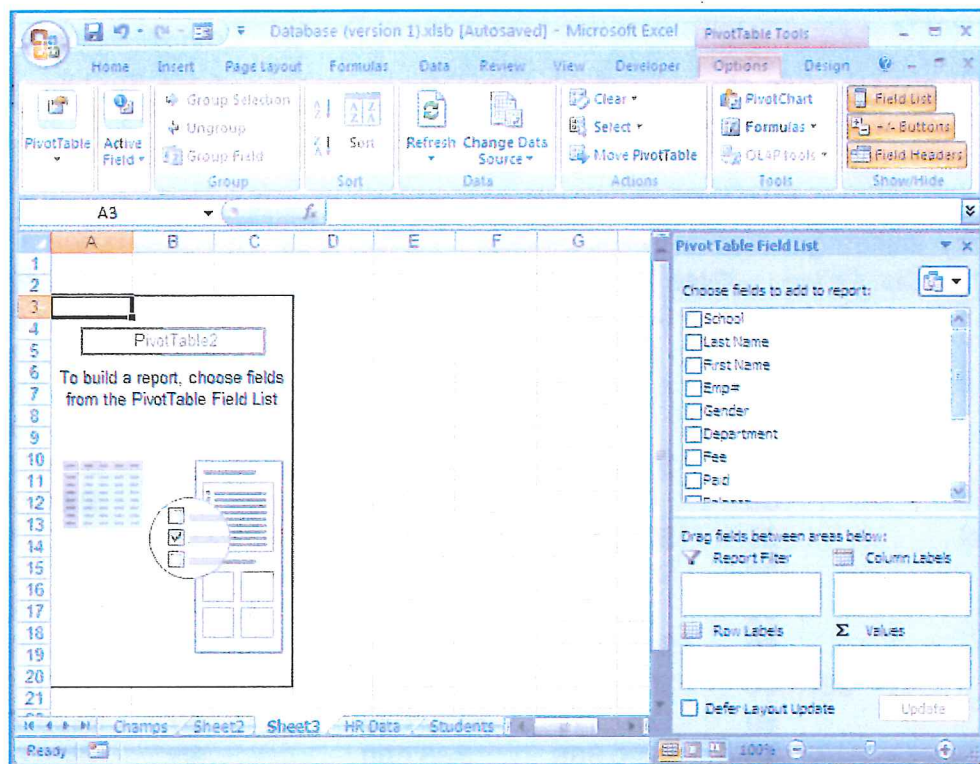
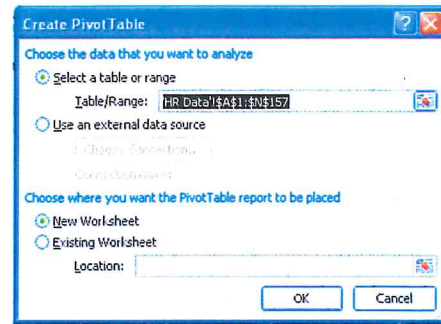
After the Pivot Table has been built you can rearrange the tables, rows, or columns, allowing you to view your data from alternative perspectives. This ability to “pivot” the dimensions of your table gives the Pivot table its name and makes it a powerful analytical tool.

This Pivot Table gives the sum of employee salary by Department for each Site/Building in the school.

<b>Sum of Salary</b>	<b>Building</b>				
<b>Department</b>	<b>Dist Office</b>	<b>Glen Elem</b>	<b>Kennedy</b>	<b>Lincoln HS</b>	<b>Grand Total</b>
Admin.	\$550,921	\$436,530	\$434,600	\$339,586	\$1,761,637
Art	\$0	\$69,000	\$253,086	\$320,765	\$642,851
Athletic	\$0	\$0	\$269,800	\$279,000	\$548,800
Bus ED	\$0	\$0	\$249,679	\$45,000	\$294,679
Business	\$150,486	\$291,486	\$69,000	\$250,000	\$760,972
Chemistry	\$0	\$0	\$281,000	\$285,000	\$566,000
Computer Sci	\$0	\$118,500	\$162,500	\$331,779	\$612,779
Engineering	\$0	\$110,000	\$247,486	\$159,600	\$517,086
English	\$0	\$23,486	\$385,396	\$245,000	\$653,882
Food Serv	\$0	\$118,500	\$114,000	\$152,000	\$384,500
Health	\$97,096	\$162,679	\$209,300	\$322,500	\$791,575
History	\$0	\$287,179	\$122,000	\$0	\$409,179
Lang Arts	\$0	\$320,665	\$45,000	\$0	\$365,665
Math	\$0	\$319,600	\$497,275	\$619,507	\$1,436,382
Media	\$0	\$132,500	\$230,000	\$252,179	\$614,679
Office Support	\$85,086	\$507,058	\$352,486	\$418,486	\$1,363,116
Social Study	\$0	\$0	\$364,696	\$79,800	\$444,496
<b>Grand Total</b>	<b>\$883,589</b>	<b>\$2,897,183</b>	<b>\$4,287,304</b>	<b>\$4,100,202</b>	<b>\$12,168,278</b>

