



Macro

Excel Macro is a record and playback tool that simply records your Excel steps and the macro will play it back as many times as you want. VBA Macros save time as they automate repetitive tasks. It is a piece of programming code that runs in an Excel environment but you don't need to be a coder to program macros. Though, you need basic knowledge of VBA to make advanced modifications in the macro.

Why are Excel Macros Used in Excel?

As humans, we are creatures of habit. There are certain things that we do on a daily basis, every working day. Wouldn't it be better if there were some magical way of pressing a single button and all of our routine tasks are done? I can hear you say yes. Macro in Excel helps you to achieve that. In a layman's language, a macro is defined as a recording of your routine steps in Excel that you can replay using a single button.

For example, you are working as a cashier for a water utility company. Some of the customers pay through the bank and at the end of the day, you are required to download the data from the bank and format it in a manner that meets your business requirements.

You can import the data into Excel and format. The following day you will be required to perform the same ritual. It will soon become boring and tedious. **Macros solve such problems by automating such routine tasks.** You can use a macro to record the steps of

- Importing the data
- Formatting it to meet your business reporting requirements.

What is VBA in a Layman's Language?

VBA is the acronym for Visual Basic for Applications. It is a programming language that Excel uses to record your steps as you perform routine tasks. You do not need to be a programmer or a very

technical person to enjoy the benefits of macros in Excel. Excel has features that automatically generated the source code for you.

Excel Macro Basics

Macros are one of the developer features. By default, the tab for developers is not displayed in Excel. You will need to display it via customize report

Excel Macros can be used to compromise your system by attackers. By default, they are disabled in Excel. If you need to run macros, you will need to enable running macros and only run macros that you know come from a trusted source

If you want to save Excel macros, then you must save your workbook in a macro-enabled format *.xlsm

The macro name should not contain any spaces.

Always fill in the description of the macro when creating one. This will help you and others to understand what the macro is doing.

Step by Step Example of Recording Macros in Excel

Now in this Excel macros tutorial, we will learn how to create a macro in Excel:

We will work with the scenario described in the importance of macros Excel. For this Excel macro tutorial, we will work with the following CSV file to write macros in Excel.

```
serial no,date,account no,amount
1,01-02-2015,001,500
2,01-02-2015,001,200
3,01-02-2015,001,350
4,01-02-2015,001,2500
5,01-02-2015,001,5000
```

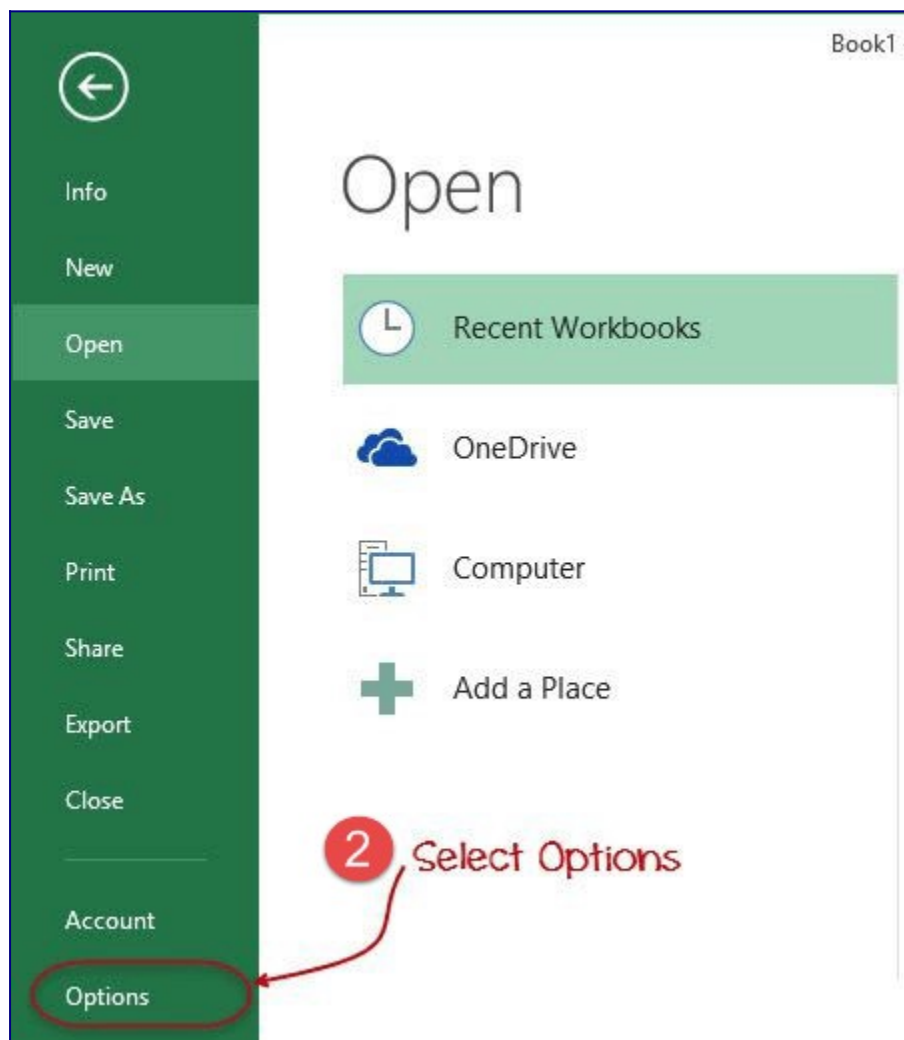
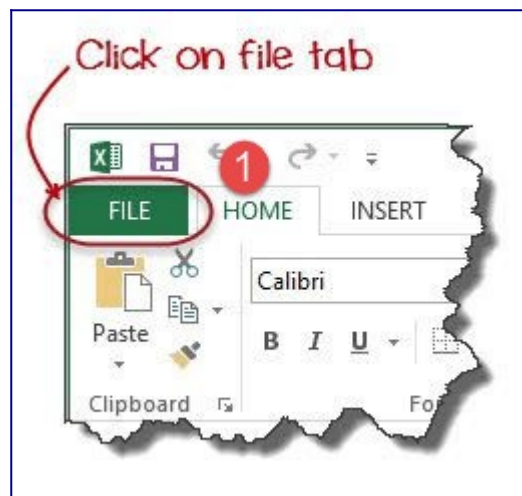
We will create a macro enabled template that will import the above data and format it to meet our business reporting requirements.

Enable Developer Option

To execute VBA program, you have to have access to developer option in Excel. Enable the developer option as shown in the below Excel macro example and pin it into your main ribbon in Excel.

