

# MS Office 2010



## Record Excel Macros

[Catraining.co.uk](http://Catraining.co.uk)

Tel: 020 7920 9500



# Table of Contents

INTRODUCTION TO MACROS.....	1
<i>WHAT IS A MACRO?</i> .....	1
<i>MACRO SECURITY LEVELS</i> .....	1
<i>HOW TO CHANGE MACRO SECURITY LEVEL</i> .....	2
<i>TYPES OF MACRO</i> .....	2
<i>PERSONAL WORKBOOK OR WORKSHEET</i> .....	2
<i>RECORDED MACRO LIMITATIONS</i> .....	3
BASIC MACRO RECORDING .....	4
TO RECORD AN ABSOLUTE MACRO .....	4
TO RECORD AN RELATIVE MACRO .....	5
RUNNING AND ASSIGNING MACROS TO OBJECTS .....	6
<i>TO RUN A MACRO</i> .....	6
<i>ASSIGN A MACRO TO A BUTTON ON A SHEET</i> .....	6
<i>ASSIGN A MACRO TO AN IMAGE OR OBJECT</i> .....	6
<i>ASSIGNING A MACRO ON THE USER ACCESS TOOLBAR</i> .....	7
IDENTIFY AN EXCEL TASK TO AUTOMATE .....	8
<i>GET READY TO RECORD</i> .....	8
<i>START RECORDING</i> .....	8
<i>PERFORM THE MACRO STEPS</i> .....	9
<i>STOP THE RECORDING</i> .....	10
<i>GET READY TO TEST THE MACRO</i> .....	10
<i>MACRO SECURITY SETTINGS</i> .....	11
<i>TEST THE MACRO</i> .....	11
<i>RUN THE RECORDED MACRO</i> .....	11
<i>SAMPLE DATA FOR ABOVE MACRO</i> .....	12
IDENTIFY AN EXCEL TASK TO AUTOMATE .....	14
<i>GET READY TO RECORD</i> .....	14
<i>START RECORDING</i> .....	14
<i>PERFORM THE MACRO STEPS</i> .....	15
<i>STOP THE RECORDING</i> .....	16
<i>GET READY TO TEST THE MACRO</i> .....	16

<i>MACRO SECURITY SETTINGS</i> .....	17
<i>TEST THE MACRO</i> .....	17
<i>RUN THE RECORDED MACRO</i> .....	17
<i>SAMPLE DATA FOR ABOVE MACRO</i> .....	19
EXCEL KEYBOARD SHORTCUTS .....	21
<i>EXCEL SUMMARY</i> .....	22
<i>WHAT'S NEXT?</i> .....	22





# Introduction to Macros

## What is a macro?

An Excel macro is a set of instructions that can be triggered by a keyboard shortcut, toolbar button or an icon in a spread sheet. 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 unprotect worksheets, selecting a range of cells, or adding the current date to a spread sheet.

In Excel, macros are written in Visual Basic for Applications (VBA). For those who cannot write VBA code, Excel allows you to record a series of steps - using keyboard and mouse that Excel then converts into VBA.

## Macro Security Levels

Security is an important issue when you're working with Excel 2010 macros. If you open worksheets containing macros from outside sources, these macros could be harmful to your computer. By default, Excel protects you from running macros, but if you're creating your own macros, you'll probably want to change the protective security settings.

**Disable all macros without notification:** Allows you to run only those macros stored in a trusted location. Click the Trusted Locations setting in the left pane to manage these trusted locations. Also, since the macros are automatically disabled, this option disables security alerts.

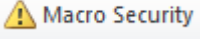
**Disable all macros with notification:** Displays a security alert when a workbook with macros opens. You can then decide whether to enable the macros associated with the workbook. This is the Excel default setting.

