

Macros

If you've ever found yourself manually completing the same series of steps over and over again in Excel, you will be an instant fan of macros. With macros, you can record the steps needed to complete a task once and then run it to automatically repeat the steps on other worksheets. You can even set keyboard shortcuts for your macros to make them lightning fast to run and avoid mouse clicks altogether.

This module shows you how to create and run macros as well as modify and copy macros using Microsoft Visual Basic for Applications.

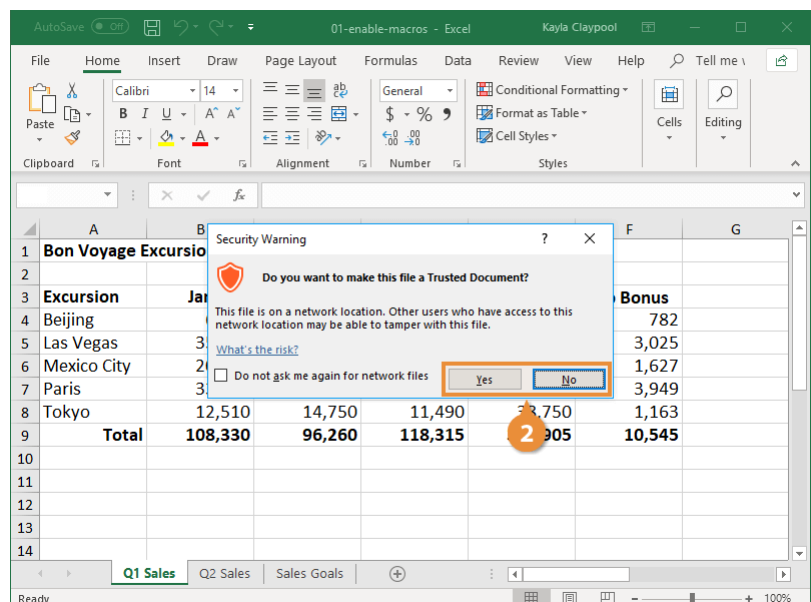
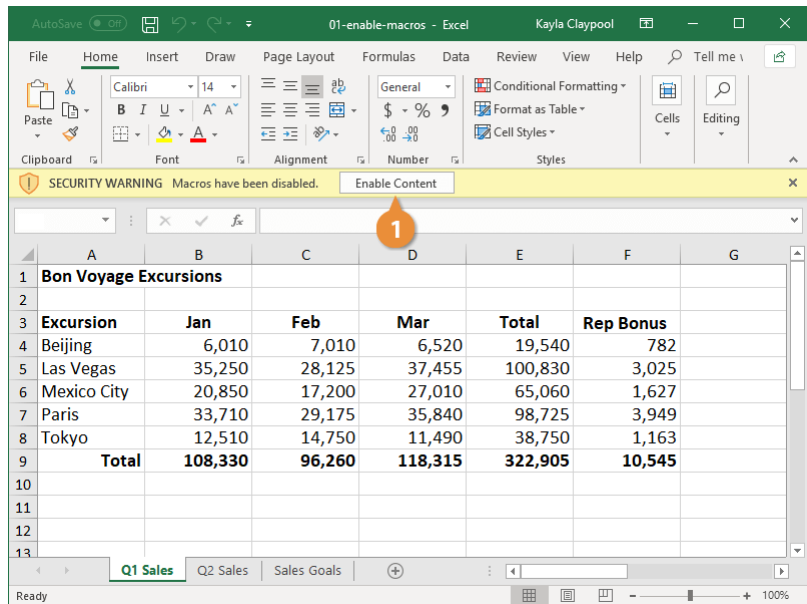
Enable Macros

A macro is a series of Excel commands and instructions that are recorded so that they can be executed as a single command. Instead of manually performing a series of time-consuming, repetitive actions in Excel yourself, you can create a macro to perform the task for you. In order to use macros in a workbook, you'll need to enable them, either on a case-by-case basis, or by adding a trusted save location to Excel.

Enable Macros in a Single File

Macros are disabled by default because they are created with Visual Basic code that could negatively affect your computer if written or recorded with malicious intent. If you choose to enable content on a file-by-file basis, a yellow security warning will appear above the worksheet data for any file containing a macro.

