

Working with PivotTables

When the Excel *Table* or data range accumulates large amounts of mixed data, you need a way to identify the key trends and anomalies that exist deep within the data. For this, Excel 2007 offers the *PivotTable* report, a powerful tool designed to perform this very task. A *PivotTable* report provides a dynamic summary of an existing *Table* or data range that can be quickly expanded, collapsed, and rearranged to give you several different perspectives on your data.

NOTE: This document provides a brief overview of creating a *PivotTable* from existing data, and then using the *PivotTable Field List* to create different views of the data. There are many advanced features related to *PivotTables* (e.g., *PivotCharts* and the *PivotTable Options* and *Design* tabs) which are beyond the scope of this document.

Notes on Working with PivotTables

- As with *Tables*, *PivotTables* need first row column labels to determine how your data should be grouped
- *PivotTables* are most helpful for analyzing complex *Tables* and data ranges (e.g., those with three or more columns, with at least one column containing multiple data types)
- Each column in your data source becomes a *PivotTable* field, which summarizes its corresponding rows
- The initial *PivotTable* report is an empty shell; with this shell in place, you can add, remove, rearrange, and modify data using the *PivotTable Field List* or tools found in the *Options* and *Design* command tabs
- As you make changes in a *PivotTable* report, your data source remains untouched and completely secure
- The *PivotTable Options* and *Design* command tabs appear only when a *PivotTable* is active
- Before creating a *PivotTable*, be sure to disable any existing subtotals in your data source; *PivotTables* generate their own totals and subtotals.

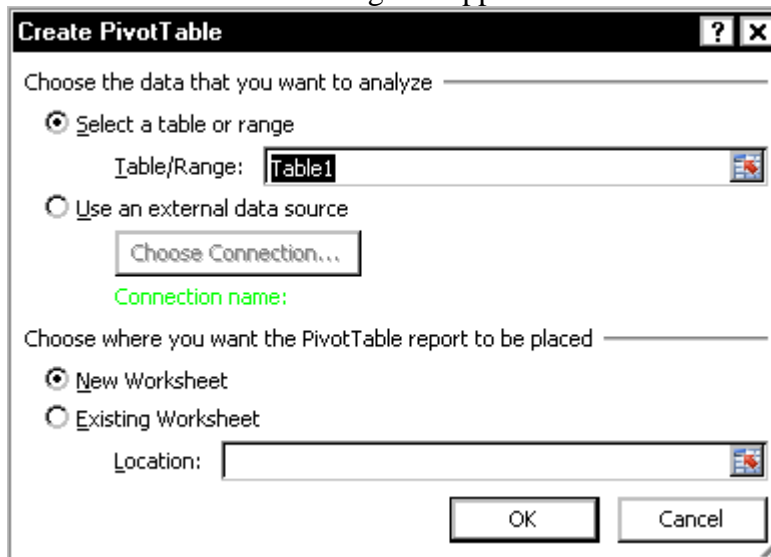
Creating a PivotTable

Creating a *PivotTable* report from an existing *Table* or data range is easy. For information on *Tables*, refer to *Tables Overview* and *Creating Tables*.

1. Select a cell within the *Table* or range for which you are creating a *PivotTable*
2. From the *Insert* command tab, in the *Tables* group, click **INSERT PIVOTTABLE**

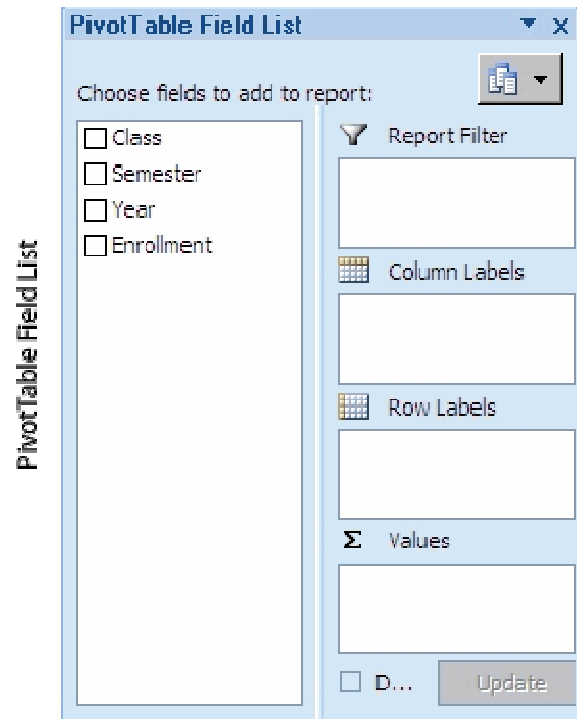
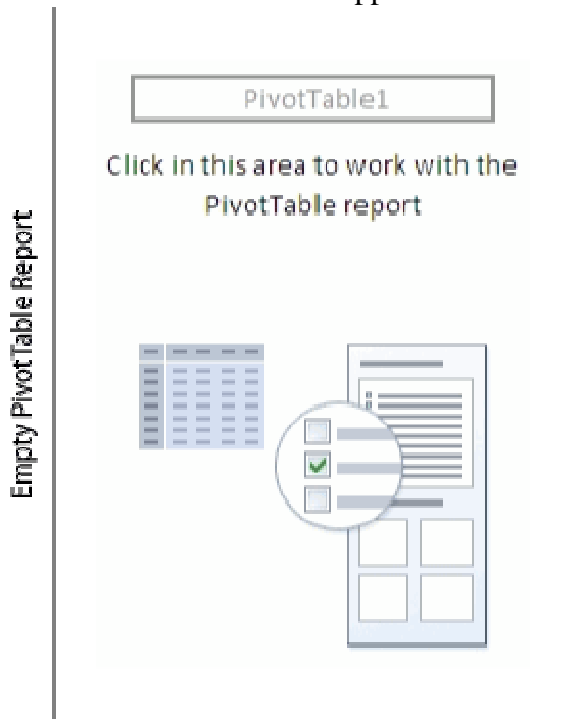