## Creating a Pivot Table from an Excel Database

1. Click in a cell in the Database
2. From the **Insert** tab choose the **PivotTable** command from the **Tables** group
3. The Create PivotTable dialog opens
4. Click on **OK**
5. Excel displays the Pivot Table construction screen:



6. Use the **PivotTable Field List** to add the fields in your PivotTable for analysis.

Drag and drop field names into the four boxes displayed at the lower right bottom

- a. Columns Labels - will allow you to specify the variable in your list of which there are fewer specific separate items.
- b. Row Labels – allows you to place another set of variables displaying in the rows
- c. Values – Drag a field to conduct a range of mathematical or statistical processes

## Classic Pivot Table Layout

1. Right-click on the Pivot Table
2. Choose: PivotTable Options
3. Click on the **Display** Tab
4. Choose / Select "Classic Pivot Table Layout"

## Format the cells of a Pivot Table (Currency \$\$\$)

Adjust the settings of the "Value Field"

1. Click in the Pivot table
2. On the Option tab, click on the Field Settings Button
3. Click on the Number Format button

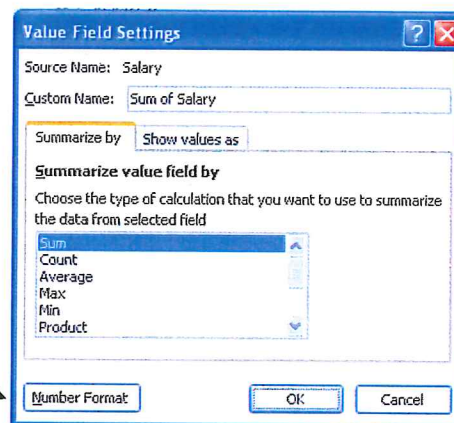


Or

1. Right-click on the Pivot table
2. Choose Value Field Settings

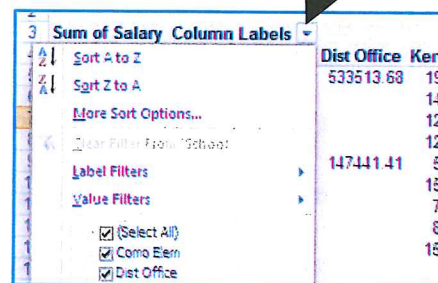


3. Click on Number Format



## Hide / Show Fields (Columns)

Click on the drop down arrow to hide / show rows or columns





## Sort the Values in a Column

1. Click in the Column

2. Click on the sort button.



Or right-click in the column and choose **Sort**

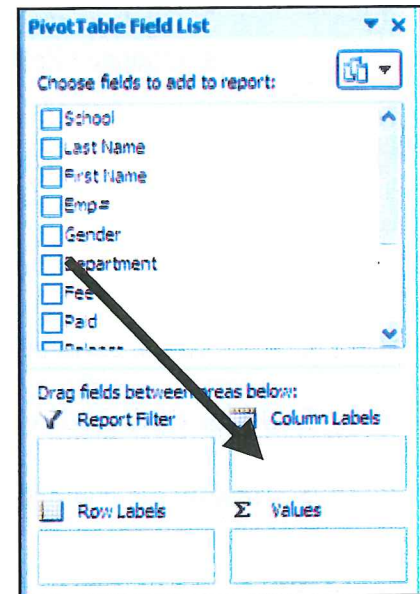
## ReArrange the Pivot Table

1. Click inside the Pivot Table

2. Use the **PivotTable Field List** pane to drag and drop Field names

If the **PivotTable Field List** does not appear::

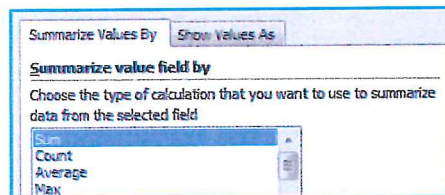
Right click on the pivot table and choose “Show Field List”



