Automate tasks with Visual Basic macros

If you're not familiar with macros, don't let the term frighten you. A macro is simply a recorded set of keystrokes and instructions that you can use to automate a task that you don't want to do from scratch each time. For example, you might record a macro to apply specific page margins, insert a customized bulleted list, or insert a complex table. Take this tutorial to learn how.

Before you begin

What you'll learn

After completing this tutorial, you'll be able to:

- Show the Developer tab on the ribbon.

- Record a macro to insert a stylized table.

- Assign a keyboard shortcut to a macro.

- Run a recorded macro.

- Edit a macro.

Requirements

- Word for Mac 2011

- Basic Word skills, including how to open a document, cut and paste, and format text.

Estimated time to complete: ⏱ 25 minutes

1. Show the Developer tab

The Developer tab is a specialized ribbon tab that contains commands for working with macros. By default, the Developer tab does not appear on the ribbon.
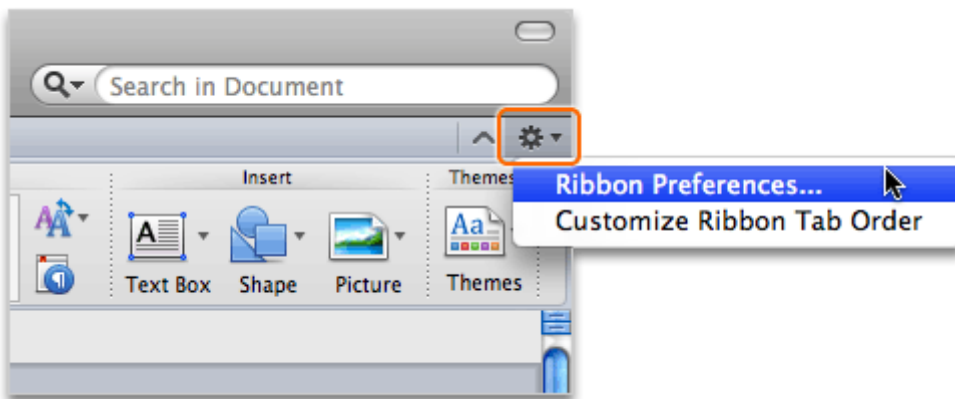
Let's show the Developer tab on the Word ribbon.

> **Important** This tutorial uses Word to demonstrate how to work with macros. However, the principles are similar in Excel.
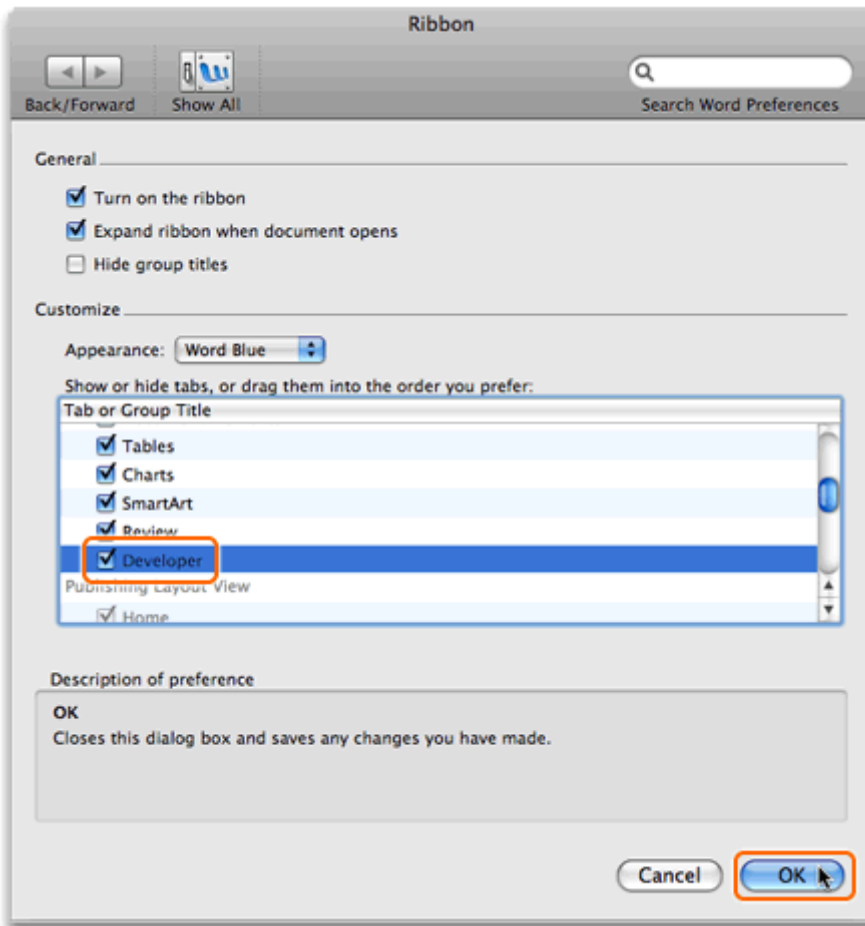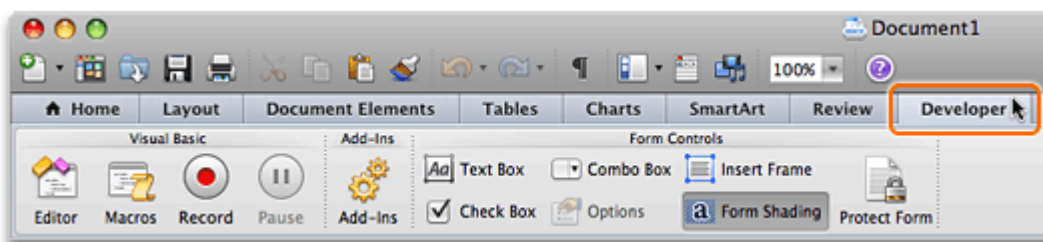
① In Word, click **File** > **New Blank Document**.
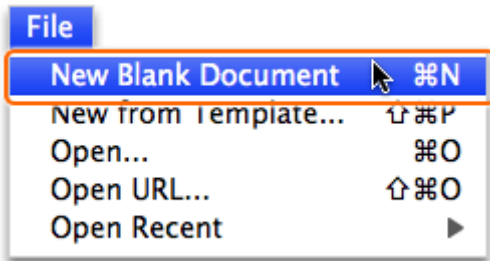
② On the ribbon, click **Ribbon Options**, and then click **Ribbon Preferences**.