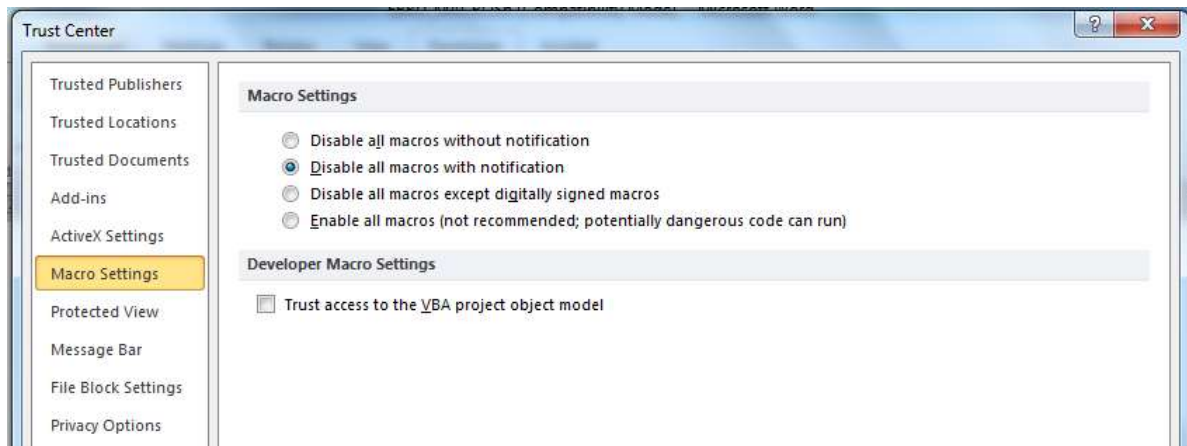
**Disable all macros except digitally signed macros:** You can run only those macros that are digitally signed.

**Enable all macros:** Allows macros to run without a notification. This can be helpful if you run a lot of macros, but be aware of the risk when using macros from unknown sources.

## How to Change Macro Security Level

Ensure that the Developer tab is available on the ribbon tab if it is not open click on the file menu, options, then customise ribbon place a tick next to developer in the customise ribbon panel on the right column.

- On the developer tab click macro security. 
- From the trust centre, macro settings choose the required security level.



## Types of macro

There are two types of macros that you can record. A relative recorded macro and an absolute recorded macro.

The default for recording a macro is Absolute. This means that when you record your macro, it will run in/on exactly the same sheets/cells/columns/rows that you specify.

Points you need to remember, when recording a Relative macro, is that all your movements are **\*relative\*** to the active cell at the time your Start recording

## Personal workbook or worksheet

For any of the repeating tasks that you do through macros, Excel provides a way to have those commonly used actions always available to you. Instead of copying the macros you use frequently to every workbook, Excel gives you use of a Personal Macro Workbook.

**Personal Macro Workbook** - this means your macro will be stored in the Personal.xls workbook and will be available to you every time you Start Excel in any workbook.

**New Workbook** - Your macro will be created only in a new workbook

**This Workbook** - Your macro will be created only in the workbook you are currently in.



## Recorded Macro Limitations

ALTHOUGH THE EXCEL MACRO RECORDING FEATURE IS A VERY SIMPLE WAY OF CREATING VBA CODE, IT CAN ONLY BE USED FOR VERY BASIC MACROS. THIS IS BECAUSE IT CANNOT MAKE USE OF ANY OF THE VBA FEATURES THAT STORE INFORMATION IN MEMORY, SUCH AS:

- Defined Constants, Variables and Arrays
- If Statements
- Loops
- Calls to Built-In Functions or Other Procedures

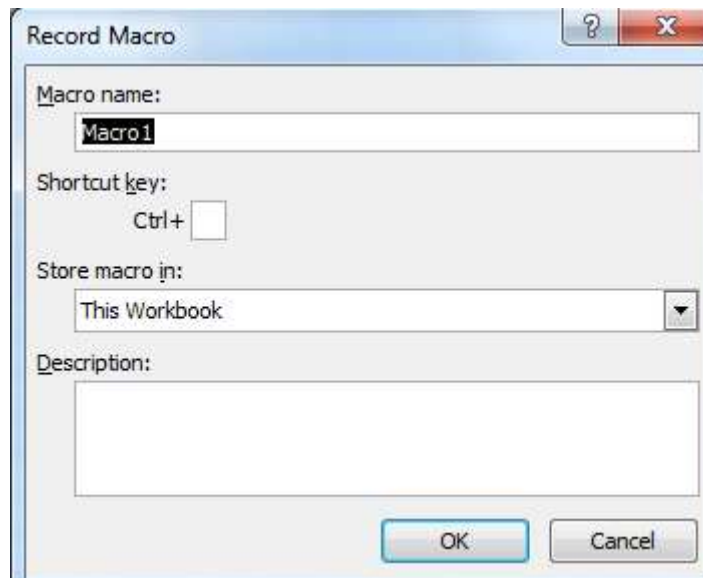
Also, the recording feature can only produce subroutines (not functions), as it cannot return a value. These subroutines cannot be passed any arguments, although they are able to identify the current active cells, ranges or worksheets, and values stored in the cells of the workbook. It should also be noted that the code generated is not always the most efficient code possible for the required actions.