## Change the Type of Calculation

1. Right-click in the Pivot Table

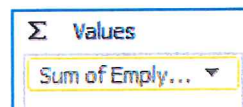
2. Choose: Value Field Settings



## Getting Employees Counts on a Pivot Table

To get a count you need to count on field where the value in that field is unique for each row/record. Since all employees have a unique employee number or SSN number, these fields are ideal to use when counting employees in a Pivot Table

1. Drag the “Emp#” field into the Values box



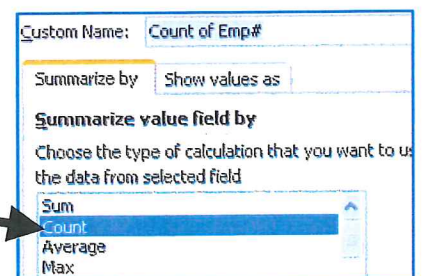
2. Select the downward pointing arrow next to “Sum of Emp#” ( the default is SUM )

3. Choose the “Value Field Settings” option



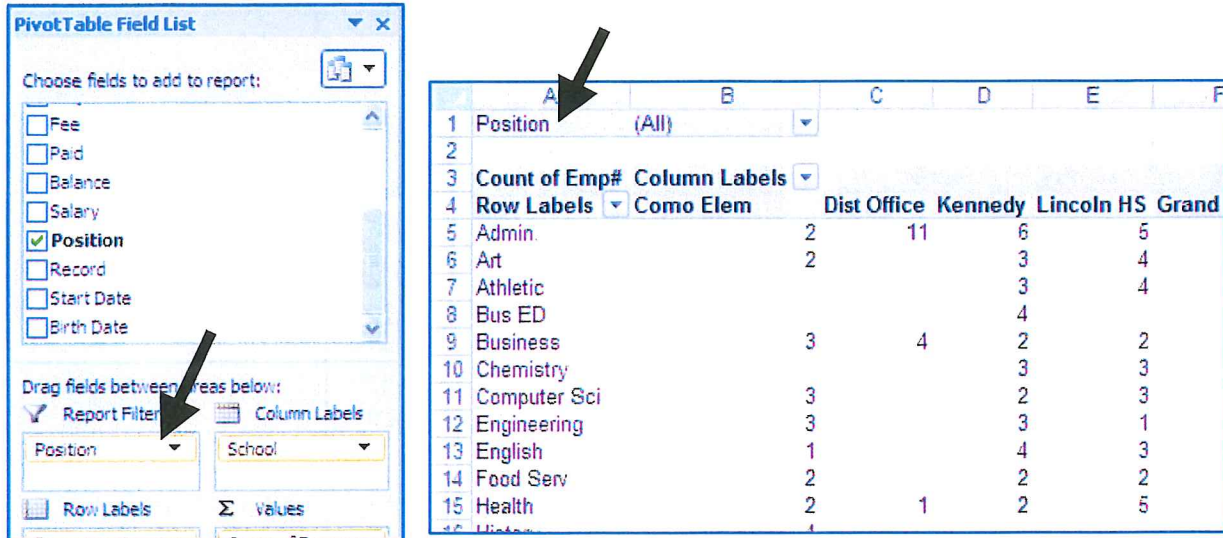
4. Change the “Summarize value field” from Sum to Count

5. Select OK



## Using the Report Filter of Pivot Tables

The **Report Filter** lets you view data for a specific value from a field. For example: if you drag the Position field to the **Report Filter** field you can view data for only one position at a time. It's like having your data on separate pages.



The screenshot shows the PivotTable Field List on the left and a PivotTable on the right. In the Field List, the 'Position' field is checked and has been moved to the 'Report Filter' area. The PivotTable on the right displays a list of positions filtered by the 'Report Filter'. The table has columns for 'Count of Emp#', 'Column Labels', 'Row Labels', 'Como Elem', 'Dist Office', 'Kennedy', 'Lincoln HS', and 'Grand'.

Count of Emp#	Column Labels	Row Labels	Como Elem	Dist Office	Kennedy	Lincoln HS	Grand
2	11	6	5				
2		3	4				
		3	4				
		4					
3	4	2	2				
		3	3				
3		2	3				
3		3	1				
1		4	3				
2		2	2				
2	1	2	5				

## Refreshing a Pivot Table

The Pivot Table is linked to a source of data. The Pivot Table may **not** automatically update each time a change occurs in the source data. Sometimes you may need to refresh the Pivot Table.