③ In the **Tab or Group Title** box, select the **Developer** check box, and then click **OK**.

④ Notice that the **Developer** tab now appears on the ribbon.

Hints

- To rearrange or remove ribbon tabs from the ribbon, click **Ribbon Options**, and then click **Customize Ribbon Tab Order**.

**Before you move on**

Make sure that you can do the following:

- Show the Developer tab on the ribbon.
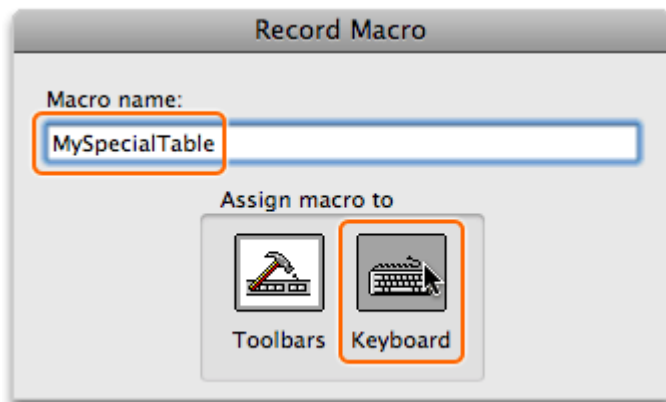
2. Assign a keyboard shortcut to a macro

Before you begin recording a macro, you have the option to assign it a keyboard shortcut. By assigning a keyboard shortcut to a macro, you will be able to run the macro at any time by pressing the shortcut keys.

Let's assign a keyboard shortcut to the macro that we will record in the next lesson.

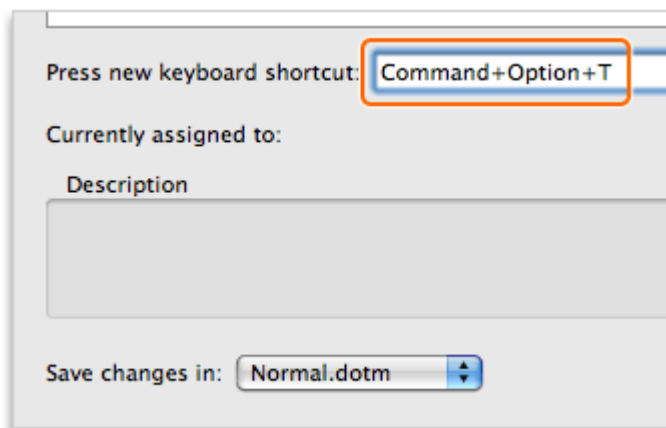① On the **Developer** tab, under **Visual Basic**, click **Record**.
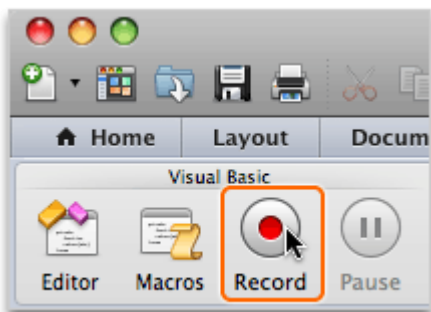
② In the **Macro name** box, type **MySpecialTable**, and then click **Keyboard**.

