



Spreadsheet Methods 5N1977

5. Macro: Used to Automate Routine Steps

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1. WHAT ARE MACROS?

An Excel macro is a set of instructions that can be triggered by a keyboard shortcut, toolbar button or an icon in a spreadsheet. Macros are used to eliminate the need to repeat the steps of common tasks over and over. Tasks such as adding or removing rows and columns, protecting or unprotecting worksheets, selecting a range of cells, or adding the current date to a spreadsheet.

For additional help with macros visit

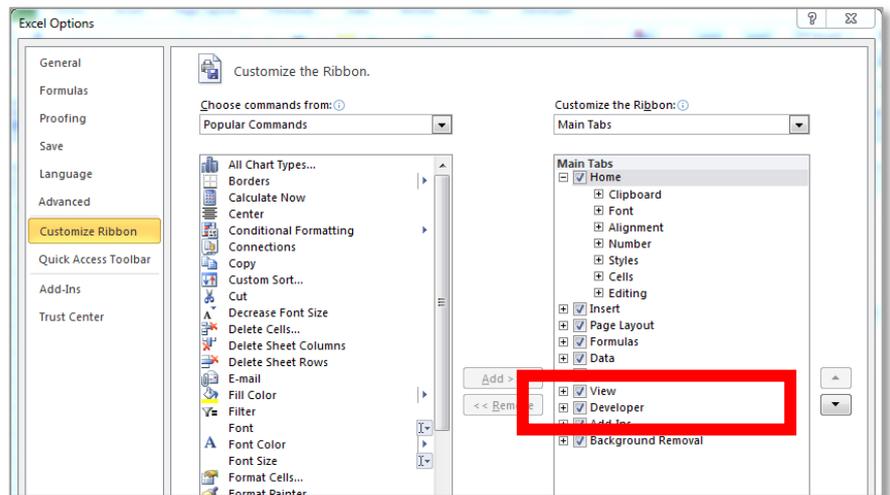
<http://spreadsheets.about.com/od/advancedexcel/ss/080703macro2007.htm>

2. CREATE SIMPLE MACROS

To record a macro you can use the macro recorder. To access this you must first turn on the **Developer** tab.

Turn on the Developer Tab

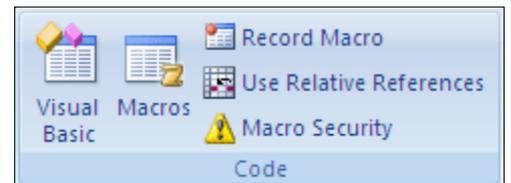
1. To do this click on the **File** **Button** and click on **Options**.
2. In the **Customize Ribbon** tab, select the **Developer** toolbar check box and then click **OK**.



Set the Security Level

On the Developer tab, in the Code group, click Macro Security.

Under Macro Settings, click Enable all macros (not recommended, potentially dangerous code can run), and then click OK.



Record a Macro

1. On the Developer tab in the Code group, click Record Macro.
2. In the name box enter a name for the macro, remember that spaces are not allowed in the name of a macro.
3. You can decide which workbook you would like to save the macro in by changing the **Store macro in** option.
4. Include a description of the macro, in the description box to explain what the macro will do.
5. Click **OK** to start recording **NOTE** remember that anything you do from this point until you stop recording will become part of your macro.

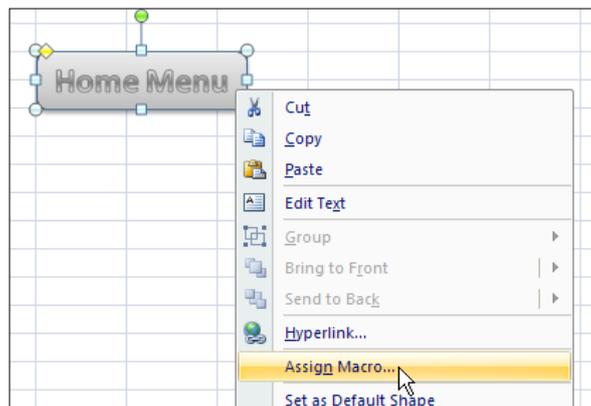


6. Perform the actions you want your macro to do.
 7. On the **Developer** tab, in the **Code** group, click on **Stop Recording**
- Note: You can also click **Stop Recording** on the left side of the status bar.