- 1 Click the **Enable Content** button in the security warning above the formula bar.
- 2 Choose if you want to make this a trusted document.
 - **Yes:** Macros are enabled automatically each time this file is opened.
 - **No:** Macros must be enabled each time this file is opened.



Set Trusted Locations

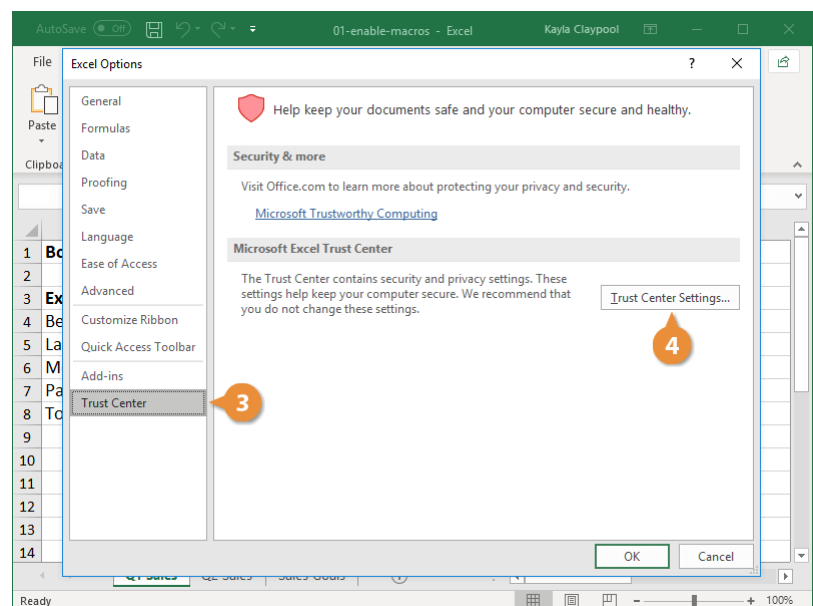
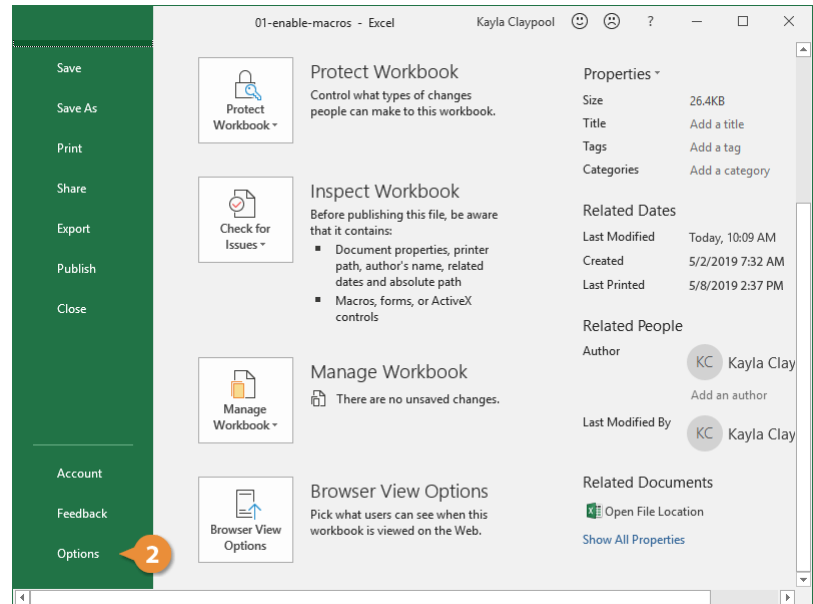
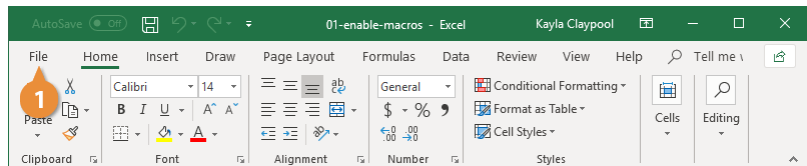
If you have a lot of macro files in one location, like a network drive, and you don't want to continually enable content in every file, set up a trusted location instead.

- 1 Click the **File** tab.
- 2 Select **Options**.
- 3 Select **Trust Center**.

The Trust Center in Excel contains all the security and privacy settings used to keep your computer secure.