📝 **Note** Macro names cannot contain spaces or special characters, such as @ or !.

③ Make sure that the cursor is in the **Press new keyboard shortcut** box, and then press ⌘+OPTION+T.

Note If the keyboard shortcut is assigned to another command, the command will appear next to **Currently assigned to**. If you assign a different keyboard shortcut, make a note of the shortcut since you will use it in a later lesson.

④ Click **Assign**. The shortcut appears in the **Current keys** box. Then click **OK**.
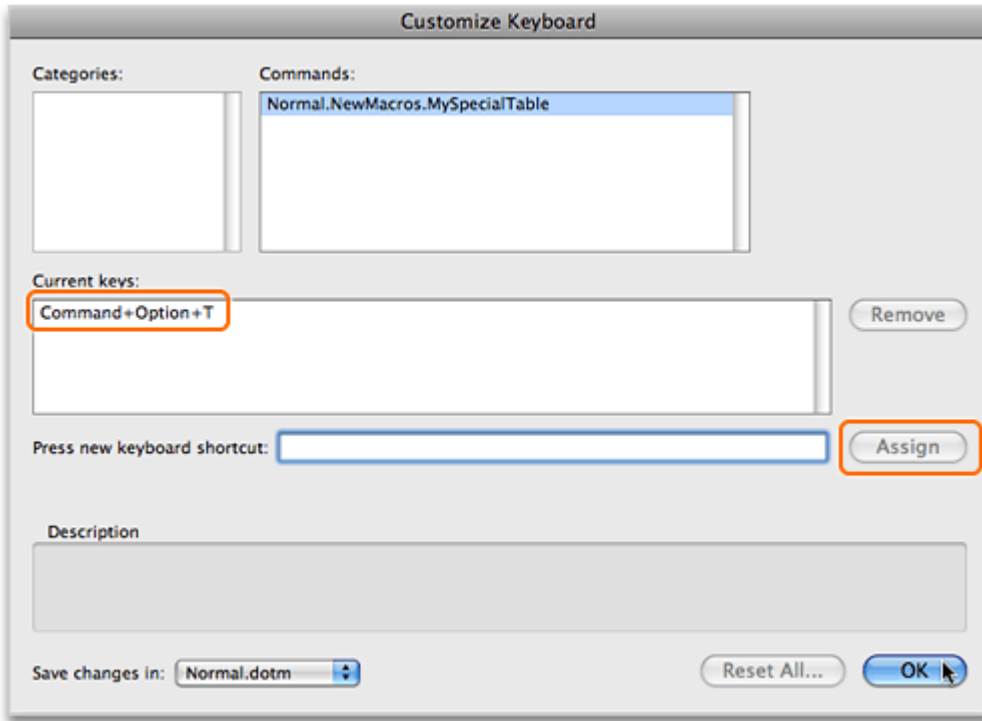
⑤ Notice that the **Record** button on the **Developer** tab now appears as **Stop**. Word is now in macro recording mode.
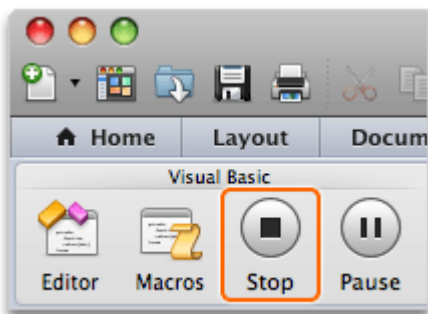
Hints

- By default, a macro is saved so that it can be used in all documents that are based on the Normal template (Normal.dotx). To restrict a macro to the current document, in the **Record Macro** dialog box (shown in step 2), on the **Store macro in** pop-up menu, click **Document1 (document)**, where Document1 is the name of the current document.

Before you move on

Make sure that you can do the following:

- Assign a keyboard shortcut to a macro.