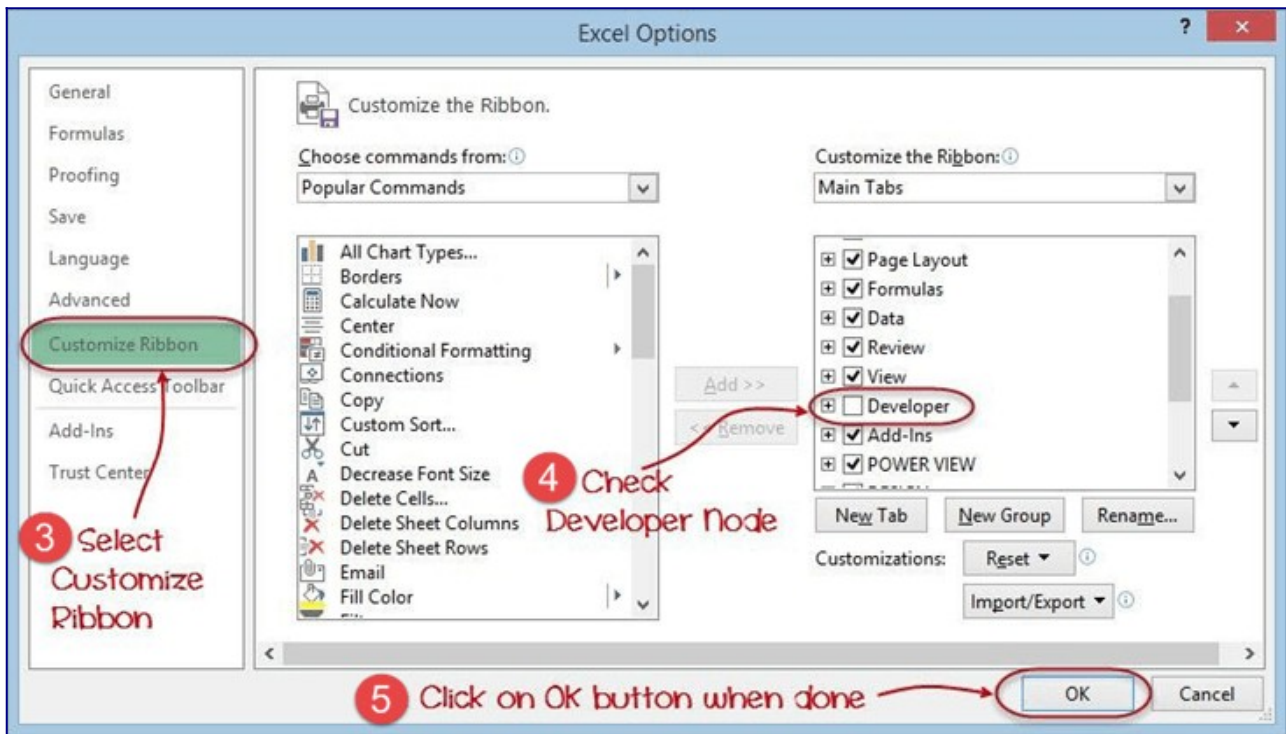
Step 1)Go to main menu "FILE"

Select option "Options."



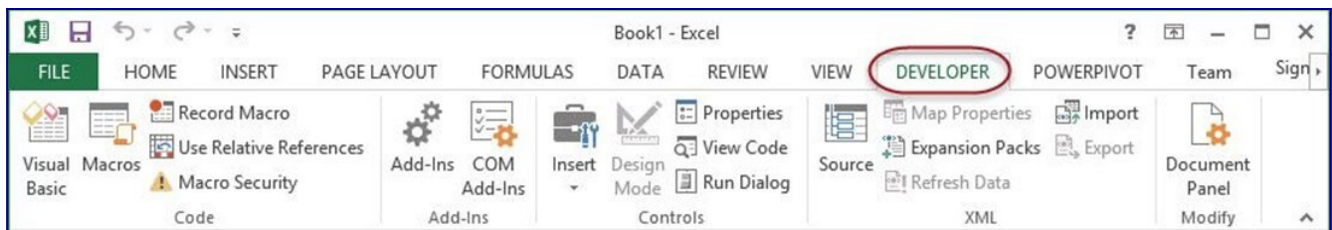
Step 2) Now another window will open, in that window do following things

- Click on Customize Ribbon
- Mark the checker box for Developer option
- Click on OK button



Step 3) Developer Tab

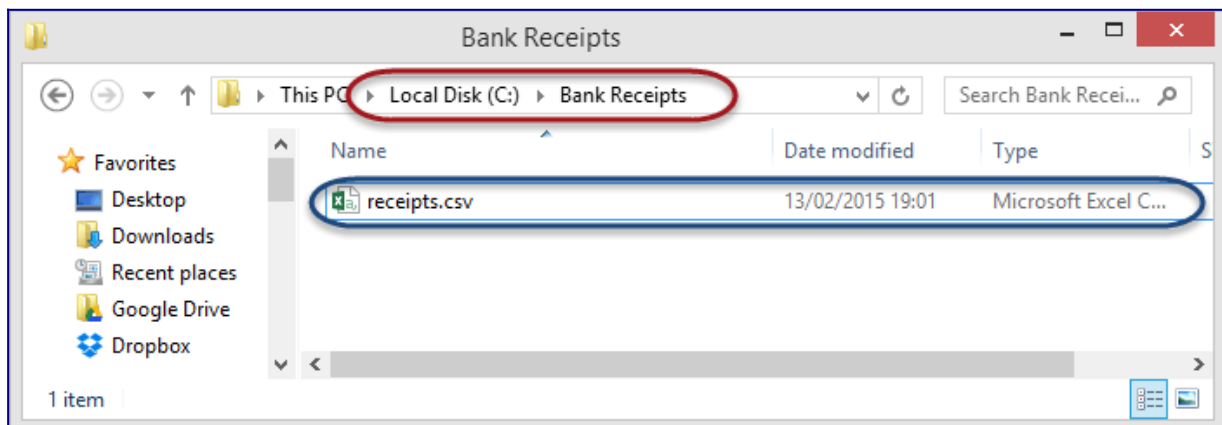
You will now be able to see the DEVELOPER tab in the ribbon



Step 4) Download or Create the CSV

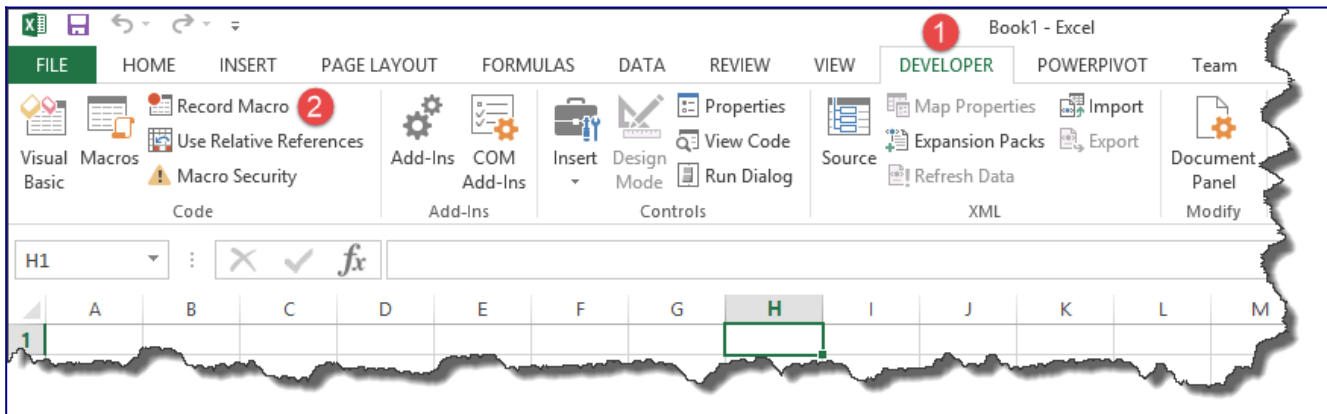
First, we will see how we can create a command button on the spreadsheet and execute the program.