- 4 Click the **Trust Center Settings** button.

The Trust Center dialog box opens.



5 Select **Trusted Locations** in the left column.

Depending on your setup, you may have a number of trusted locations already added. You can make changes or add additional locations here.

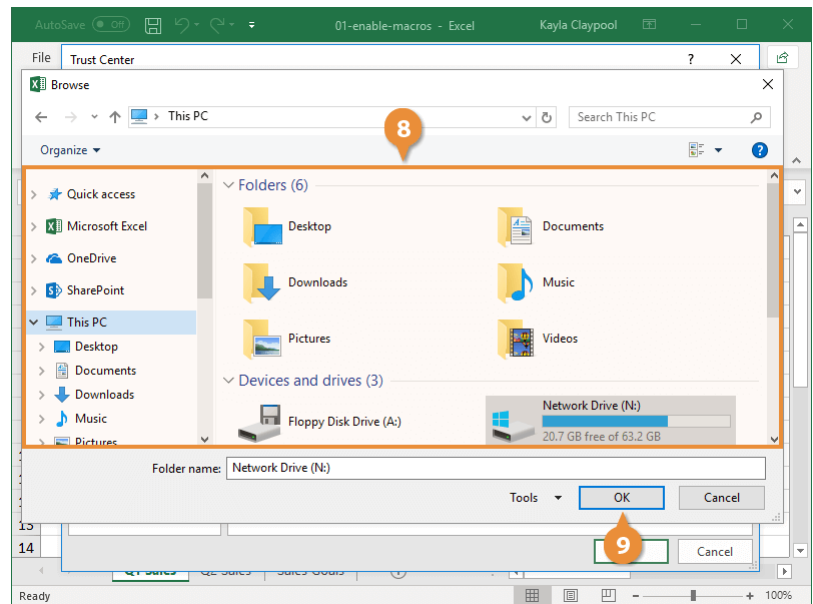
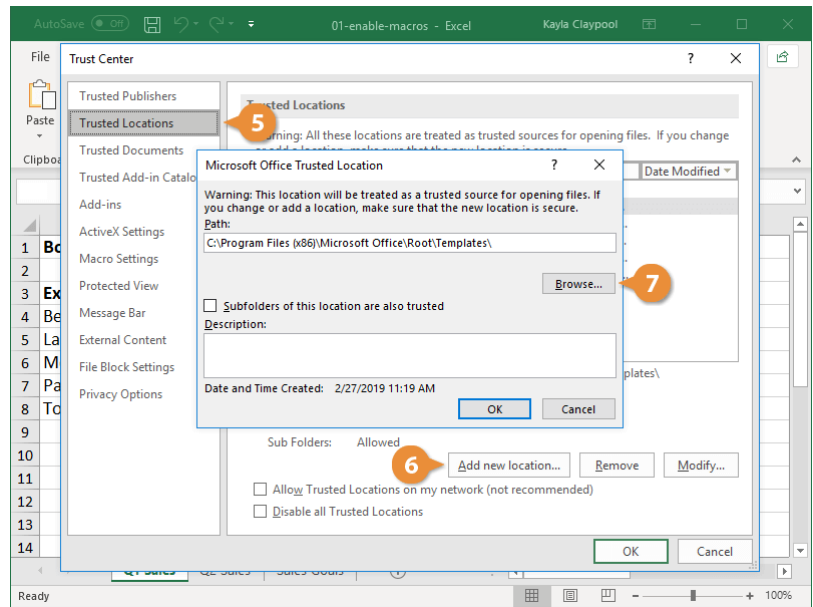
6 Click the **Add new location** button.

7 Click the **Browse** button.

8 Navigate to and select the trusted location in the Browse window.

9 Click **OK**.

Excel adds the specific folder you selected as a trusted location. If the folder is moved or modified, you'll have to return to the Trust Center and update the location.