3. Record a macro

To record a macro, you simply step through the task as you would normally. As you perform the task, Word records each click, keystroke, and any text that you type as VBA code that you can edit later.
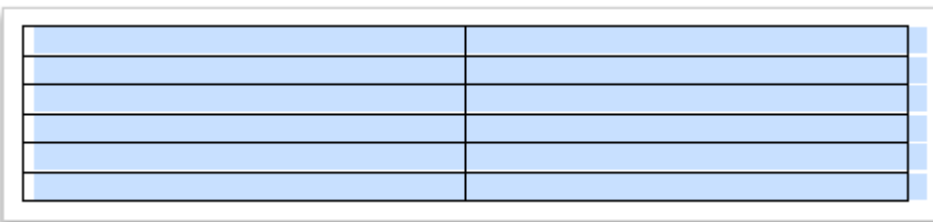
Let's record a macro that will insert a stylized, two-column "Question and Answer" table.

   Important You must follow the steps in lesson 2 before you complete this lesson.

① On the **Tables** tab, under **Table Options**, click **New**, then drag to create a 2 x 6 table.
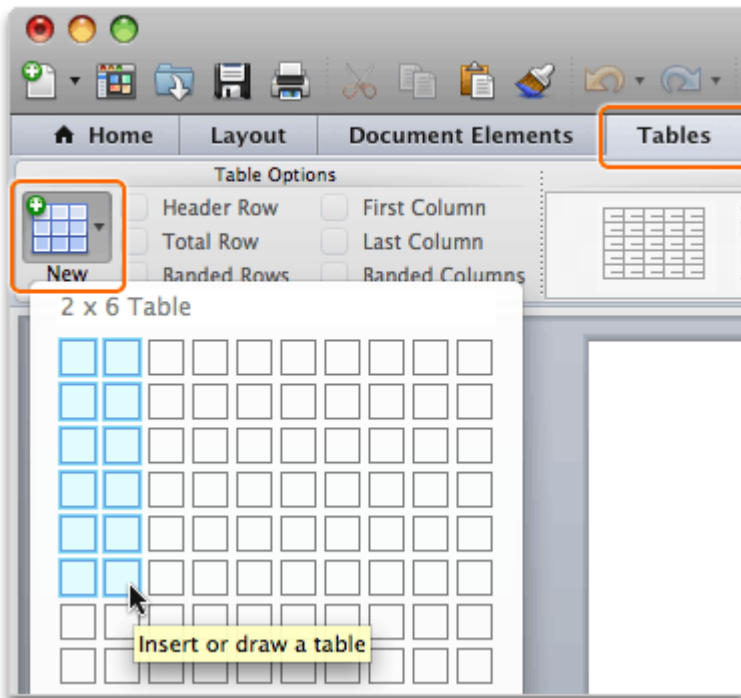
② Hold down SHIFT and OPTION, and press the right arrow key on your keyboard until the table is selected as shown below.
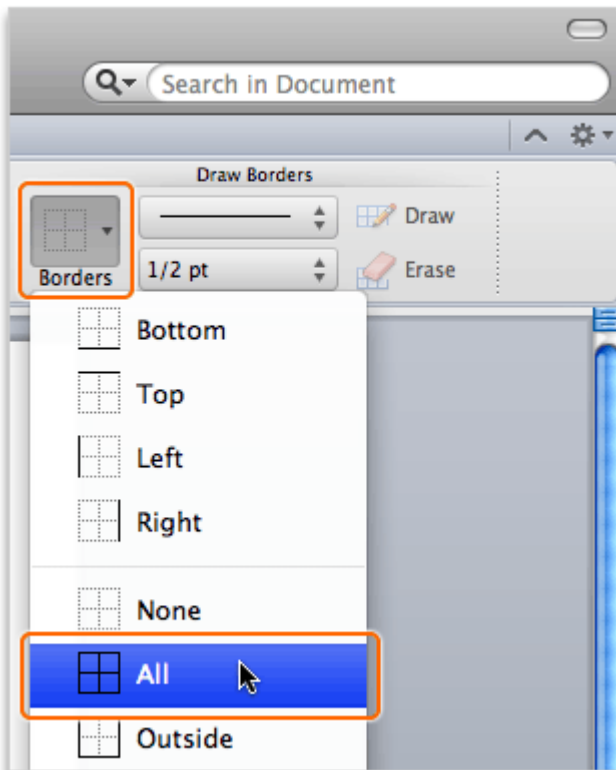
🗒 **Note** When recording a macro, you cannot use the mouse to select, copy, or drag content in the document. To record these actions, you must use the keyboard.