- Create a folder in drive C named Bank Receipts
- Paste the receipts.csv file that you downloaded

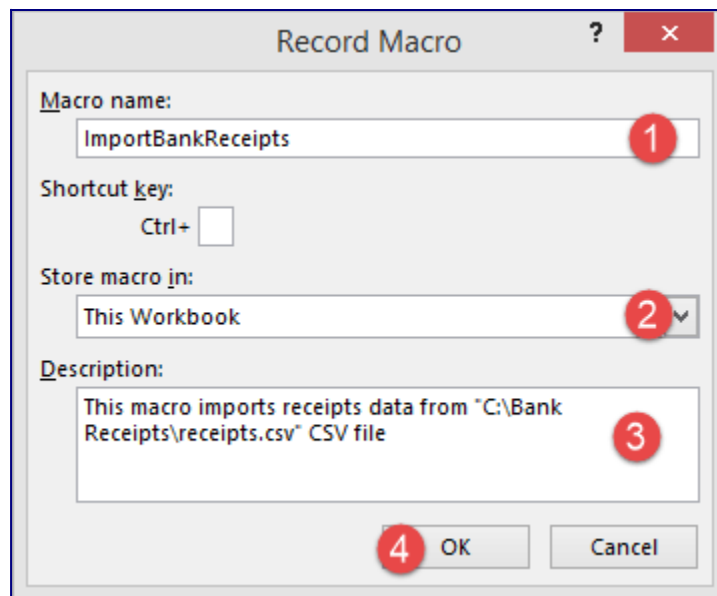


Step 5) Record Macro

1. Click on the DEVELOPER tab
2. Click on Record Macro as shown in the image below



You will get the following dialogue window

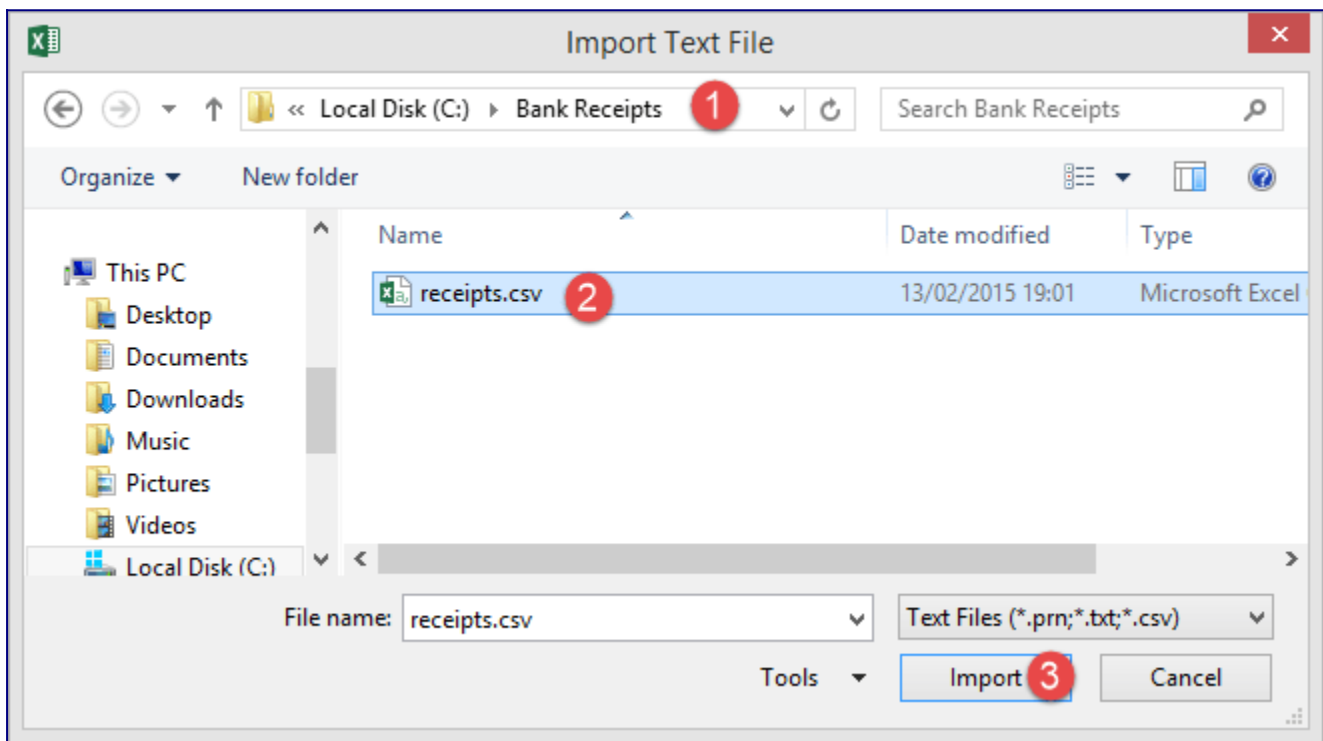


1. Enter ImportBankReceipts as the macro name.
2. Step two will be there by default
3. Enter the description as shown in the above diagram
4. Click on "OK" tab

Step 6) Perform Macro Operations/Steps you want to record

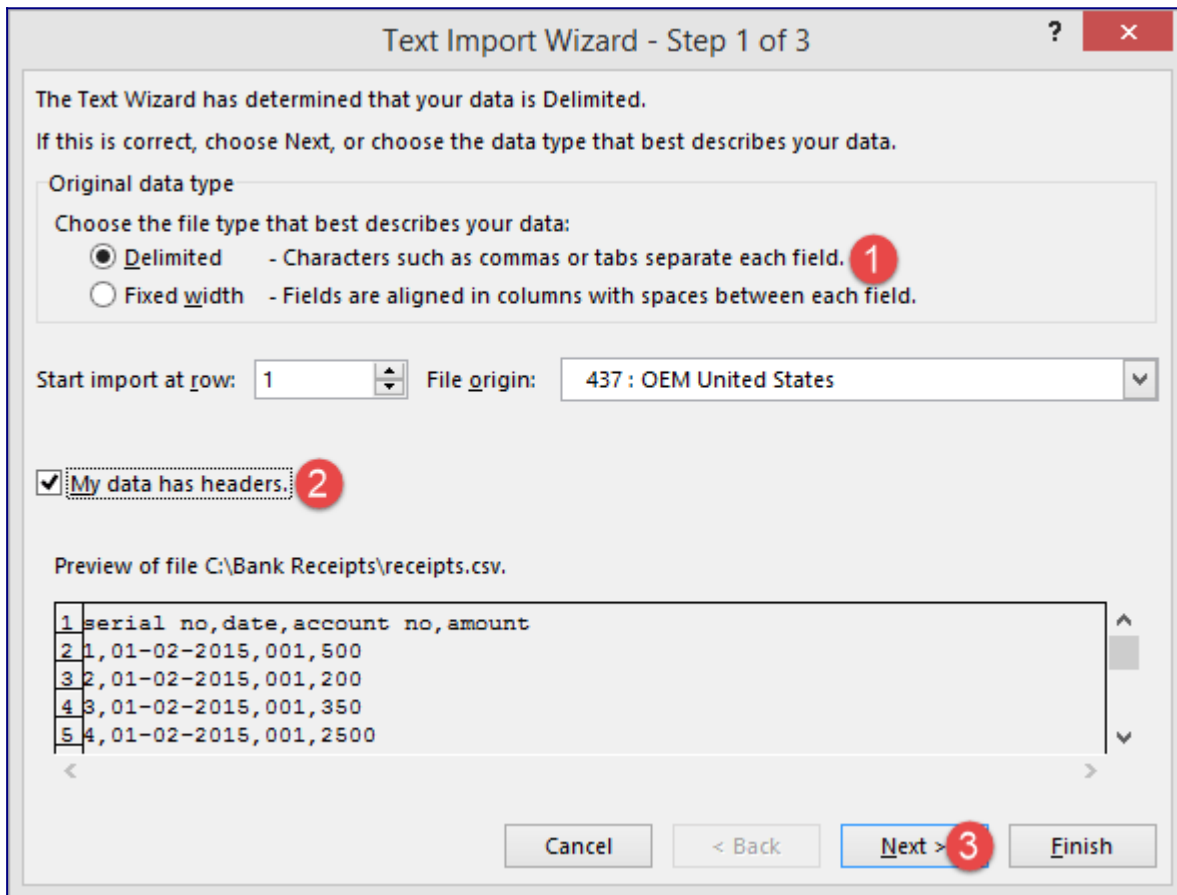
- Put the cursor in cell A1
- Click on the DATA tab
- Click on From Text button on the Get External data ribbon bar

