

ARE YOU INTIMIDATED BY MACROS?

What are two of the most intimidating words for CPAs? Excel macros. Creating and using macros represents the invisible line that separates the average CPA Excel users from the more advanced users. However, this does not have to be the case. Macros are a great tool for any CPA. In this article, you will learn about built-in macros and how to create a custom macro without knowing anything about coding.

A macro takes repetitive actions and automates them. This allows the users to complete dozens of steps in a single keystroke. The benefits of macros are more than just saving time. Macros produce consistent application, avoiding the possibility of skipping a step. They also provide consistent output, especially when formatting large groups of data. For example, a macro can set all columns to a specific width or even encrypt a workbook before sending it to a colleague.

Lastly, a macro has numerous benefits for data that is the same as the previous year. For example, if the same analysis is performed year over year, a macro expedites the process to avoid wasting time trying to match prior years.

What makes macros seem scary is that many CPAs are only familiar with the most complex way to create them. Using Visual Basic for Applications (VBA) coding, an advanced user can design custom macros to do virtually any function. However, gaining the expertise required to program in VBA is prohibitive for many CPAs. This unnecessarily causes some CPAs to shy away from investing time in

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learning about macros. Nevertheless, there are two easy strategies to becoming a faux-expert macro user.

STRATEGY 1: USE THE HIDDEN FUNCTION IN EXCEL

Every version of Excel has been built around macros. Novice users are likely familiar with copy and paste shortcuts; however, there are many more, ranging from formatting commands to mathematical formulas.

FORMATTING MACROS

Function	PC Shortcut	Mac Shortcut
Bold Font	Control b	Command b
Add Border Outline	Control Shift &	Command Option 0
Apply Number Format	Control Shift !	Command Shift !

These macros make formatting data easier. Unformatted data is overwhelming. Using the bold function and border outlines make headers stand out. Number

formatting provides a quick way to label the currency of the data. Formatting shortcuts organize the data and makes it easier to read.

DATA VISUALIZING MACROS

Function	PC Shortcut	Mac Shortcut
Group Rows or Columns	Alt Shift Right Arrow	Command Shift k
Create a Table	Control t	Shift t
Create a Graph	Select all data. FN F11	FN F11

Visual shortcuts like creating a table, graph or grouping rows and columns are important everyday functions for CPAs. Enormous amounts of data are confusing if

background on the information is not available. A graph solves this issue by summarizing data visually. Creating a graph can require multiple keystrokes, but the FN F11 shortcut reduces it to a single keystroke. A visual representation makes the data more understandable and adds value for users.

MATHEMATICAL MACROS

Function	PC Shortcut	Mac Shortcut
Auto Sum	Alt =	Shift Command t
Toggle Relative & Absolute References	FN F4	Command t
Insert a Function	Shift FN F3	Shift FN F3

Mathematical functions create functions quickly without having to type in the formula. CPAs must often calculate totals and

cross foot records; therefore, utilizing auto sum and inserting function shortcuts streamline their work. Toggling relative and absolute references allows the user to drag formulas across cells while retaining the function's cell integrity.

STRATEGY 2: RECORDED MACROS

Most CPAs often find themselves manually completing the same task several times throughout an engagement, because there is no built-in function that meets their specific client needs, addresses the issues with the data or that complies with firm/supervisor-specific requirements. When the CPA is a coding expert, he/she may program a custom macro to meet his/her needs. However, there is another option: recorded macros.

A recorded macro records every keystroke and mouse click from when users press start until they press stop. These macros require no coding knowledge and are created in just a few minutes. Even expert coders may find that it is more efficient to record macros rather than write them. A CPA can record his/her first macro in five simple steps.