The *Create PivotTable* dialog box appears



3. In the *Choose the data that you want to analyze* section, select **a table or range**
4. In the *Table/Range* text box, type the cell range (or range name) for which you want to create a *PivotTable* report
5. To place the *PivotTable* in a new worksheet, in the *Choose where you want the PivotTable report to be placed* section, select **New Worksheet**
To place the *PivotTable* in the active worksheet,
 - a. In the *Choose where you want the PivotTable report to be placed* section, select **Existing Worksheet**
 - b. In the *Location* text box, type cell or range where you want the *PivotTable* placed
6. Click **OK**
An empty *PivotTable* appears in the specified location.

The *PivotTable Field List* appears.



Creating a PivotTable Report

The *PivotTable Field List* lets you select which fields appear in your *PivotTable* report, and where and how they are displayed. You can easily display or hide fields, and change how field data are viewed, sorted, or filtered.

When you select a field in the *PivotTable Field List*, Excel analyzes the data it contains and automatically assigns it to one of four categories: *Report Filter*, *Column Labels*, *Row Labels*, or *Values*. If, for example, a field contains numerical data, Excel likely will add it to the *Values* category; if it contains text, it will probably be displayed in either the *Row Labels* or *Column Labels* category. However, the strength (and the purpose) of *PivotTables* lies in the ease with which you can maneuver fields between these various categories.

1. From the *PivotTable Field List*, in the *Choose fields to add to report* section, select the check box next to the field you want to display
Excel displays the selected field in a default area of the *PivotTable Field List* and its field data in the corresponding area of the *PivotTable* report.
2. Repeat step 1 for all desired fields

Customizing a PivotTable Report

By moving fields among different *Field List* categories, the corresponding *PivotTable* report changes accordingly. For a visual example, refer to The *PivotTable Field List Illustrated*.

1. In the *PivotTable Field List* category currently displaying the field, position the mouse over the field label



The pointer becomes a four-headed arrow.

2. Click and drag the field label into the new category
3. Release the mouse button

The field is added to the new category of the *PivotTable Field List*.

The *PivotTable* report changes accordingly.

NOTE: If a *PivotTable Field List* category contains multiple fields, the lower fields are displayed in the *PivotTable* report as cascading sub-entries of the top field.

The PivotTable Field List Illustrated

The graphics below illustrate how fields selected in a *PivotTable Field List* are displayed in the *PivotTable* report.

- The original data source is shown in **fig. 1**; the empty *PivotTable Field List* is shown in **fig. 2**.
- To understand the relationship between a data source, the *PivotTable Field List*, and the *PivotTable* report, follow the blue arrow in **fig. 3** from the *Class* field of the *Choose fields to add to report* area to its default category, *Row Labels*, and then the red arrows in **fig. 3** to the data as displayed in **fig. 4**.
- Notice that the *Year* field (i.e., column in the data source) is not selected and does not appear in any *PivotTable Field List* category or in the *PivotTable* report.
- Also, see how the arrangement of the *Class* and *Semester* fields in the *PivotTable Field List* correlates in the *PivotTable* report.

fig 1. Data Source

Class	Semester	Year	Enrollment
Engl 110	Fall	2004	972
Engl 110	Spring	2004	1005
Engl 110	Summer	2004	21
Engl 110	Fall	2005	1080
Engl 110	Spring	2005	1017
Engl 110	Summer	2005	18
Chem 103	Fall	2004	298
Chem 103	Spring	2004	311
Chem 103	Summer	2004	28
Chem 103	Fall	2005	305
Chem 103	Spring	2005	272
Chem 103	Summer	2005	35
Math 104	Fall	2004	161
Math 104	Spring	2004	155
Math 104	Summer	2004	27
Math 104	Fall	2005	160
Math 104	Spring	2005	165
Math 104	Summer	2005	31

fig 2. PivotTable Field List (No Fields Selected)

PivotTable Field List

Choose fields to add to report:

- Class
- Semester
- Year
- Enrollment

Report Filter

Column Labels

Row Labels

Values

D... Update

fig 4. PivotTable Report (Contains Data from Source)

Row Labels	Sum of Enrollment
Chem 103	1249
Fall	603
Spring	583
Summer	63
Engl 110	4113
Fall	2052
Spring	2022
Summer	39
Math 104	699
Fall	321
Spring	320
Summer	58
Grand Total	6061

fig 3. PivotTable Field List (With Fields Selected)

PivotTable Field List

Choose fields to add to report:

- Class
- Semester
- Year
- Enrollment

Report Filter

Column Labels

Row Labels

Class

Semester

Values

Sum of Enrollment

D... Update

PivotTable Tools

Once a *PivotTable Report* has been created, the *Options* and *Design* tabs appear on the *Ribbon*, under the *PivotTable Tools* heading. From these tabs you can sort, filter, format, and move your *PivotTable* report.

NOTE: For the *PivotTable Tools* (i.e., the *Options* and *Design* tabs) to be visible, the *PivotTable* report must be active (i.e., selected).

These documents are based on and developed from information published in the LTS Online Help Collection (www.uwec.edu/help) developed by the University of Wisconsin-Eau Claire and copyrighted by the University Of Wisconsin Board Of Regents. Used by permission.