You will get the following dialogue window

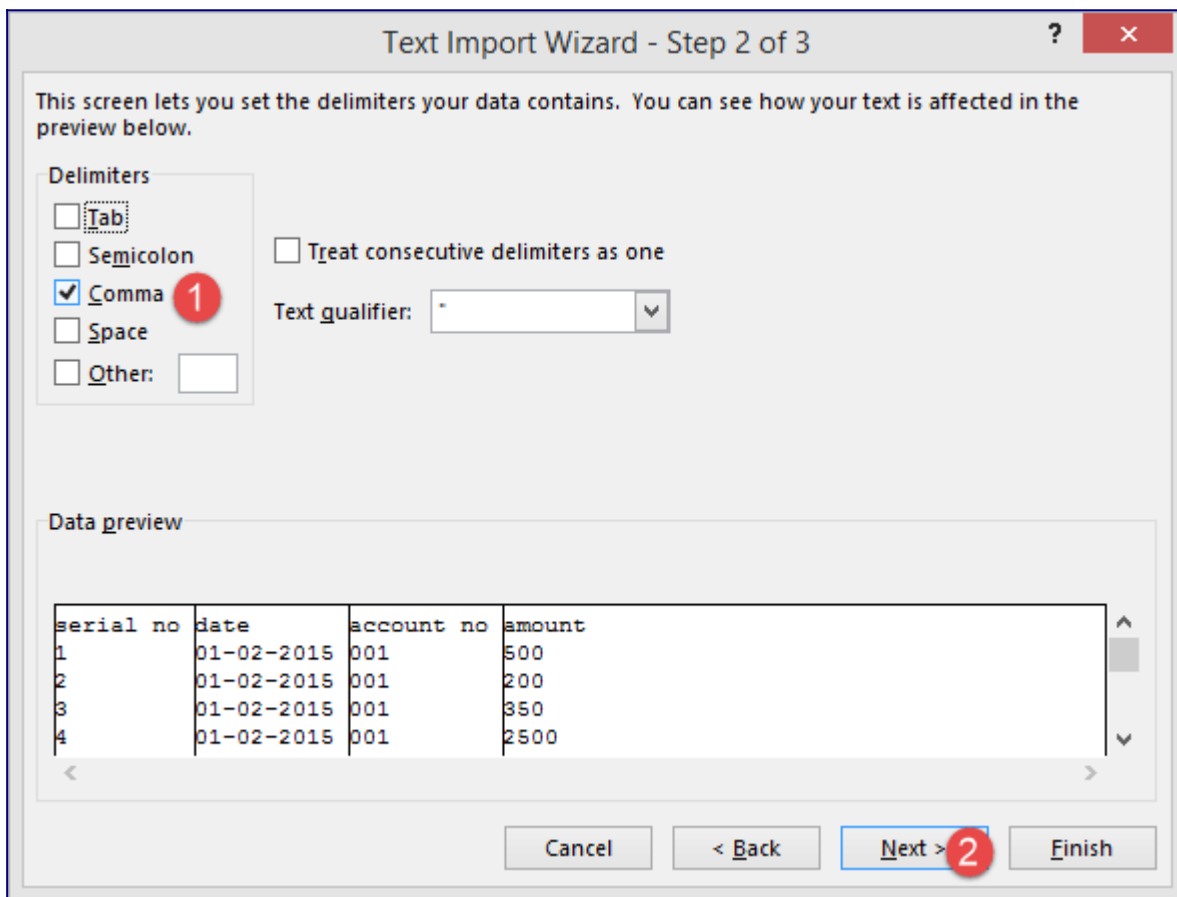


1. Go to the local drive where you have stored the CSV file
2. Select the CSV file
3. Click on Import button

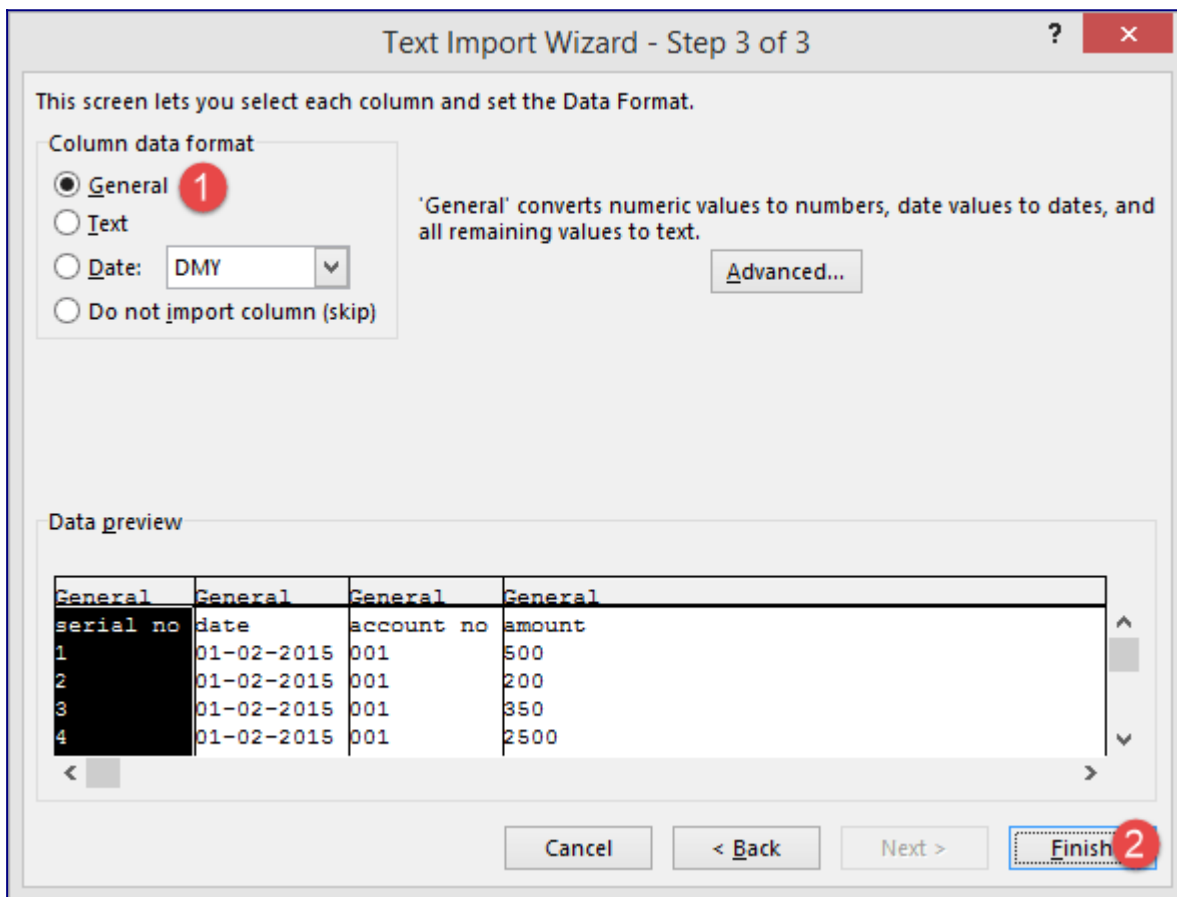
You will get the following wizard



Click on Next button after following the above steps



Follow the above steps and click on next button

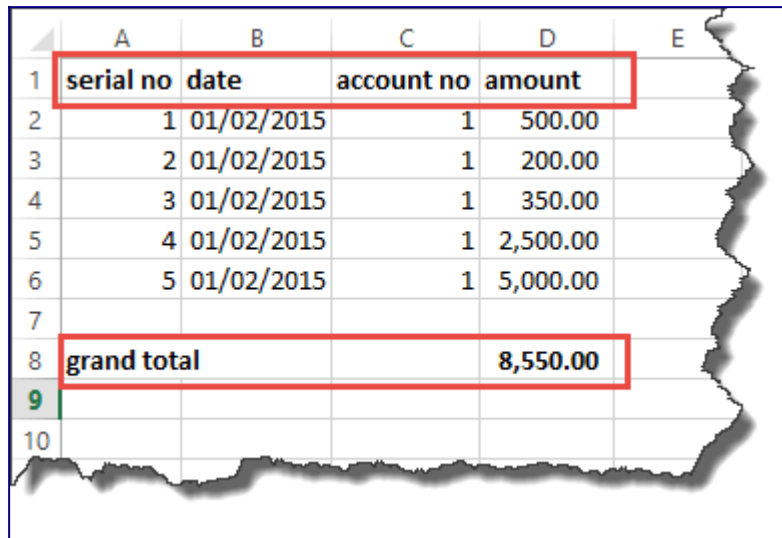


- Click on Finish button
- Your workbook should now look as follows

serial no	date	account no	amount
1	01/02/2015	1	500
2	01/02/2015	1	200
3	01/02/2015	1	350
4	01/02/2015	1	2500