Step 1: Plan

It is key to know the macro's purpose before recording. If the intentions are unclear, creating a macro may not have intended results. For example, imagine a macro that changes the sign of the value in each cell. Was the intention to make all the numbers negative or switch the signs? What if there was a negative number in the data set and, by using this macro, it made the negative number positive? This macro does not have the intended results. Therefore, it

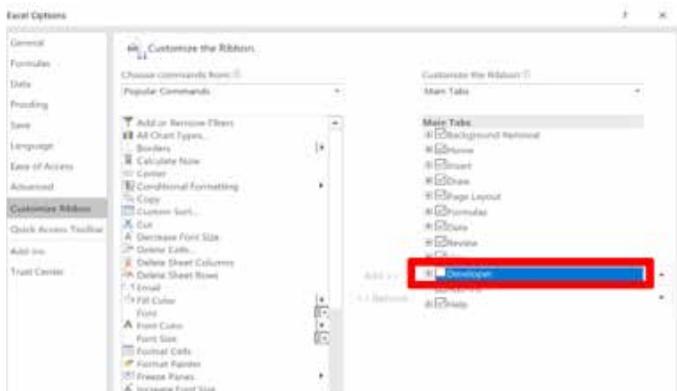
is of paramount importance to have a clear purpose before beginning.

Step 2: Setup

Next, with Excel open, make sure the “Developer” tab is activated. This is in the Excel ribbon at the top of the workbook. The ribbon includes tabs such as Home, Insert, Page Layout, Formula, Data and Review. If Excel has a “Developer” tab, then proceed to Step 3. PCs and Macs have different setups for adding the “Developer” tab, so both are included.

PC: Right click any green tab (such as the “Data” tab) and select “Customize the Ribbon.” When the dialogue box appears, look for “Developer” on the right side under “Customize the Ribbon.” Check the box to the left of “Developer” and press “OK.” See Figure 1.

FIGURE 1. CUSTOMIZE RIBBON FOR PC



Mac: Select “Excel” in the top ribbon. Select “preferences.” From there, click “Ribbon and Toolbar.” On the right side are all the options to customize the ribbon. Select “Developer” and then press “Save.”

Now click on the “Developer” tab and the world of macros is opened.

Step 3: Implement

Once the planning and setting up steps are completed, click on “Record Macro.” See Figure 2.

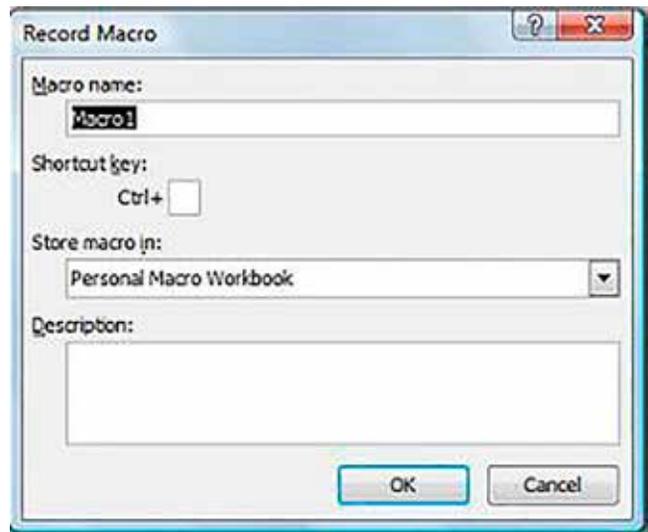
FIGURE 2. DEVELOPER TAB



From there, a dialog box appears. See Figure 3. Enter the macro name, shortcut key and macro description. When choosing a unique name for a macro, do not include any spaces. Be mindful when picking a shortcut key; it overrides any preprogrammed shortcuts. For example, using the shortcut Ctrl+S overwrites the save-shortcut function. It is not mandatory to have a shortcut key.

The default setting is to store the macro in the active workbook alone. However, users can select an option to make this macro available in other workbooks on this computer by saving the macro to the “Personal Macro Workbook.” If the macro is reusable, it is best to save it to this workbook. This adds the macro to the personal library of custom macros. See Step 5 for instructions on accessing macros from the “Personal Macro Workbook.” It is recommended that the description summarizes the task the macro performs. Finally, press “OK” and the macro starts recording every keystroke or mouse click.

FIGURE 3. MACRO DIALOG BOX



Now, perform the automated task normally. Remember when creating a macro, the number of keystrokes or mouse clicks does not matter. Creating a macro makes the task effective, but running a macro makes it efficient. Once the task is completed, go back to the “Developer” tab and click “Stop Recording.” See Figure 4. This completes the macro.