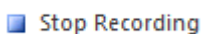
While Excel's automatically generated VBA code is fine for simple macros, if you want to produce more complex macros, you will need to learn to write VBA code for yourself. However the Excel Macro Recording feature is an excellent tool to start you off with code that you can adapt or insert into your more complex macros.

## Basic Macro Recording

### To record an absolute macro

- From the developer tab select Record Macro

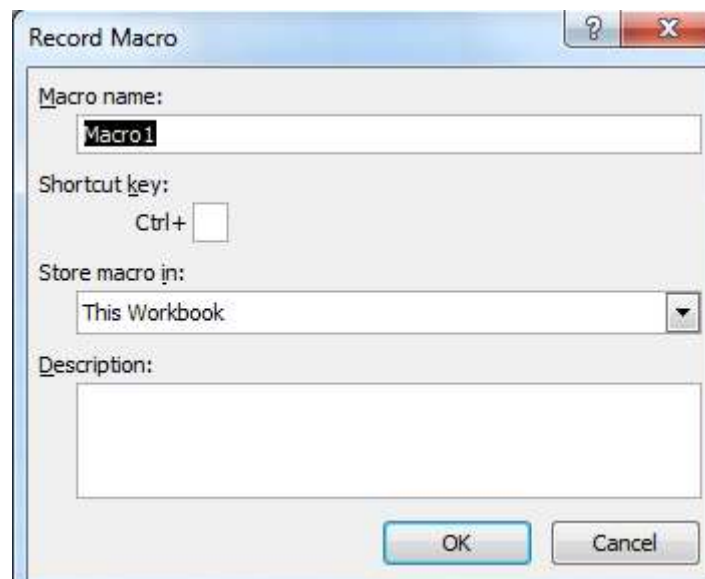


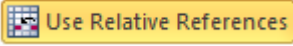
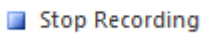
- In the Macro name text box type a name for the macro. The macro name must start with a character the name can contain numbers and letters but cannot have spaces or punctuation marks.
- Type a brief description of the macro in the description box, excel will create its own description if no description is present.
- You can assign a shortcut key to run the macro but be careful you do not use an internal shortcut as this will be over written.
- Click OK button to start the recording.
- Perform the actions that are to be recorded
- Click stop recording to finish your recording 

The macro you have recorded would be an absolute macro, as excel records macros in absolute mode by default. The function was also stored in the local workbook.

## To record a relative macro

- From the developer tab select Record Macro



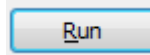
- In the Macro name text box type a name for the macro.  
The macro name must start with a character the name can contain numbers and Letters but cannot have spaces or punctuation marks.
- Type a brief description of the macro in the description box, excel will create its own description if no description is present.
- You can assign a shortcut key to run the macro but be careful you do not use an internal shortcut as this will be over written.
- Click OK button to start the recording.
- Click on the use Relative References 
- Perform the actions that are to be recorded
- Click stop recording to finish your recording 

The macro you have recorded would be a Relative macro; this will work from the point of insertion of the selected cell. The function was also stored in the local workbook.

# Running and assigning macros to objects

## To run a Macro

- If a short cut key has been assigned to the macro, press the shortcut key
- Select the developer tab, click on macros. Either type in the name of the macro or select the macro from the list.
- Alternatively press [ALT] + [F8] to open the macros dialog box.
- Click the run button to execute the command



Macros can be assigned to menus, buttons, or graphic objects to provide a more convenient way to execute your macro.

## Assign a macro to a button on a sheet

Accesses the controls area on the developer tab click **insert** select **Button** from **Form Controls** draw the button to the required size.



When you release the mouse button the macros dialog box opens, select the macro to assign to the button.

To edit the text, right click on the button and select **Edit Text** to edit the font on the button right click and **Format Control**

## Assign a macro to an Image or object

- Insert an **IMAGE** from your images directory
- Right click **CHOSE** assign macro
- Select the **MACRO** from the macros dialog box.

## Assigning a Macro on the User access toolbar

You can assign a macro created in Excel 2010 to a custom button on the Quick Access toolbar and then run it by clicking that button. This provides quicker access to a macro than using the Macro dialog box.