5	01/02/2015	1	5000

Step 7) Format the Data

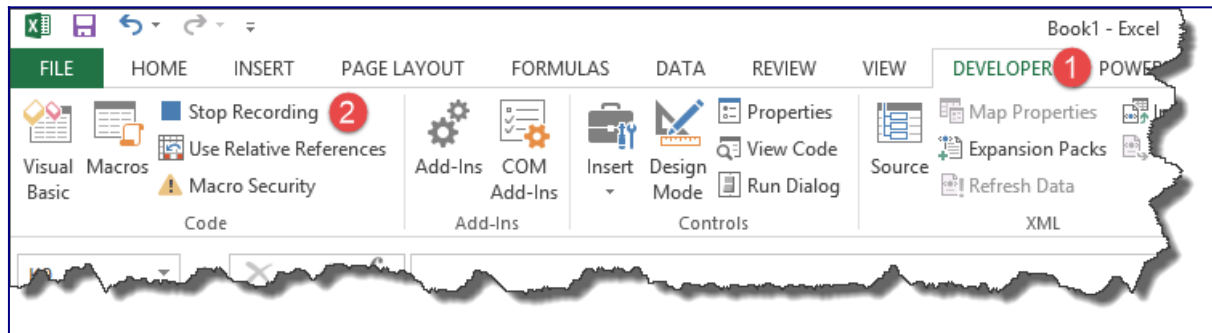
Make the columns bold, add the grand total and use the SUM function to get the total amount.



	A	B	C	D	E
1	serial no	date	account no	amount	
2	1	01/02/2015	1	500.00	
3	2	01/02/2015	1	200.00	
4	3	01/02/2015	1	350.00	
5	4	01/02/2015	1	2,500.00	
6	5	01/02/2015	1	5,000.00	
7					
8	grand total			8,550.00	
9					
10					

Step 8) Stop Recording Macro

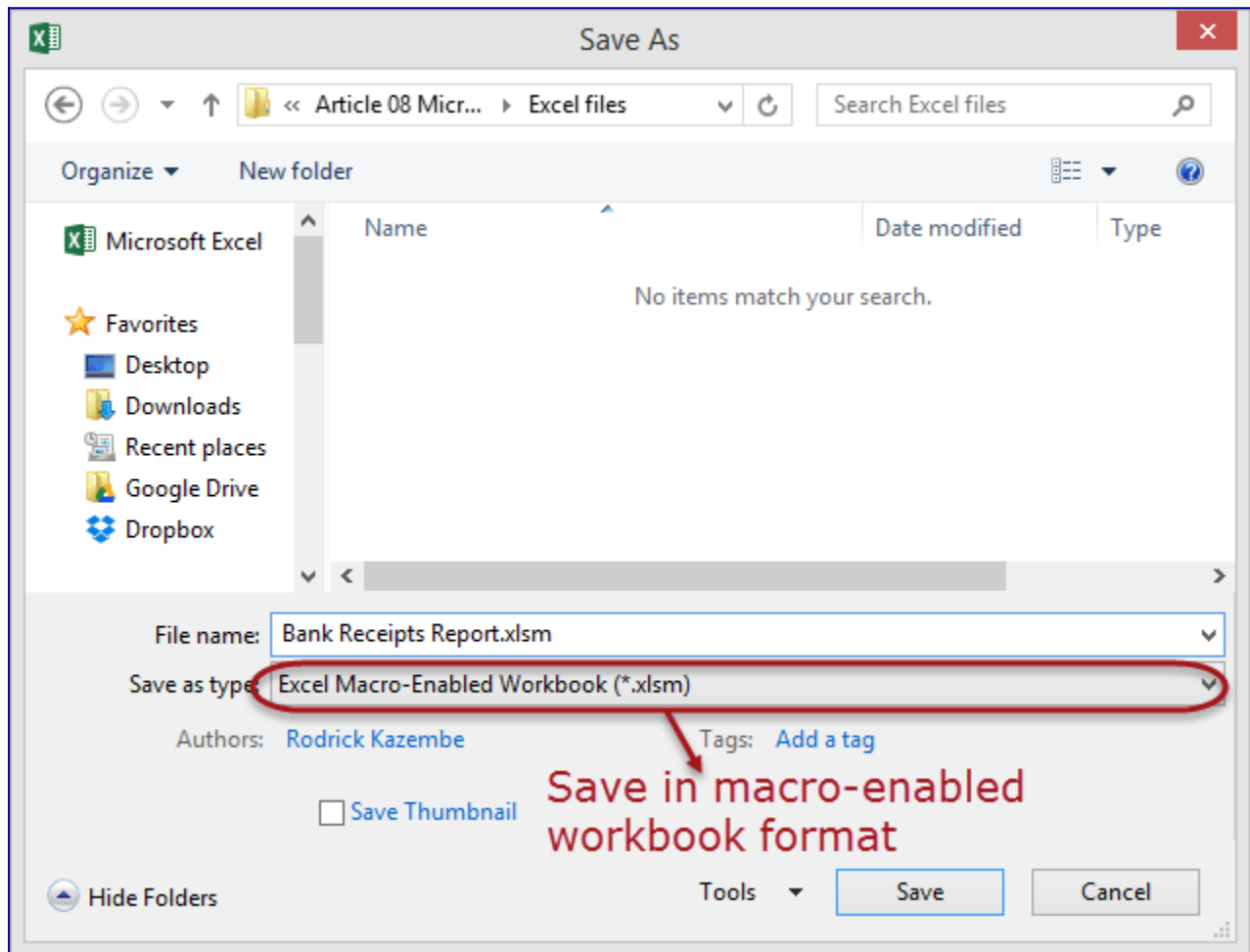
Now that we have finished our routine work, we can click on stop recording macro button as shown in the image below