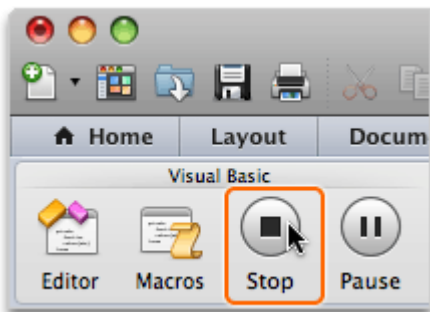③ Under **Table Styles**, click **Light Shading - Accent 1**.
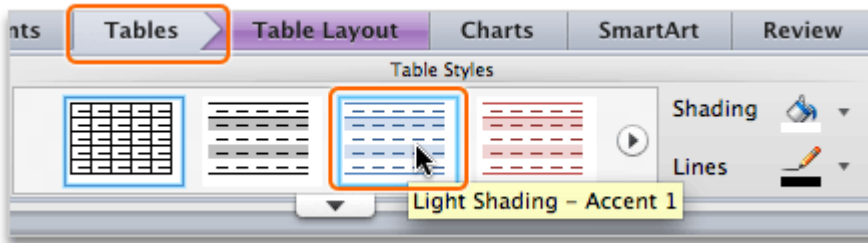
④ On the **Tables** tab, under **Draw Borders**, click **Borders**, and then click **All**.

⑤ Type **Question**, press TAB, and then type **Answer**.

Question	Answer

⑥ On the **Developer** tab, click **Stop**. The macro is now recorded and saved.

Hints

- When you record your own macros, it is important to carefully plan what you want to record. The macro recorder records every keystroke and click, which can lead to inefficient macros if you record a lot of unnecessary keystrokes.

- To pause while recording a macro, on the **Developer** tab, click **Pause**.

Before you move on

Make sure that you can do the following:

- Record a macro to insert a two-column table.

4. Run the macro

When you run a macro, Word performs the sequence of tasks that you recorded.

Let's run the macro by using the assigned keyboard shortcut and by using a command on the Developer tab.

① Click **File** > **New Blank Document**.
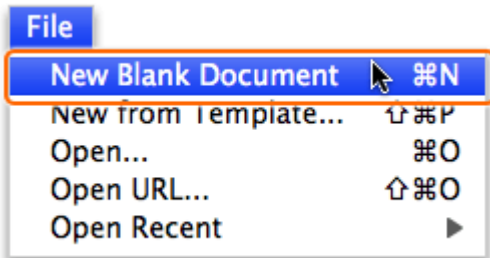
② Press ⌘+OPTION+T.

📄 **Note** If you assigned a different keyboard shortcut in the earlier lesson, press that shortcut instead.

③ Click below the inserted table, and then press RETURN to insert a blank line.

④ On the **Developer** tab, under **Visual Basic**, under **Visual Basic**, click **Macros**.

⑤ Click **MySpecialTable**, and then click **Run**.
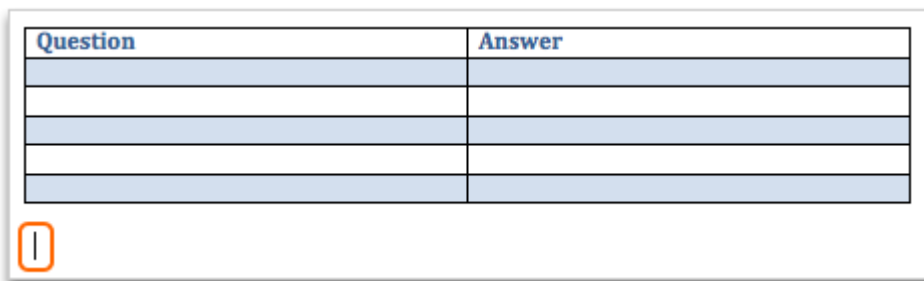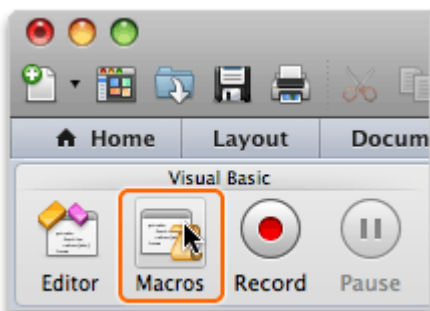
Macros

Macro name:

MySpecialTable

MySpecialTable

Run

Cancel

Step

Edit

Create

Delete

Organizer...