- **Click the File tab and then click Options**

The Excel Options dialog box appears.

- **Click the Quick Access Toolbar tab**

The Customize the Quick Access Toolbar options appear in the right pane

- **Click Macros in the Choose Commands From drop-down list box.**

Excel lists the names of all macros created in the current workbook and those saved in the PERSONAL.XLSB workbook in the Choose Commands From list box.

- **Click the name of the macro and click the Add button**

The macro appears in the list box on the right side of the dialog box

- **Click the macro name in the list box on the right and then click the Modify button.**

The Modify Button dialog box appears

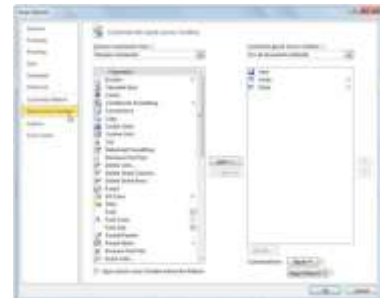
- **Select an icon to use for the button.**

This is the icon that will appear on the Quick Access toolbar to represent your macro.

- **Click OK two times**

Both dialog boxes close and the macro button appears on the Quick Access toolbar.

To remove the macro button from the Quick Access toolbar, right-click the button and select Remove from Quick Access Toolbar.



## Identify an Excel Task to Automate

If you use Excel every day, you probably have a few tasks that you repeat daily, weekly or monthly. To get started with Excel VBA, you could focus on one of those tasks, and try to automate

In this example, you have a list of stationery orders, in a workbook named Orders.xlsx. You can download the sample Orders file, or use a file of your own. The sample file is in Excel 2010 format.

Every day, in your imaginary job, you open that Orders file and filter the list of orders, to find all the orders for binders. Then you copy the orders, and paste them into a new workbook.

Here's a summary of the steps that you follow every morning:

- Open the orders file
- Filter the list for binder orders
- Copy the binder orders
- Create a new worksheet
- Paste the binder orders into the new worksheet.

Instead of doing that task manually every day, you could automate it, by creating an Excel macro.

## Get Ready to Record

Now that you've decided to automate this task, you'll use Excel's Macro Recorder tool to create the Excel VBA code. Before you start recording, you'll get everything into position. For example:

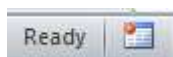
- Do you want the macro to open a specific workbook, or will that workbook already be open?
- Should you select a cell or worksheet before the macro runs, or will selecting the cell be part of the macro?

In this example, you want the macro to open the Orders workbook for you and then filter and copy the data. So, the Orders workbook should be closed when you start recording. You don't need to select a specific cell or worksheet before recording; any cell selection will be done during the macro recording.

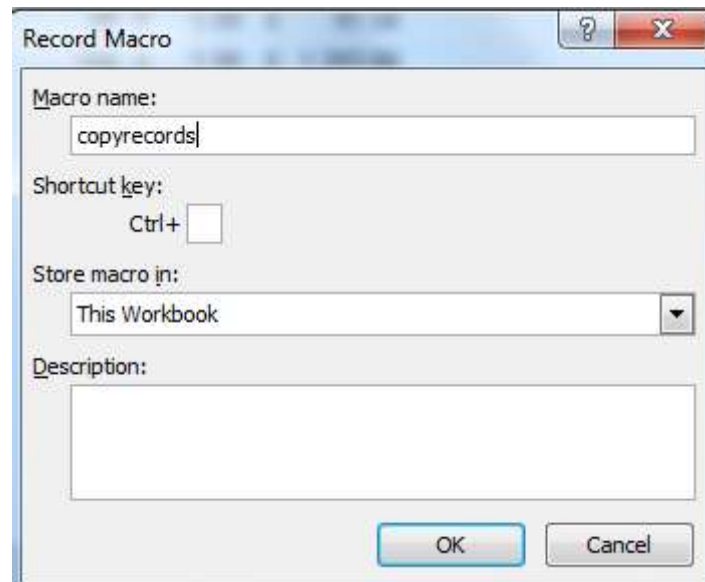
## Start Recording

Once everything is in position, you can get ready to start recording.

- Open a new blank workbook, which is where you'll store the macro.
- At the bottom left of the Excel window, click the Record Macro button.