Step 9) Replay the Macro

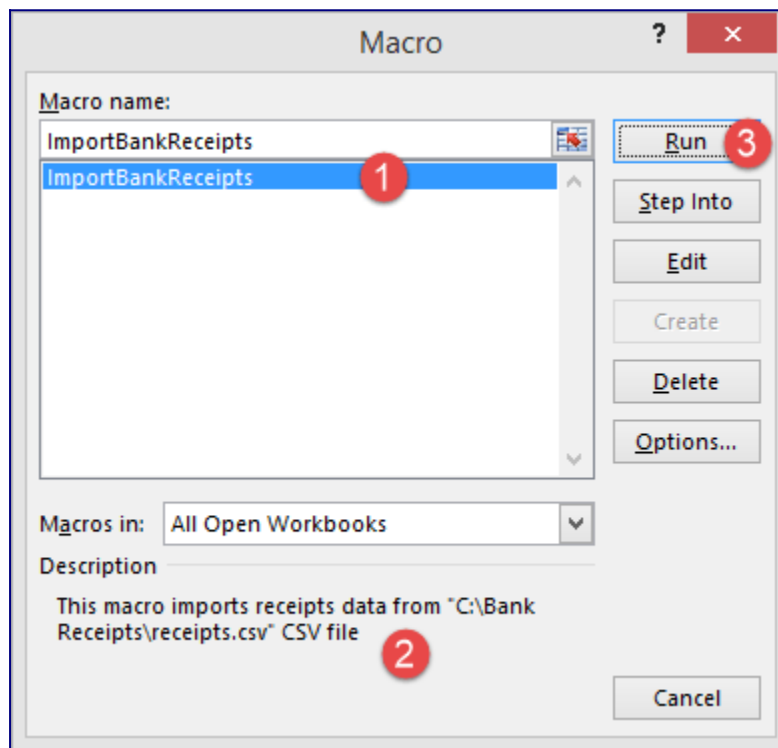
Before we save our work book, we will need to delete the imported data. We will do this to create a template that we will be copying every time we have new receipts and want to run the ImportBankReceipts macro.

- Highlight all the imported data
- Right click on the highlighted data
- Click on Delete
- Click on save as button
- Save the workbook in a macro enabled format as shown below



- Make a copy of the newly saved template
- Open it
- Click on DEVELOPER tab
- Click on Macros button

You will get the following dialogue window



1. Select ImportBankReceipts
2. Highlights the description of your macro
3. Click on Run button

You will get the following data

	A	B	C	D	E
1	serial no	date	account no	amount	
2	1	01/02/2015	1	500.00	
3	2	01/02/2015	1	200.00	
4	3	01/02/2015	1	350.00	
5	4	01/02/2015	1	2,500.00	
6	5	01/02/2015	1	5,000.00	
7					
8	grand total			8,550.00	
9					
10					

Congratulations, you just created your first macro in Excel.

Summary

Macros simplify our work lives by automating most of the routine works that we do. Macros Excel are powered by Visual Basic for Applications.

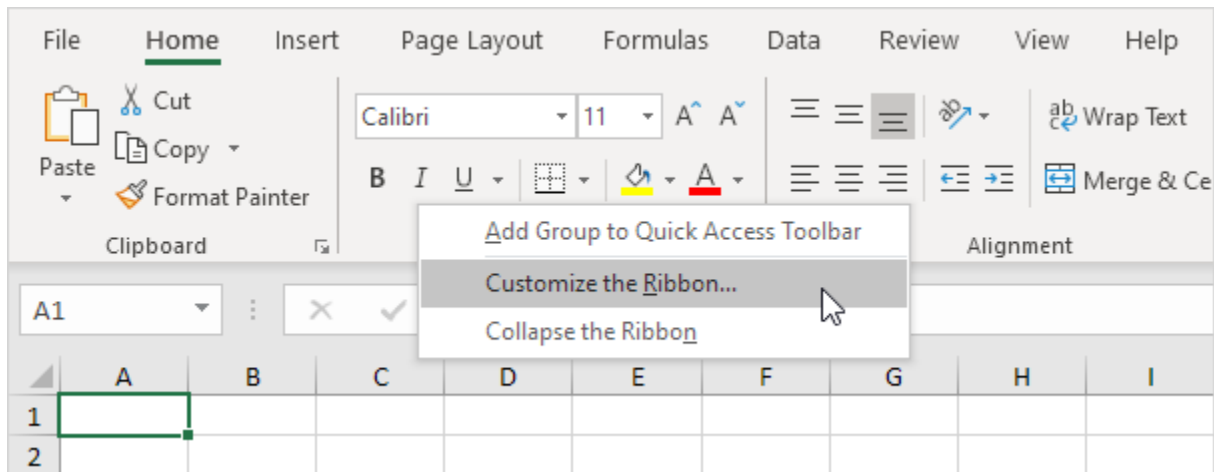
Create a Macro – Illustration 2

With **Excel VBA** you can automate tasks in Excel by writing so called macros. In this section, you will learn how to create a simple **macro** which will be executed after clicking on a command button. First, turn on the Developer tab.