Macros in: All active templates and documents

Description:
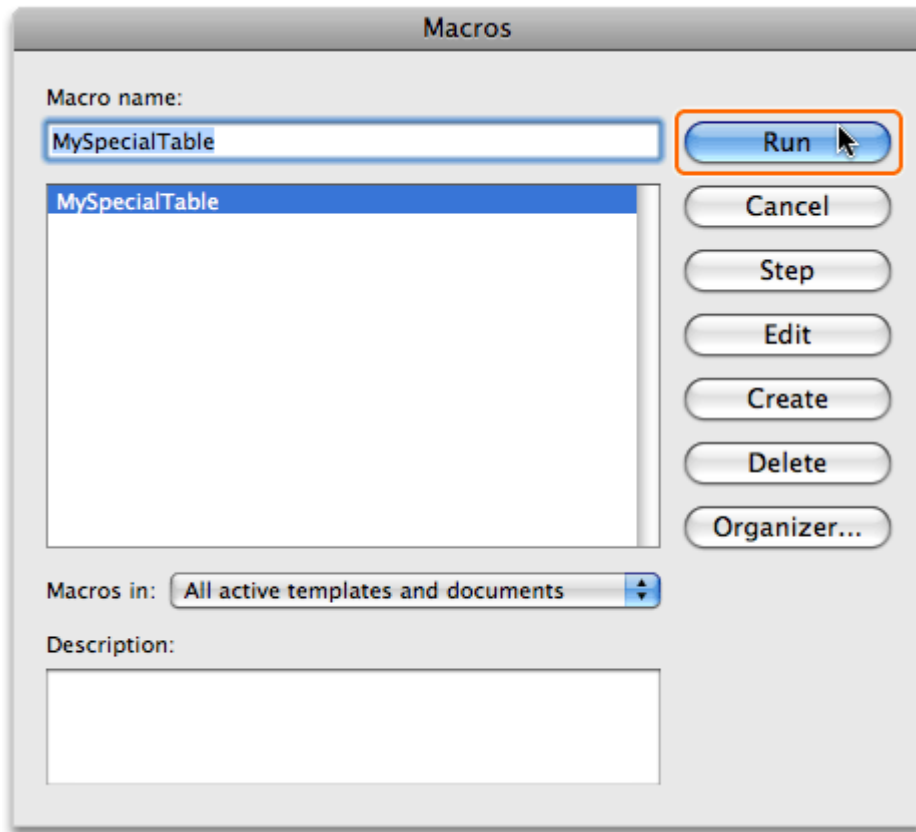
📝 **Note** If you don't see your macro in the list, on the **Macros in** pop-up menu, click **All active templates and documents**.

⑥ Notice that Word inserts a table each time that you run the macro.

Question	Answer

Question	Answer

Hints

- To change the keyboard shortcut assigned to a macro, click **View** > **Toolbars** > **Customize Toolbars and Menus**. Then, on the **Commands** tab, under **Categories**, click **Macros**. Click the macro that you want to change the shortcut for, and then click **Keyboard**.

- To change macro security warnings, click **Word** > **Preferences**. Then, under **Personal Settings**, click **Security**. The option is listed under **Macro Security**.

Before you move on

Make sure that you can do the following:

- Run a macro by using the assigned keyboard shortcut and by using the Macros command on the Developer tab.

5. Edit the macro

When you record a macro, Word automatically translates each keystroke and click into VBA code. For the macro that you just recorded, the code specifies that the macro will insert a 2 x 6 table, plus all of the placeholder text that you typed. You can modify the code, and thus the actions that the macro performs, by using the built-in Visual Basic Editor.

Let's edit the macro so that the inserted table includes three columns instead of the original two.

Note Advanced macro editing is beyond the scope of this tutorial. For additional information about editing macros and the Visual Basic Editor, see Visual Basic Documentation.