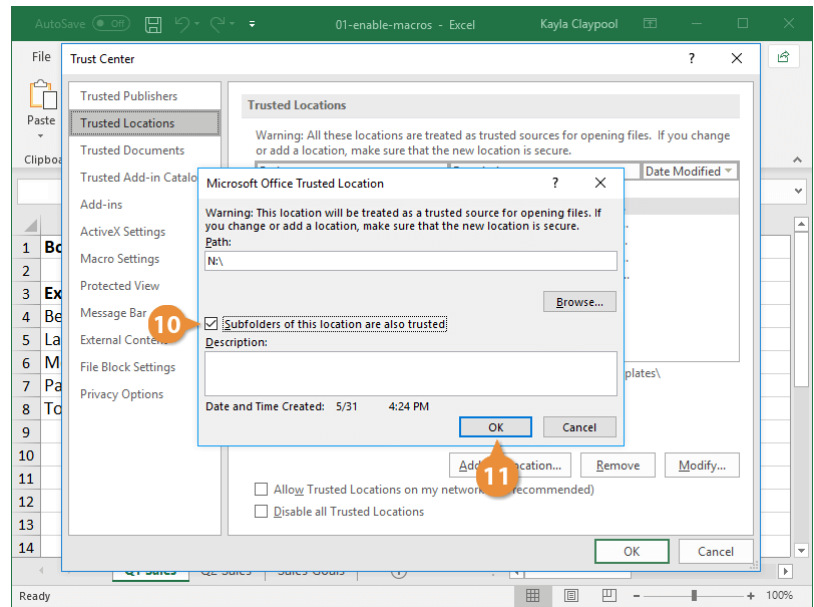


10 (Optional) Select the **Subfolders of this location are also trusted** check box.

With this option selected, any folders within the location you've selected in the Browse dialog box will also be trusted.

11 Click **OK**.

The trusted location is added. You will no longer get a security warning when you open any file saved in the specified folder.



Macro Settings

You also have the ability to globally change the settings for all files containing macros within the Trust Center. This can be risky, so if you work in an organization with a system administrator, you may find you are unable to change these settings.

- 1 Select **Macro Settings** in the Trust Center dialog box.

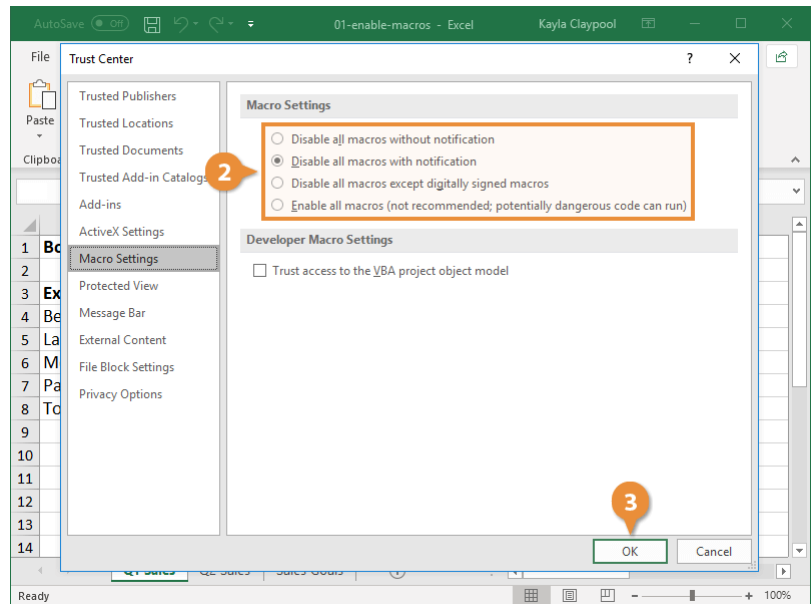
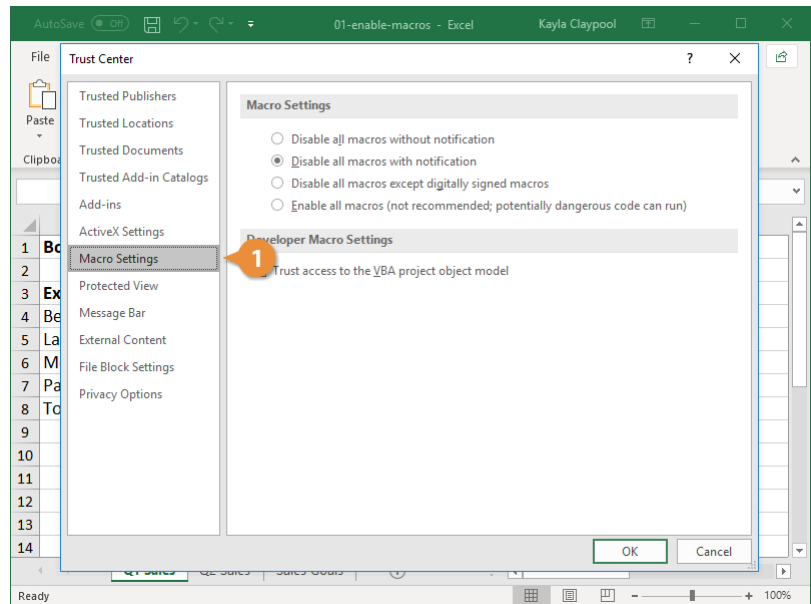
There are four levels of macro security:

- The first level disables macros entirely, blocking them without a notification. This option is the safest but doesn't allow you to run macros at all—even macros you record yourself.
- The default setting blocks macros but displays a notification. This notification allows you to enable macros on a case-by-case basis. This option is safe, as long as you know that you can trust the macros you allow.
- You can automatically enable digitally-signed macros. You'll still be prompted for most macros, but trusted macros will be allowed without a prompt.
- Finally, you can enable all macros without a prompt. This can be dangerous, so use this command with caution.

- 2 Choose the proper security level.

- 3 Click **OK**.

The Trust Center dialog box closes, and the settings are applied to Excel.



Create Macros

There are two ways to create a macro: by recording them or by writing them in Excel's Visual Basic programming language. This lesson explains the easy way to create a macro—by recording the task(s) you want the macro to execute for you.

Record a Macro

When you create a macro, imagine you're being recorded; every step you make is being tracked—all your commands, the data you enter, even any mistakes you make. Before recording a macro, it's helpful to write down a script that contains all the steps you want the macro to record. Practice or rehearse your script a couple times, to make sure it works, before you actually record it. If you do make a mistake while recording a macro, don't worry—you can always delete the existing macro and try again or edit the macro's Visual Basic source code to fix the mistake.

1 If necessary, turn on the Developer tab.

2 Click the **Developer** tab.

3 Click the **Record Macro** button.

The Record Macro window opens, where you can set up the macro's name, description, and shortcut keys before you record it.

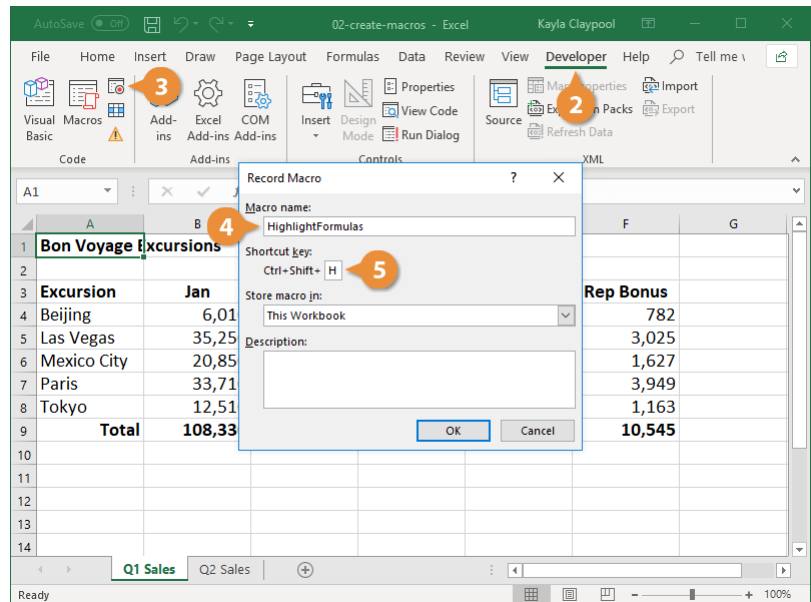
4 Type a name for the macro.

The name must start with a letter and can't have any spaces, symbols, or punctuation marks.

Tip: You may have quite a few macros in a file, so you'll want to give it a descriptive name to easily identify what it does.

5 (Optional) Assign a keyboard shortcut.

Tip: Make sure it's not something you commonly use, like Ctrl + C, which is copy.



6 Choose where to save the macro.

- **Personal Macro**

Workbook: The macro will be available in any Excel file you work in.