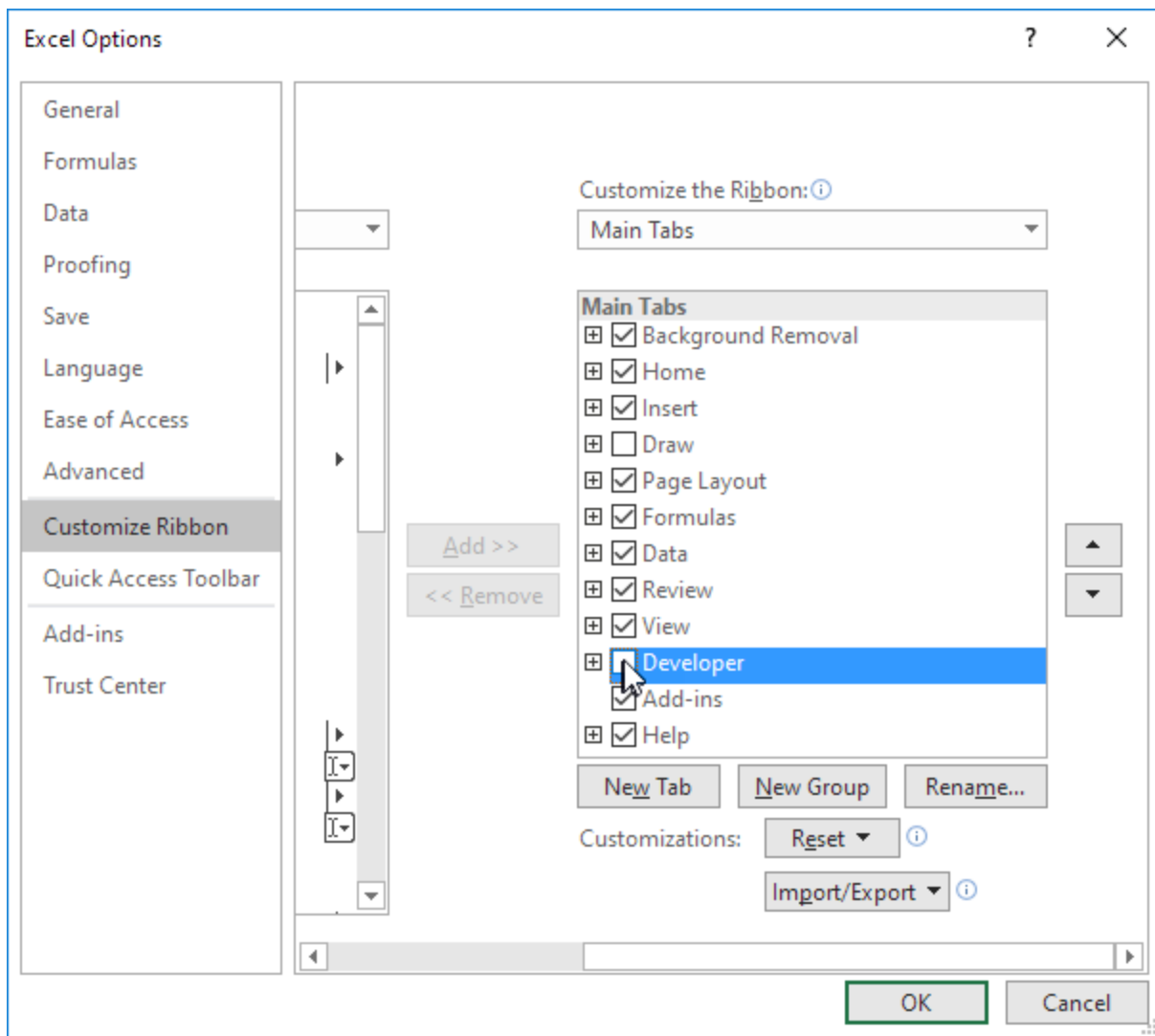
Developer Tab

To turn on the Developer tab, execute the following steps.

1. Right click anywhere on the ribbon, and then click Customize the Ribbon.

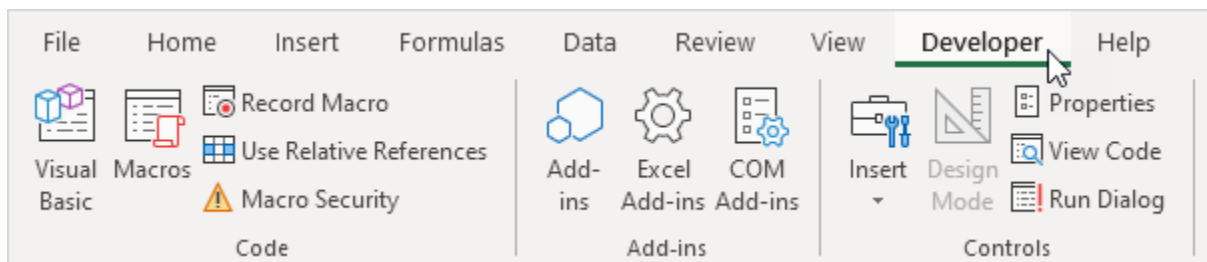


2. Under Customize the Ribbon, on the right side of the dialog box, select Main tabs (if necessary).
3. Check the Developer check box.



4. Click OK.

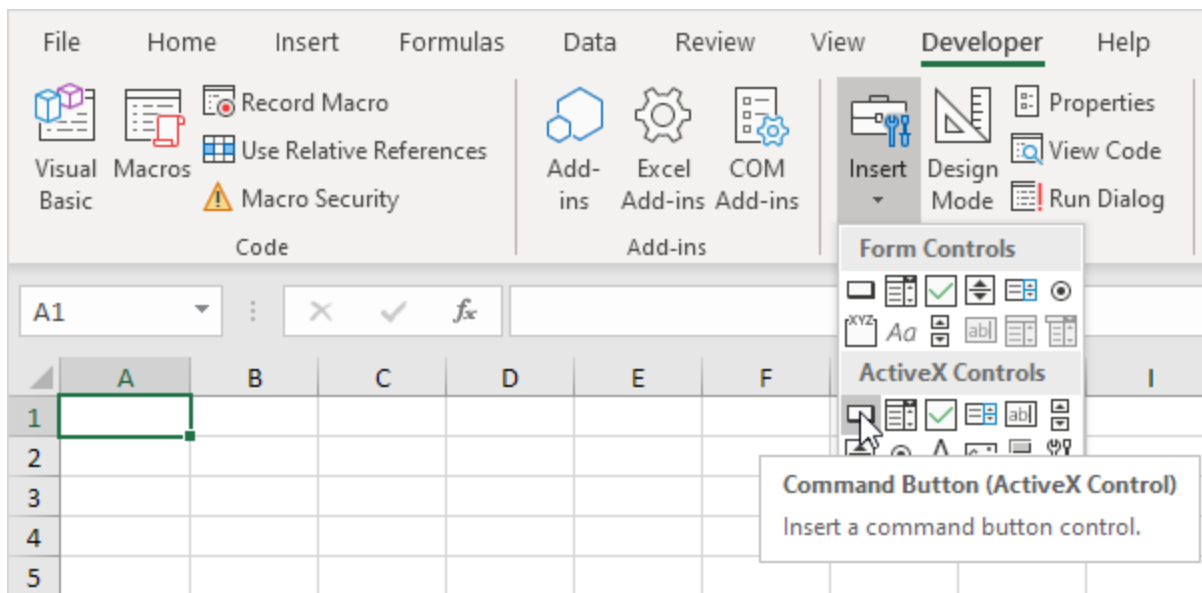
5. You can find the Developer tab next to the View tab.



Command Button

To place a command button on your worksheet, execute the following steps.