To refresh or update a Pivot Table:

1. Click on any cell in the Pivot Table
2. From the Options tab choose Refresh

## Show details - Drill Down

Double click on a cell in the pivot table to see the detailed information

The detailed information will be displayed on a new sheet

To disable this feature: Go to the Pivot Table Options – Data – Enable Show Data.

## Show Percentage %

Change the values displaying as Currency totals to the Percent of the Column Total

The Grand Total for spending at the bottom of the Abby Column is \$400.

Abby has spent \$100 on Church.

What is the percentage of the Church spending ?

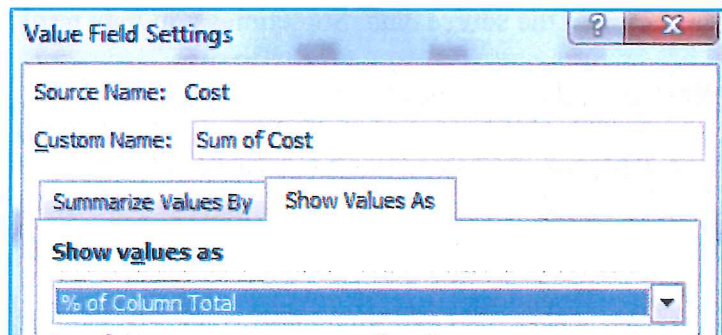
**Currency**

Sum of Cost	Person	
Item	Abby	Janet
Aerobics	\$45	\$38
Beer	\$5	\$15
Church	\$100	\$15
Clothes		\$87
Food	\$67	\$46
Games		\$47
Gas	\$50	\$79
Golf		\$16
Movie		\$16
Music	\$30	\$6
Phone	\$14	
Snacks	\$5	
Tennis		\$37
Yoga	\$84	
Grand Total	\$400	\$402

**Percentage**

Sum of Cost	Person	
Item	Abby	Janet
Aerobics	11%	9%
Beer	1%	4%
Church	25%	4%
Clothes	0%	22%
Food	17%	11%
Games	0%	12%
Gas	13%	20%
Golf	0%	4%
Movie	0%	4%
Music	8%	1%
Phone	4%	0%
Snacks	1%	0%
Tennis	0%	9%
Yoga	21%	0%
Grand Total	100%	100%

1. Right-click on the Pivot Table
2. Choose: Value Field Settings
3. Click on the tab: "Show Values As"
4. Choose: % of Column Total





## Grouping Data in a Pivot Table

Sometimes your data has too many values and is difficult to use in a Pivot Table. You can use the Grouping feature of Excel to gather these values into groups and display your data in a more meaningful manner. A good example of using this feature is when working with **dates**.

In our example we have many dates of expenditures in the column.

We want to group the dates by Month, so that we can see how much was spent each month

Sum of Cost	Date						
Item	1/2/2001	1/3/2001	1/5/2001	1/7/2001	1/8/2001	1/10/2001	1/11/2001
Aerobics	\$10			\$10			
Beer						\$39	
Church		\$25	\$5				
Clothes							
Food	\$12						
Games							
Gas				\$14	\$19		\$23

Drag fields between areas below:

Report Filter:

Column Labels:

Row Labels:

Σ Values:

1. Right-click a "Date field name" in the Pivot Table and choose "Group"

Sum of Cost	Date			
Item	1/2/2001	1/3/2001	1/5/2001	1/7/2001
Aerobics	\$10			\$10
Beer				
Church		\$25	\$5	

2. Choose Months and click on OK
3. In our example our dates are now grouped by months

We can see how much was spent each month for each Item.

Sum of Cost	Date							
Item	Jan	Feb	Mar	Apr	May	Jun	Grand Total	
Aerobics	\$44	\$56	\$4	\$15	\$6		\$125	
Beer	\$56	\$22		\$16	\$18	\$79	\$191	
Church	\$45	\$10	\$25	\$25	\$24	\$36	\$165	
Clothes	\$87	\$87	\$47		\$47	\$47	\$315	
Food	\$94	\$64	\$79	\$25	\$50	\$51	\$363	
Games	\$5	\$21	\$21				\$47	
Gas	\$56	\$57	\$69	\$22	\$12	\$27	\$243	

Grouping

Auto

☒ Starting at: 3/24/1937

☒ Ending at: 9/29/1970

By

Seconds

Minutes

Hours

Days

Months

Quarters

Years

Number of days: 1

OK Cancel