FIGURE 4. DEVELOPER TAB



Step 4: Verify and Run Macro

Now on a clean set of data, test the macro. Testing the macro ensures its effectiveness and protects actual data. Beware: once a macro is run, the “Undo” button no longer works. In other words, any changes made by the macro must be manually undone or the users must revert to a previously saved version of the data. If the macro is programmed to remove data, the data is permanently deleted, so a previously saved copy of the data must be recalled to restore it. To run the test macro, either use the shortcut key or create a button.



To create a button, return to the “Developer” tab in the ribbon. From there, select “Insert.” The button is the first option in the drop-down menu. Select it and drag and drop the button anywhere on the spreadsheet. Once this is complete, assign the macro to the button. Make sure the correct macro is assigned. Then rename the button to

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describe the macro. Click anywhere on the spreadsheet to deselect the button. Multiple buttons are allowed per worksheet. Simply press the button to run the test macro on a clean set of data. Once it has been determined that the macro will perform the correct task, repeat this step on the real data.

Step 5: Review

If the created macros were saved in the “Personal Macro Workbook,” these macros are available to be applied to other workbooks. Running the “Personal Macro Workbook” in the background allows those macros to be run on any other open worksheet. To use the macros, go to the “Developer” tab and select “Macros.” See Figure 5.

FIGURE 5. VIEW MACRO LIBRARY

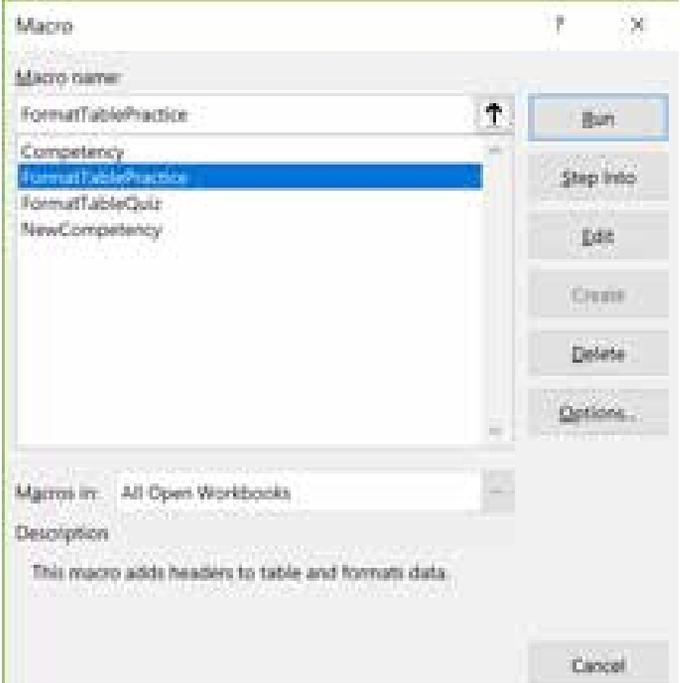




Using the recording function simplifies macros, saves time and makes the CPA's life easier.

This opens a dialog box allowing users to run any available macro on a set of data. See Figure 6. Make sure the macro selected is applicable to the data. Select the macro and click "Run" to apply it.

FIGURE 6. MACRO DIALOG BOX



ARE MACROS STILL INTIMIDATING?

Hopefully not! Using the recording function simplifies macros, saves time and makes the CPA's life easier. In a competitive industry, this differentiates you from a novice user. If we (two graduate students who think technology is always against us) can figure it out, so can you!

TABLE 1. FIVE EASY MACROS TO GET STARTED

Macros	CPA Functionality
Highlight greater/less than values	Easily point to numbers that are outside of your designated threshold
Unhide all hidden worksheets	Easily unhide all worksheets that an earlier user may have intentionally hid
Create a backup of current workbook	Excel loves to crash; this is a wonderful way to quickly protect yourself
Add workbook to mail attachment	Easily send a document you have been working on to a coworker
Save selected range as a PDF	Quick way to send something to the client so he/she cannot edit your work

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