

Excel 2016 Advanced for Mac

Unlock insights and tell the story in your data.

What to expect:

- How to create Pivot Tables
- How to create Macros

Advanced Tips and Shortcuts

To do this	Press
Display the Format Cells dialog box	⌘ + 1
Display the Replace dialog box	Control + H
Paste special	⌘ + OPTION + V
New blank workbook	⌘ + N
New workbook from template	⌘ + SHIFT + P
Delete to the right	FN + DELETE
Insert a hyperlink	⌘ + K
Apply an outline border to selected cells	⌘ + OPTION + ZERO (0)
Remove outline borders	⌘ + OPTION + HYPHEN (-)
Group selected cells	⌘ + SHIFT + K
Ungroup selected cells	⌘ + SHIFT + J

Creating PivotTables in Excel

PivotTables enable you to extract meaning from large amounts of data, identifying trends and patterns that may be buried in the data. With PivotTables you can easily organize and summarize both numerical data and non-numerical data, perform comparisons and organizing data using row and column headings. For example, you might want to find out how many foreign students major in History at a specific college, then compare that number with the number of foreign students that major in mathematics. PivotTables enable you to organize these multiple sets of data at the same time.

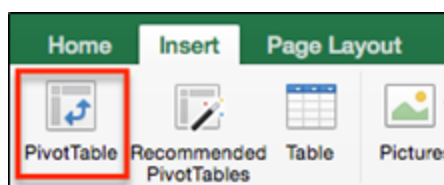
Use a PivotTable report when you want to analyze related totals, especially when you have a long list of figures to sum and you want to compare several facts about each figure. Because a PivotTable report is interactive, you can change the view of the data to see more details or calculate different summaries, such as counts or averages.

PivotTables

Getting Started:

Begin by making sure your table is set up correctly in order to use PivotTables. The first row contains the field or column names. The second and subsequent rows contain the data. There are no blank rows, although individual blank cells may be present.

1. Open an existing Excel spreadsheet that contains data for analyzing.
2. Click once in the cell(s) you wish to use in the PivotTable.
3. Click on the Insert tab, then click on the arrow next to the PivotTable tool.

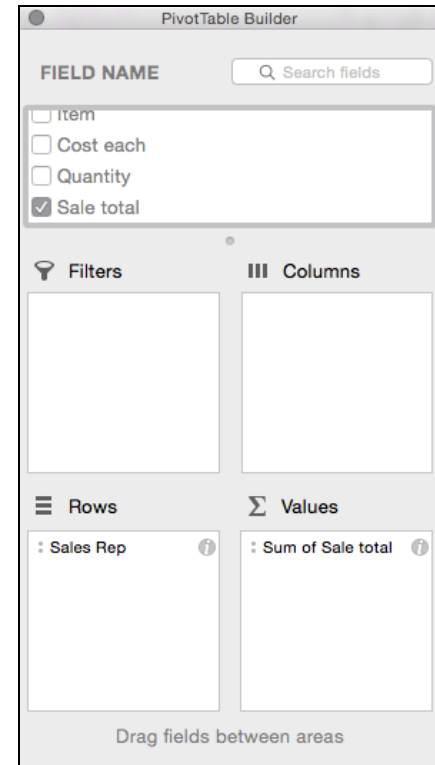


4. Because you already selected a cell or range of cells (step 2), you can find the correct data range on the icon to the right of your PivotTable Location box (the range is surrounded by a pulsing dashed line, also known as a marquee). If you want to create a PivotTable from external data, select External Data Source, then select the data source file.
5. Select New Worksheet as the location for the PivotTable Report. Click OK.
6. When you are finished, click OK. The PivotTable opens and the PivotTable Builder appears (shown to the left).

You now have a PivotTable, but it has no data (shown below). To populate your PivotTable, you need to click and drag the items under Field Name to the four main

areas, located at the bottom of the PivotTable Builder. These four main areas are (1) Values Area, where the actual data will go. The (2) Row and (3) Column Areas are places where you can add fields or columns from the original data list, and use that to create organization for your PivotTable. Lastly, the (4) Filter Area allows you to put fields there which don't affect the structure of the PivotTable; instead, it allows you to filter the contents of the PivotTable based on any field that's in the report Filter Area.