- In the Record Macro dialog box, type a one word name for the macro, CopyRecords
- From the Store Macro In drop down, select This Workbook as the workbook where you'd like to store the VBA code. Later, you can open this workbook every morning, to run the macro.



- In the Description box, you can type a brief note about what the macro will do. This is optional, and you can leave the Description box empty, if you prefer.

## Perform the Macro Steps

While the Macro Recorder is on, you'll perform the steps that you want to automate. In this example, these are the steps that you should do now:

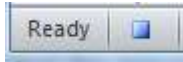
- Open the orders file - Orders.xlsx
- On the Data sheet in the Orders file, use an AutoFilter to view the binder orders
- Copy the filtered binder orders, including the heading row.
- Create a new blank worksheet
- Paste the binder orders into the new worksheet, in cell A1 on Sheet1.

If you make a mistake - no problem! Just stop the recording (instructions below), close the files without saving, and start over again.

## Stop the Recording

Once you finished all the steps, follow these steps to turn off the Macro Recorder and save the macro file.

Click the Stop Recording button at the bottom left of the Excel window.



- Close the workbook where you pasted the binder orders, without saving the changes.
- Close the Orders.xlsx workbook, without saving the changes
- Save the workbook where you stored the macro:
- Name: BinderCode.xlsm
- File Type: Excel Macro-Enabled Workbook \*.xlsm
- Close the BinderCode.xlsm file.

## Get Ready to Test the Macro

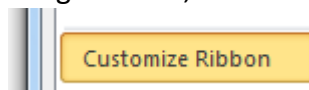
To prepare to test the macro, make sure that the Orders.xlsx workbook is closed.

## Add the Developer Tab

To run the macro, you'll use the Developer tab on the Excel Ribbon. You can add the Developer tab to the Excel Ribbon, if it's not there already:

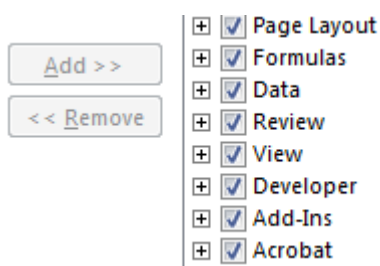
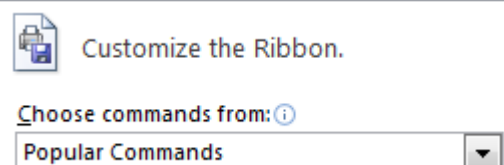
- Click the Microsoft backstage Button, and then click Excel Options.

- Click customise



ribbon.

- Click the Popular commands , main tab, and add a check mark to Show Developer tab in the Ribbon



- Click OK, to close the Excel Options window.



## Macro Security Settings

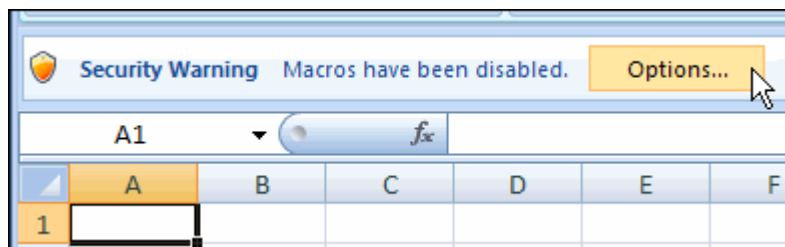
If you haven't run macros before, you might need to change your macro security level. (You may have to clear this with your IT department.)

- On the Ribbon, click the Developer tab, and in the Code group, click Macro Security.
- In the Macro Settings category, under Macro Settings, click Disable all macros with notification
- Click OK.
- If you changed the setting, close the workbook, and then reopen it.

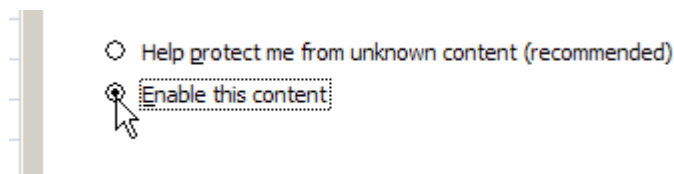
## Test the Macro

Now that the Developer tab is visible, you can get ready to test the macro. Open the Macro File First you'll open the file where the recorded macro is stored, and enable macros, by following these steps:

- Open the file (BinderCode.xlsm) where you stored the macro that you recorded.
- If a security warning appears at the top of the worksheet, click the Options button.