1. On the **Developer tab**, click Insert.
2. In the ActiveX Controls group, click Command Button.

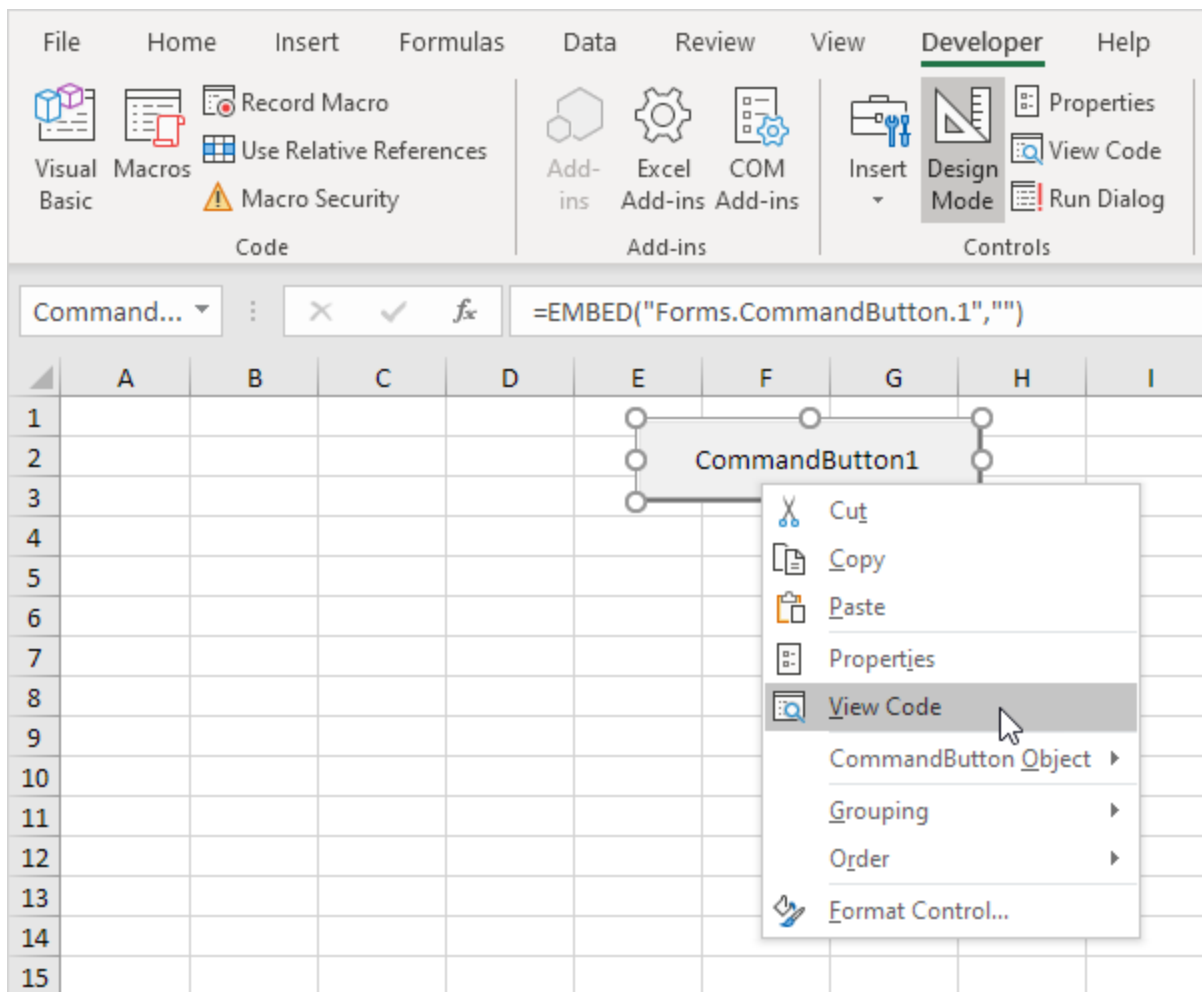


3. Drag a command button on your worksheet.

Assign a Macro

To assign a macro (one or more code lines) to the command button, execute the following steps.

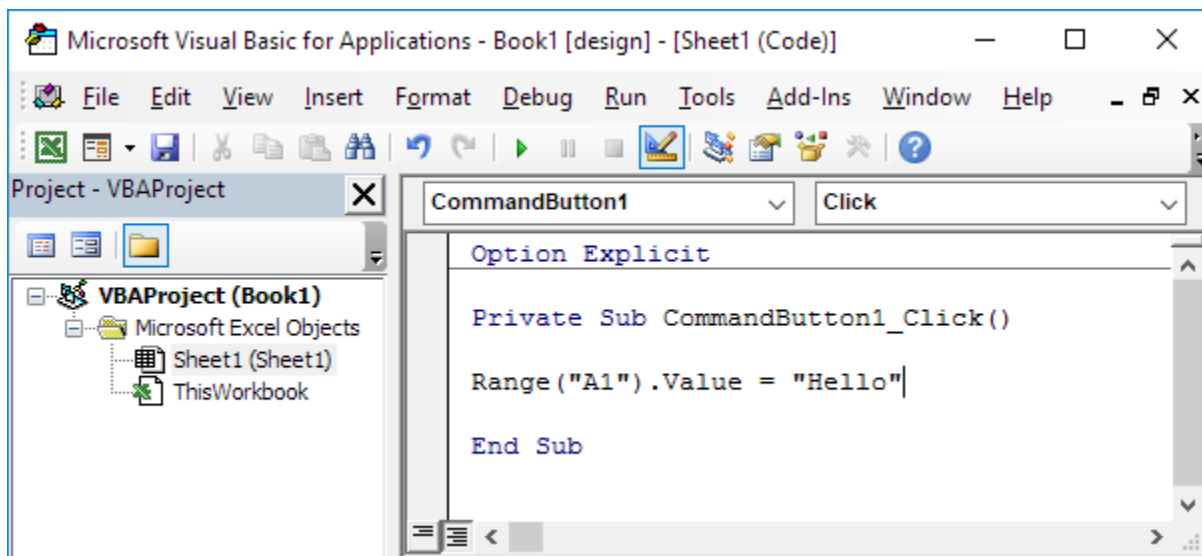
1. Right click CommandButton1 (make sure Design Mode is selected).
2. Click View Code.



The Visual Basic Editor appears.

3. Place your cursor between Private Sub CommandButton1_Click() and End Sub.

4. Add the code line shown below.



Note: the window on the left with the names Sheet1 (Sheet1) and ThisWorkbook is called the Project Explorer. If the Project Explorer is not visible, click View, Project Explorer. If the Code window for Sheet1 is not visible, click Sheet1 (Sheet1). You can ignore the **Option Explicit** statement for now.

5. Close the Visual Basic Editor.

6. Click the command button on the sheet (make sure Design Mode is deselected).

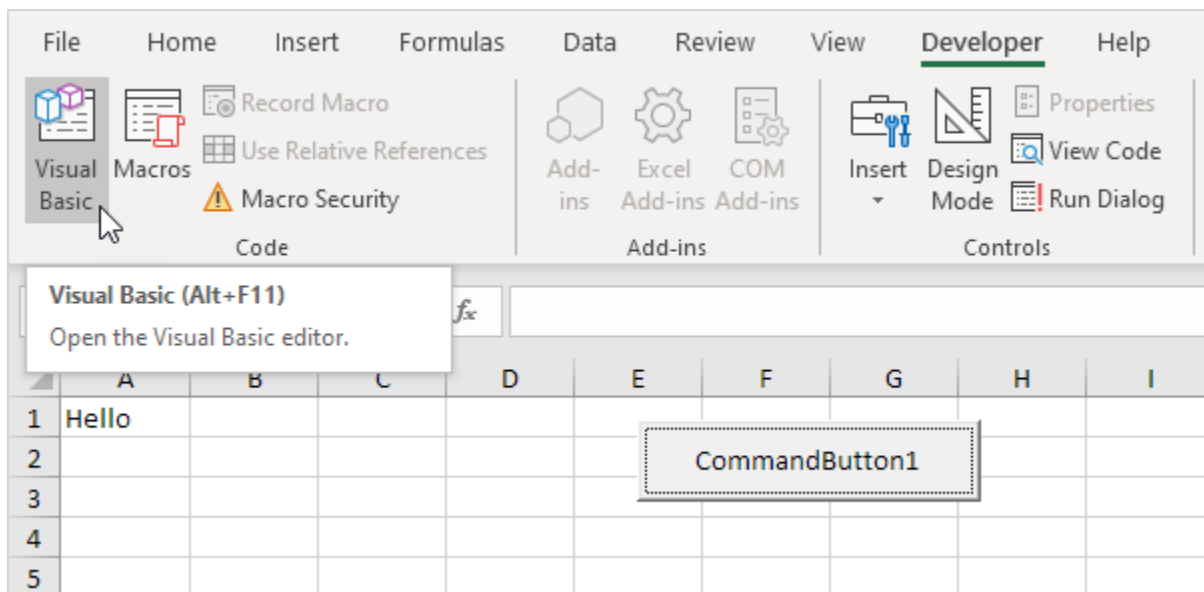
Result:

	A	B	C	D	E	F	G	H	I
1	Hello								
2									
3									
4									
5									

Congratulations. You've just created a macro in Excel!

Visual Basic Editor

To open the Visual Basic Editor, on the **Developer tab**, click Visual Basic.



The Visual Basic Editor appears.