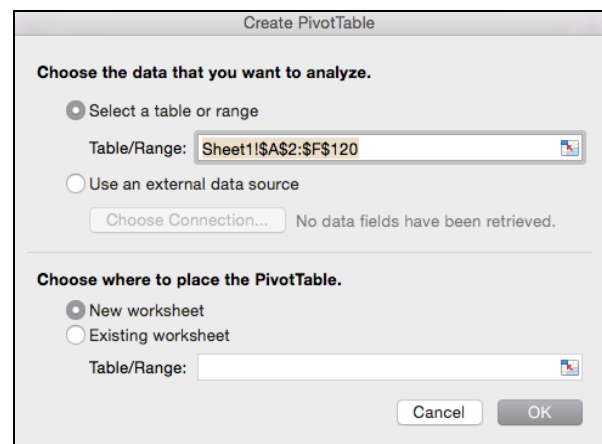
You can ask different questions of the data and look at it in different ways depending on which fields you decide to use for rows, columns, and data. For example, if you want to see which majors are the most popular with men and women of different ethnic groups, drag the gender and ethnicity fields to the Row box on the PivotTable builder. Drag the planned major field to the Column box. Drag the planned major field to the Data box. (Notice that you can use the same field in more than one place.)



Working with PivotTables

PivotTables are dynamic worksheets—you can change and rearrange them to ask different questions and to look at your data in different ways. The first thing you want to do is work with the PivotTable buttons to change the field parameters. For example, when analyzing participation rates, you can change the page field data to display information about any of the participating ethnic groups. You can change the page field altogether to categorize the data differently, by gender or by college, for example.

The illustration to the right shows a PivotTable report of the sample data. The shaded cells are PivotTable buttons. You can drag buttons between rows and columns to change the way data is summarized. Click the arrow on a button to organize the rows/columns.

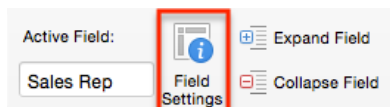


Using the PivotTable Ribbon Option

The PivotTable Ribbon allows you to work with your PivotTable easily without needing to access the PivotTable and PivotTable Builder. When you create the PivotTable, numerical data is summed by default and non-numerical data is counted. You can change the operation performed on data in a field of the PivotTable by clicking a cell in that field and then clicking the Field Settings button.



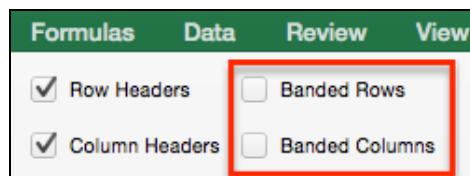
Use the PivotTable Field dialog box that appears to specify the operation you want Excel to perform in that field. For example, you can use this button to sum up the total number of students per major in your PivotTable.



Formatting your PivotTable Report

If you click any cell in the body of the PivotTable, and then click the Design tab on the ribbon, you can now apply a style from the PivotTable Styles gallery. Click the expand button located in the gallery to see all available styles and scroll down.

If you want to have your odd and even rows with different formatting, for example some lighter and some darker, then you can turn on banding. First, select a PivotTable style with different colors on the icon, then click the Row and Columns button and click Banded Rows.