① On the **Developer** tab, under **Visual Basic**, click **Editor**.
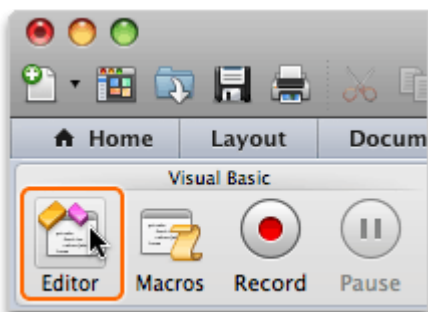
(2) Notice that the window contains code for the table that you created .
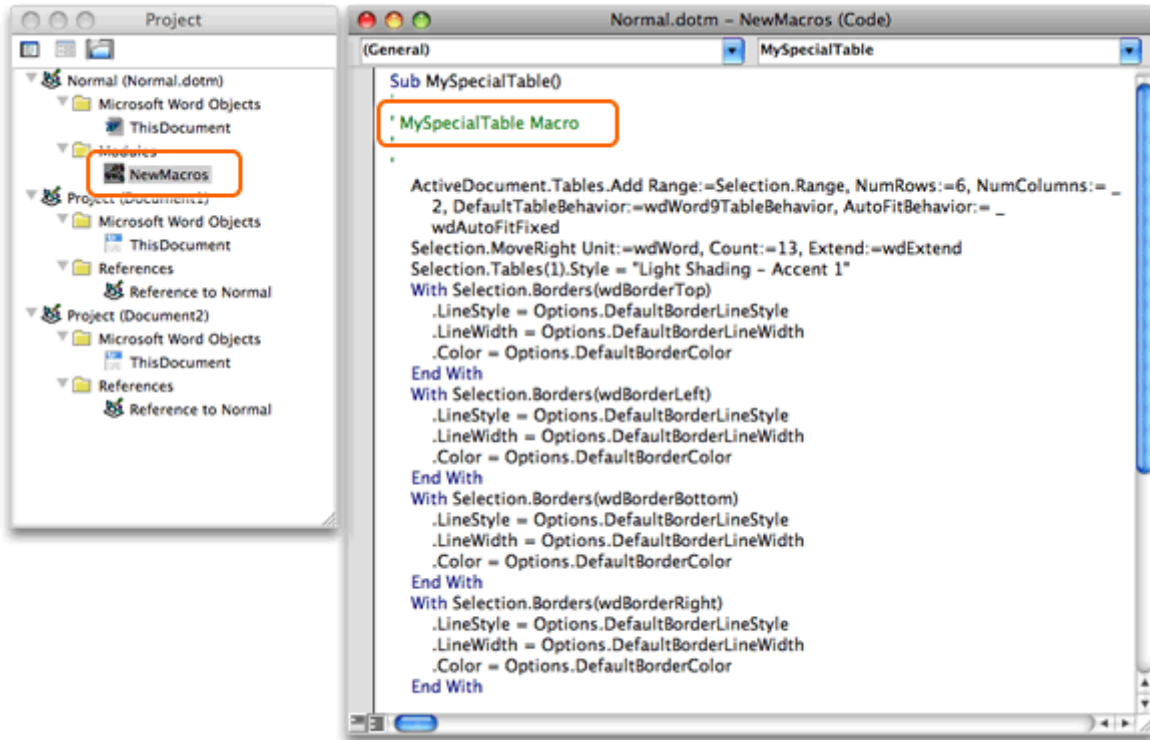
Note If the code doesn't appear, in the **Project** window, under **Modules**, double-click **NewMacros**.

(3) In the code, after `NumColumns:=_`, replace the `2` with a `3`.

④ At the bottom of the window, select the lines of code shown below, and then click **Edit** > **Copy**.

```
End With
With Selection.Borders(wdBorderVertical)
    .LineStyle = Options.DefaultBorderLineStyle
    .LineWidth = Options.DefaultBorderLineWidth
    .Color = Options.DefaultBorderColor
End With
Selection.TypeText Text:="Question"
Selection.MoveRight Unit:=wdCell
Selection.TypeText Text:="Answer"
End Sub
```
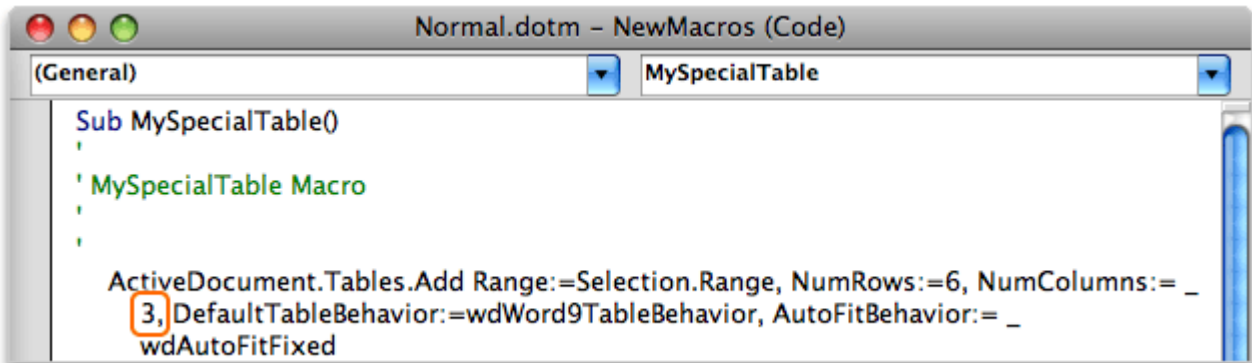
⑤ In the code, click after the quotation mark that follows `Answer`, press RETURN, and then click **Edit** > **Paste**.

```
End With
Selection.TypeText Text:="Question"
Selection.MoveRight Unit:=wdCell
Selection.TypeText Text:="Answer"
Selection.MoveRight Unit:=wdCell
Selection.TypeText Text:="Answer"
End Sub
```