- **New Workbook:** Creates a new Excel file and stores the macro there.

- **This Workbook:** Stores the macro in the current file. It will not be accessible in any other Excel files you work in.

7 (Optional) Type a macro description.

While you don't need to add a description, if you have a workbook that contains a number of macros, a description can be really helpful.

8 Click **OK** to start recording.

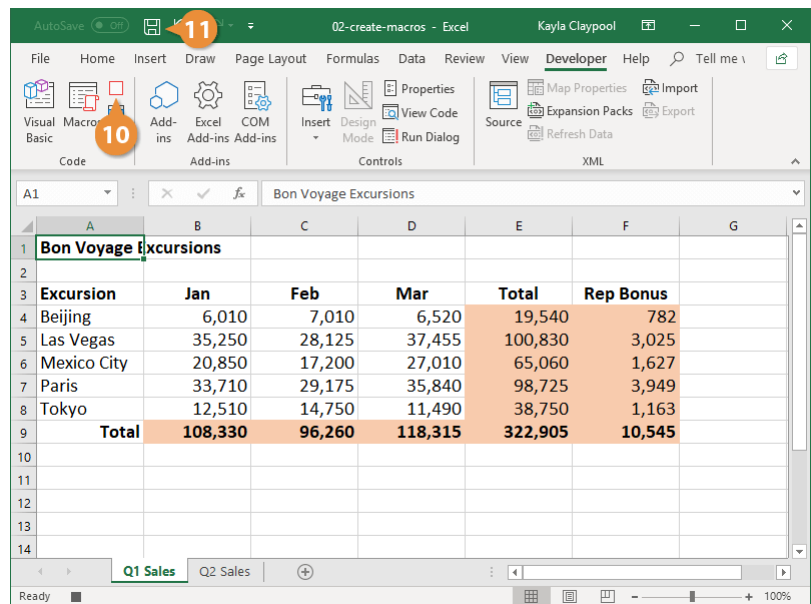
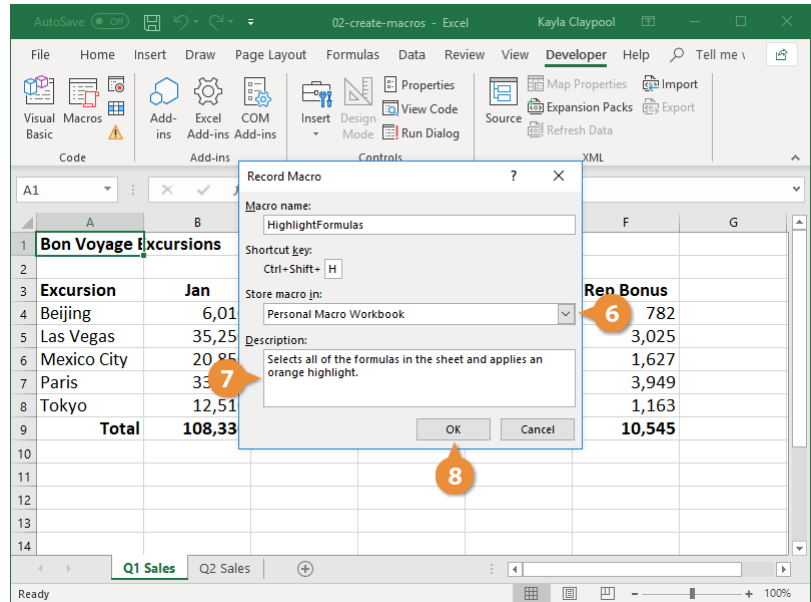
The macro immediately begins recording.

9 Complete all the actions for the process you want to automate.

While recording, the macro captures all the actions you perform. This includes clicking cells, typing cell data and formulas, and applying formatting, among other tasks.

10 Click the **Stop Recording** button, either on the Developer tab or in the status bar.

11 Click the **Save** button.



The workbook is saved, and the macro will be available next time the workbook is opened.

Run a Macro

Once you've recorded and saved a macro into a workbook, you can run it using the keyboard shortcut or view all the macros in a workbook and choose one to run directly.

- 1 Select the sheet where you want to run a macro.
 - 2 Click the **Macros** button on the Developer tab.
 - 3 Select the macro you want to run.
 - 4 Click the **Run** button.
- The selected macro is run.