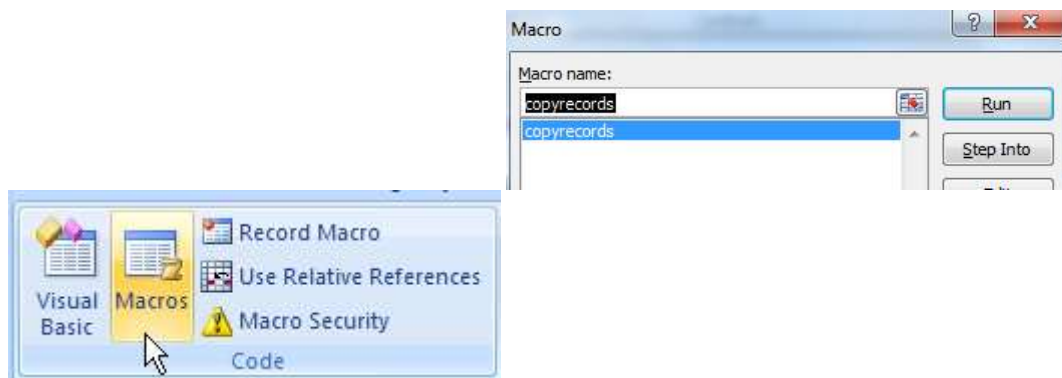
- Click Enable This Content, to allow the workbook's macros to run, and click OK.



## Run the Recorded Macro

Now, follow these steps to run the macro, to see if it works the way you want.

- On the Ribbon, click the Developer tab, and in the Code group, click Macros.



- In the Macro dialog box, click the macro that you want to run - CopyRecords.
- Click Run.

## Sample Data For Above Macro

If you have the electronic version simply copy and paste table into excel

Date	WeekOf	YearMth	Weekday	Region	Employee	Item	Units	Unit Cost	Total
14-Dec-12	10-Dec-12	2012-12	Friday	south	Preistley	ruler	46	£ 1.99	£ 91.54
15-Dec-12	10-Dec-12	2012-12	Saturday	south	smith	ruler	700	£ 1.99	£ 1,393.00
16-Dec-12	10-Dec-12	2012-12	Sunday	West	green	Binder	85	£ 4.25	£ 361.25
17-Dec-12	17-Dec-12	2012-12	Monday	south	Howard	pencil	62	£ 4.99	£ 309.38
18-Dec-12	17-Dec-12	2012-12	Tuesday	East	Gardener	Pen	58	£ 6.75	£ 391.50
19-Dec-12	17-Dec-12	2012-12	Wednesday	East	smith	Binder	10	£ 4.99	£ 49.90
20-Dec-12	17-Dec-12	2012-12	Thursday	East	smith	pencil	19	£ 2.99	£ 56.81
21-Dec-12	17-Dec-12	2012-12	Friday	East	Anderson	pencil	6	£ 1.99	£ 11.94
22-Dec-12	17-Dec-12	2012-12	Saturday	south	Howard	pencil	10	£ 4.99	£ 49.90
23-Dec-12	17-Dec-12	2012-12	Sunday	West	Wilson	Paper	39	£ 1.99	£ 77.61
24-Dec-12	24-Dec-12	2012-12	Monday	West	Wilson	Binder	1	£ 8.99	£ 8.99
25-Dec-12	24-Dec-12	2012-12	Tuesday	West	Wilson	pencil	80	£ 4.99	£ 399.20
26-Dec-12	24-Dec-12	2012-12	Wednesday	West	Wilson	Binder	51	£ 1.99	£ 101.49
27-Dec-12	24-Dec-12	2012-12	Thursday	West	Wilson	Binder	10	£ 19.99	£ 199.90
28-Dec-12	24-Dec-12	2012-12	Friday	West	Wilson	Pen Set	15	£ 4.99	£ 74.85
29-Dec-12	24-Dec-12	2012-12	Saturday	West	Wilson	Desk	31	£ 98.99	£ 3,068.69
30-Dec-12	24-Dec-12	2012-12	Sunday	West	Kivell	Binder	61	£ 8.99	£ 548.39
31-Dec-12	31-Dec-12	2012-12	Monday	south	Jones	Pen	90	£ 8.99	£ 809.10
1-Jan-13	31-Dec-12	2013-01	Tuesday	East	Preistley	Pen	43	£ 6.75	£ 290.25
2-Jan-13	31-Dec-12	2013-01	Wednesday	West	Kivell	Pen Set	32	£ 4.99	£ 159.68
3-Jan-13	31-Dec-12	2013-01	Thursday	West	Smith	Pen Set	37	£ 1.29	£ 47.73
4-Jan-13	31-Dec-12	2013-01	Friday	East	Preistley	Pen Set	26	£ 15.99	£ 415.74