⑥ Replace the second instance of `Answer` with `Comments`.

```
End With
Selection.TypeText Text:="Question"
Selection.MoveRight Unit:=wdCell
Selection.TypeText Text:="Answer"
Selection.MoveRight Unit:=wdCell
Selection.TypeText Text:="Comments"
End Sub
```
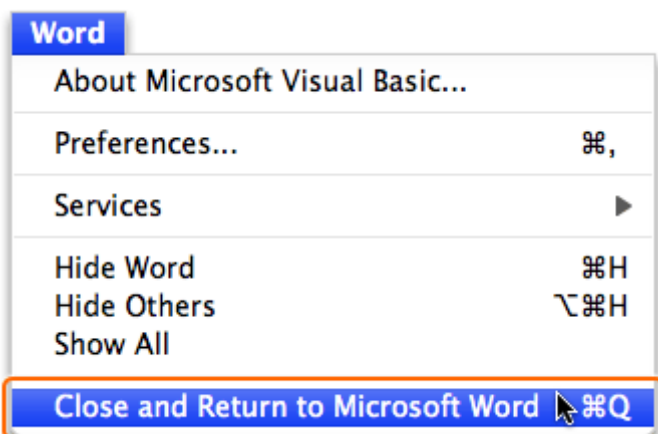
⑦   Click **Word** > **Close and Return to Microsoft Word**.

⑧   Below the existing table, press RETURN, and then press ⌘+OPTION+T (or the keyboard shortcut that you assigned in the earlier lesson).

⑨   Notice that the macro now inserts a three-column table that is based on the edited code.

Hints

- To edit a macro other than the one just recorded, on the **Developer** tab, under **Visual Basic**, click **Macros**. Select the macro that you want to edit, and then click **Edit**.

- To delete a macro, on the **Developer** tab, under **Visual Basic**, click **Macros**. Select the macro that you want to delete, and then click **Delete**.

Before you move on

Make sure that you can do the following:

- Edit a macro by using the built-in Visual Basic Editor.

Quick Reference Card

To	Do this
Show the Developer tab on the ribbon	Click the **Ribbon Preferences** gear, then click **Ribbon Preferences**. Select the **Developer** check box.
Begin recording a macro	Plan the sequence of steps for the task that you want to perform (for example, inserting a stylized table). Then, on the **Developer** tab, under **Visual Basic**, click **Record**.
Assign a keyboard shortcut to a macro	Begin recording a macro. Then, under **Assign macro to**, click **Keyboard**, and then press the keyboard shortcut that you want (for example, ⌘+OPTION+T).
Restrict a macro to the document in which it is recorded	Begin recording a macro. Then, on the **Store macro in** pop-up menu, click **Document1 (document)**, where Document1 (document) is the document in which the macro is being recorded.
Pause while recording a macro	On the **Developer** tab, under **Visual Basic**, click **Pause**.
Run a macro	Press the keyboard shortcut that you assigned to the macro. Or, on the **Developer** tab, under **Visual Basic**, click **Macros**, click the macro, and then click **Run**.
Edit a macro	On the **Developer** tab, under **Visual Basic**, click **Macros**. Click a macro in the list, and then click **Edit**.
Delete a macro	On the **Developer** tab, under **Visual Basic**, click **Macros**. Click a macro in the list, and then click **Delete**
Change the keyboard shortcut for a macro	Click **View** > **Toolbars** > **Customize Toolbars and Menus**. Then, on the **Commands** tab, under **Categories**, click **Macros**. Click the macro that you want to change the shortcut for, and then click **Keyboard**.

More Hints

- The Developer tab is a specialized ribbon tab that contains commands for working with macros. By default, the Developer tab does not appear on the ribbon.

- You can use commands on the Developer tab to record and edit macros in Word, Excel, and PowerPoint.

- When you record your own macros, it is important to carefully plan what you want to record. The macro recorder records every keystroke and click, which can lead to inefficient macros if you record a lot of unnecessary keystrokes.

- Macro names cannot contain spaces or special characters, such as @ or !.

- By default, a macro is saved so that it can be used in all documents. You can however restrict the macro to the document in which it is recorded.

- When you record a macro, Word automatically translates each keystroke and click into VBA code. You can modify the code, and thus the actions that the macro performs, by using the built-in Visual Basic Editor.