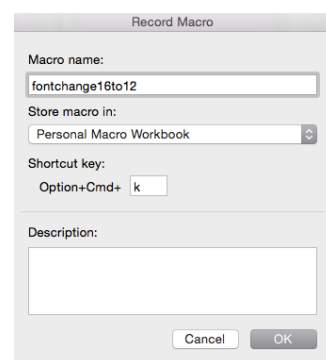
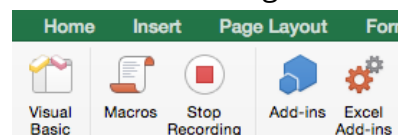
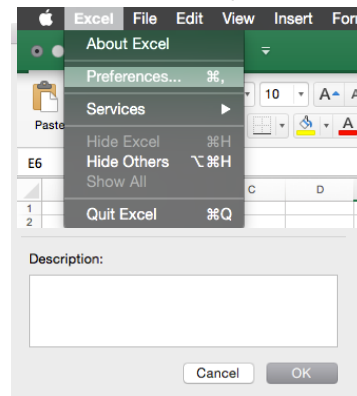


Excel Macros

The more you use excel, you will realize that you repeat certain actions often. If you would like to automate those tasks, you can record a macro and run it to save you time. For instance, you can create a macro that will change the formatting of text in the selected cell that is currently 12 pt font to 18 pt font.

Recording a Macro

1. Begin by adding the **Developer** tab on the ribbon. From the Excel menu, choose Preferences. Click on the View icon. Scroll down the list of options and choose In Ribbon, Show Developer tab. The Developer tab now appears. Click on the Developer tab to begin.
 - a. Alternatively, you can select from the Tools menu, Macro, Record New Macro.
2. If using the Developer ribbon, go to the **Visual Basic** group, and give the macro a name that is associated with the task.
 - a. Macro names must start with a letter, not a number. Numbers are okay after the first character, though.
 - b. A macro name cannot contain spaces. You have to use mixed-case capitalization to indicate separate words
 - c. Punctuation marks are off limits, too. If you do use punctuation marks, VBA returns an Invalid procedure name dialog box.
3. Click the **Record** button, and Excel will display the **Record Macro** dialogue
 - a. If you would like to assign a shortcut key to your macro, enter in a number, letter, or symbol next to **Option+Cmd+ _**.
 - b. Choose to **Store Macro** in a **Personal Macro Workbook** so that the macro can be used across your Excel documents (old and new).
4. Click **OK** to start recording
5. On the **Recording** toolbar, click **Stop Recording** once your task is complete. **Note:** Excel doesn't record when you change tabs on the Ribbon, only actions that affect the worksheet.
6. Click a cell in another worksheet you wish to reformat, then under the **Developer** tab, under **Visual Basic** group, click the **Macros** icon.
7. In the **Macro Name** list, click your created macro, and then click **Run**. The text you typed in step 5 appears in the new cell.



Button, button, who's got the button?

Some VBA applications let you assign a new macro to a toolbar button or keyboard shortcut at the time you record the macro. Take advantage of this opportunity — the most convenient way to playback a macro is to trigger it using a button or the keyboard.



To assign a button to a macro

1. Right-click over the **Quick Access** toolbar (upper-left corner of the screen).
2. Choose **Customize Quick Access Toolbar**.
3. Use the pull-down menu and select **Macros**.
4. Locate the **Macro** you want to add as a tool, then click the **Add** button in the middle column.
5. Click **OK** to close. The button is now available in the **Quick Access** toolbar.

How does it work?

The Macro Recorder acts like a tape recorder. As you work, it records your keystrokes and mouse button clicks by translating them into Microsoft Visual Basic® for Applications (VBA) code.

To view VBA code

On the **Tools** menu, point to **Macro**, and then click **Visual Basic Editor** (or press fn+option+F11). In the VBE window, locate the window called **Project**. Select the project that corresponds to the workbook in which you recorded the macro. Click the plus sign (+) to the left of the folder named Modules. Double-click Module 1.

Here's an example of Visual Basic for Applications code:

```
Sub Convert_2_Value()
Convert_2_Value Macro
Macro recorded 12/14/2006 by John Bansavich
Keyboard Shortcut: Ctrl+Shift+L
Selection.Copy
Selection.PasteSpecial Paste:=xlPasteValues,
Operation:=xlNone, SkipBlanks _:=False,
Transpose:=False
Application.CutCopyMode = False
End Sub
```

General Excel Links <http://spreadsheetpage.com/>