5-Jan-13	31-Dec-12	2013-01	Saturday	East	Gardener	Binder	79	£	8.99	£	710.21
6-Jan-13	31-Dec-12	2013-01	Sunday	West	Smith	Pen Set	72	£	15.00	£	1,080.00
7-Jan-13	7-Jan-13	2013-01	Monday	south	Jones	Pen Set	27	£	4.99	£	134.73
8-Jan-13	7-Jan-13	2013-01	Tuesday	south	Jones	Binder	5	£	19.99	£	99.95
9-Jan-13	7-Jan-13	2013-01	Wednesday	south	Howard	Pen Set	59	£	4.99	£	294.41
10-Jan-13	7-Jan-13	2013-01	Thursday	East	Gardener	Pen Set	41	£	1.99	£	81.59
11-Jan-13	7-Jan-13	2013-01	Friday	south	Howard	Pen	85	£	4.99	£	424.15
12-Jan-13	7-Jan-13	2013-01	Saturday	East	Gardener	Pen Set	61	£	1.29	£	78.69
13-Jan-13	7-Jan-13	2013-01	Sunday	East	chap	Binder	9	£	8.99	£	80.91
14-Jan-13	14-Jan-13	2013-01	Monday	West	Kivell	Desk	52	£	125.00	£	6,500.00
15-Jan-13	14-Jan-13	2013-01	Tuesday	East	Jones	Pen Set	75	£	4.99	£	374.25
16-Jan-13	14-Jan-13	2013-01	Wednesday	West	Kivell	Pen Set	97	£	12.49	£	1,211.53
17-Jan-13	14-Jan-13	2013-01	Thursday	West	Kivell	Pen Set	86	£	23.95	£	2,059.70
18-Jan-13	14-Jan-13	2013-01	Friday	West	Smith	Desk	8	£	199.99	£	1,599.92
19-Jan-13	14-Jan-13	2013-01	Saturday	East	chap	Pen Set	90	£	1.29	£	116.10
20-Jan-13	14-Jan-13	2013-01	Sunday	West	Smith	Pen	33	£	1.99	£	65.67
21-Jan-13	21-Jan-13	2013-01	Monday	West	Smith	Binder	53	£	19.99	£	1,059.47
22-Jan-13	21-Jan-13	2013-01	Tuesday	East	Gardener	Pen Set	25	£	1.29	£	32.25
23-Jan-13	21-Jan-13	2013-01	Wednesday	south	Howard	Binder	87	£	4.99	£	434.13
24-Jan-13	21-Jan-13	2013-01	Thursday	south	Howard	Binder	95	£	19.99	£	1,899.05
25-Jan-13	21-Jan-13	2013-01	Friday	East	Gardener	Binder	68	£	4.99	£	339.32
26-Jan-13	21-Jan-13	2013-01	Saturday	East	Gardener	Binder	19	£	4.99	£	94.81
27-Jan-13	21-Jan-13	2013-01	Sunday	East	Gardener	File Folder	19	£	5.99	£	113.81
28-Jan-13	28-Jan-13	2013-01	Monday	East	Gardener	File Folder	19	£	5.99	£	113.81
29-Jan-13	28-Jan-13	2013-01	Tuesday	East	Gardener	Binder	19	£	4.99	£	94.81
30-Jan-13	28-Jan-13	2013-01	Wednesday	East	Gardener	Binder	19	£	4.99	£	94.81
31-Jan-13	28-Jan-13	2013-01	Thursday	East	Gardener	Binder	19	£	4.99	£	94.81

## Identify an Excel Task to Automate

In this example, you have a list of Musical instrument orders, in a workbook named instrument.xlsx. You can download the sample Orders file, or use a file of your own. The sample file is in Excel 2010 format.

Every day, in your imaginary job, you open that instrument file and sort the entry by ascending order and run subtotals on the, to find the total orders for countries. Then you copy the orders, and paste them into a new workbook.