3. EXECUTE PREVIOUSLY CREATED MACROS

Assign a Macro to an Object or Graphic

1. Add an object to the worksheet you are working on – for example this may be a button to take you to a different work sheet. Create the button using shapes and formatting.
2. Right click on the button or image you have created and click on the **Assign Macro** on the shortcut menu.
3. In the **Macro Name** box, click the macro that you want to assign to the button.
4. This will link the button and the macro.



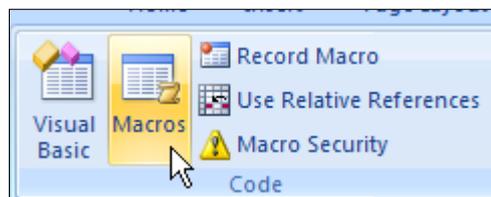
4. MANAGEMENT OF SIMPLE MACROS

Delete a Macro

Open the workbook that the macro is written in.

On the Developer tab, in the Code group, click Macros.

In the macro window click on the name of the macro you wish to delete and click **Delete**.



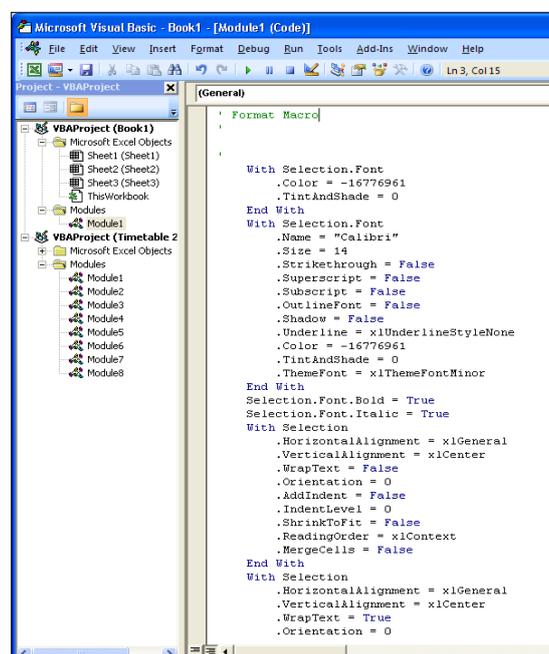
Edit a macro

On the developer tab in the code group click **Macros**.

In the **Macro** window click the macro that you want to edit.

Click **Edit** and this will open the macro editor in **Visual Basic** code. To exit from this select the exit button in the top right corner.

A macro is opened with the code **Sub** and closed with **End Sub**.



The *green code* shows the name of the macro.

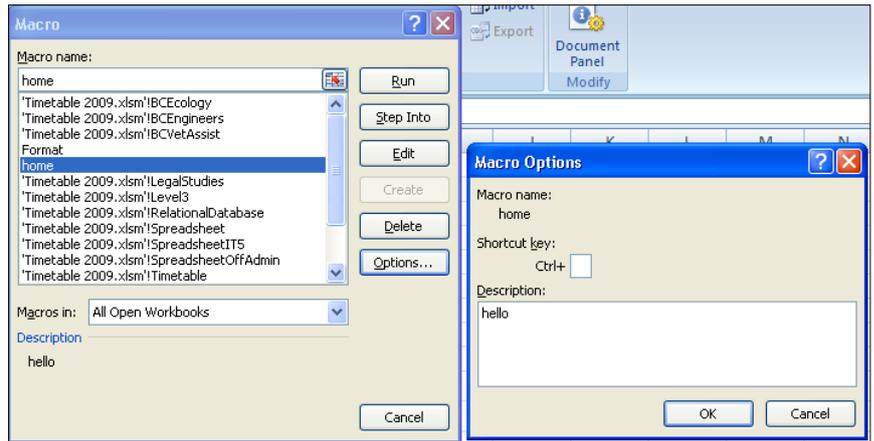
Each of the *blue With* sections of code specify actions which will be completed. These are ended with an **End With**.

To delete one particular action delete the **With** section of code as far as the **End With** option.

Every macro in one workbook is saved in a list of **Subs** under each other.

Document a macro

To document the contents of a macro go the developer tab in the code group macros, click on the button **Options**, this will open the **Macro Options** button. From here you can document the details of the actions the macro does and you can also assign a shortcut key for the macro.

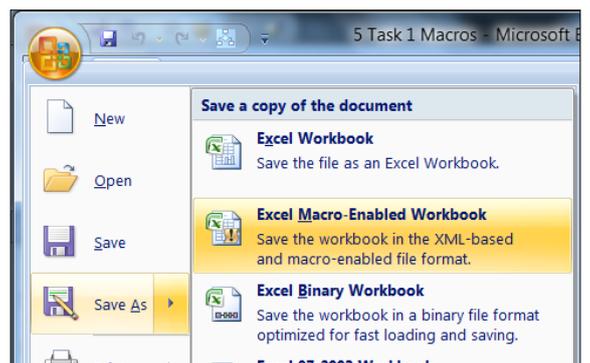


Combine two macros

When creating macros remember that a macro can contain more than one action and every workbook can contain several macros.

Saving a Macro

To save a macro you must change the **file type** to **Excel Macro-Enabled Workbook**.

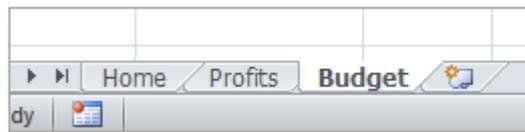


NOTES:

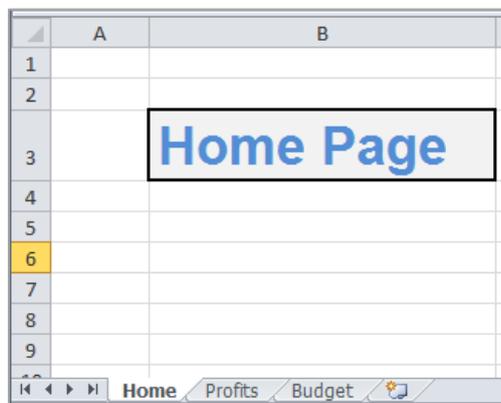
Assign a Macro to the toolbar:

TASK 1 Create a macro which connects different pages in a worksheet together.

1. Rename all the pages in the worksheet. In this example there is are **Home**, **Profit** and **Budget** pages.

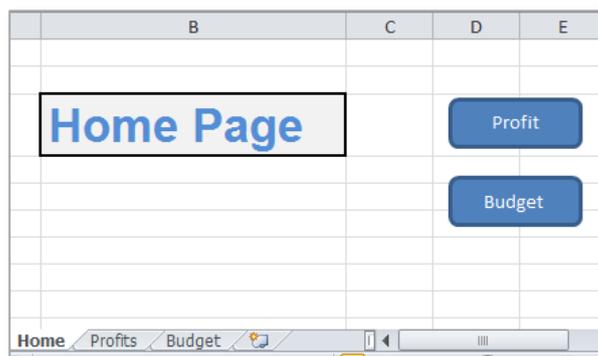


2. Label each of the pages so they can be easily identified. This is the Home Page which has been named on the worksheet and in cell B3.



3. Next add a shape to each of the pages which will be used as the button. The macro will be assigned to this button. (To do this go to **Insert > Shapes** and drag the outline of the shape on the page, add text to the shapes to show which worksheet they link to).

These buttons will be used to as a link to the Profit and Budget pages from the Homepage, like a hyperlinked menu.



4. Now record the first macro to link to the Profit page.

5. Assign the Profit macro to the appropriate shape.

6. Repeat steps 4 and 5 for the Budget Page.

7. From the Profit **page** create a shape which will be the button to link back to the Home page.

8. Record a macro which will link to the Home page and assign this macro to the Home page button.

9. This Home page button with its macro assigned can be copied and pasted to the Budget page.

10. Save your workbook as the file name **Example Menu Macros** and as the document type **EXCEL MACRO ENABLED WORKBOOK**.

NOTE: If you save as a normal Excel Workbook the macros will be removed from the spreadsheet.

TASK 2 Create a Macro which consists of at least five different commands.