Here's a summary of the steps that you follow every morning:

- Open the instrument file
- Sort the list A – Z by country
- Run the subtotal option on the data
- Copy the country orders
- Create a new worksheet
- Paste the instrument orders into the new Worksheet.

Instead of doing that task manually every day, you could automate it, by creating an Excel macro.

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Now that you've decided to automate this task, you'll use Excel's Macro Recorder tool to create the Excel VBA code. Before you start recording, you'll get everything into position. For example:

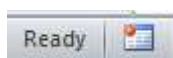
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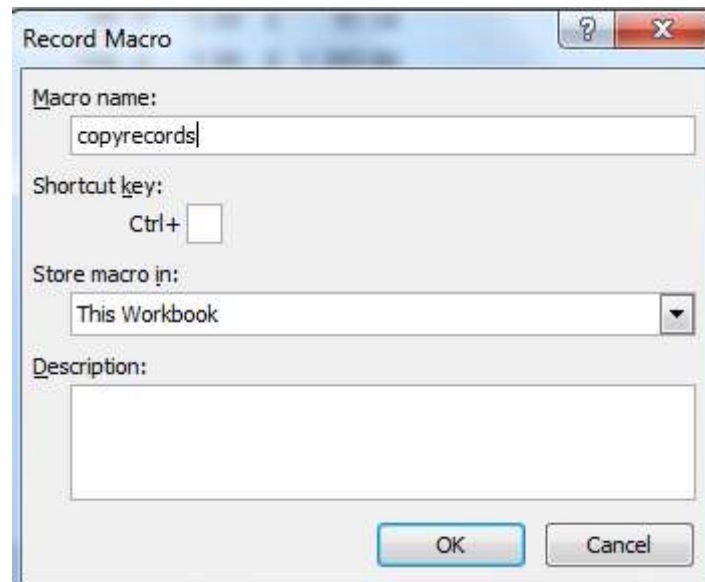
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Once everything is in position, you can get ready to start recording.

- Open a new blank workbook, which is where you'll store the macro.
- At the bottom left of the Excel window, click the Record Macro button.



- In the Record Macro dialog box, type a one word name for the macro, CopyRecords
- From the Store Macro In drop down, select This Workbook as the workbook where you'd like to store the VBA code. Later, you can open this workbook every morning, to run the macro.



- In the Description box, you can type a brief note about what the macro will do. This is optional, and you can leave the Description box empty, if you prefer.

## Perform the Macro Steps

While the Macro Recorder is on, you'll perform the steps that you want to automate. In this example, these are the steps that you should do now:

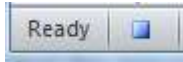
- Open the instrument file - instrument.xlsx
- On the Data sheet in the instrument file, use an data sort to view the country A – Z
- From the data sheet tab run subtotals, select at each change in country and sum on revenues, click ok
- Copy the filtered instrument data, including the heading row.
- Create a new blank worksheet
- Paste the binder orders into the new worksheet, in cell A1 on Sheet1.

If you make a mistake - no problem! Just stop the recording (instructions below), close the files without saving, and start over again.

## Stop the Recording

Once you finished all the steps, follow these steps to turn off the Macro Recorder and save the macro file.

Click the Stop Recording button at the bottom left of the Excel window.



- Close the workbook where you pasted the binder orders, without saving the changes.
- Close the instrument.xlsx workbook, without saving the changes
- Save the workbook where you stored the macro:
- Name: instrumentCode.xlsm
- File Type: Excel Macro-Enabled Workbook \*.xlsm
- Close the instrumentCode.xlsm file.

## Get Ready to Test the Macro

To prepare to test the macro, make sure that the instrument.xlsx workbook is closed.

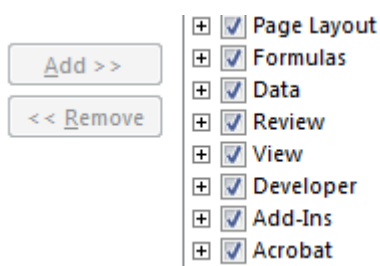
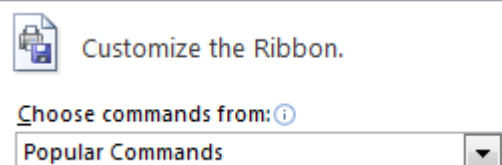
### Add the Developer Tab

To run the macro, you'll use the Developer tab on the Excel Ribbon. You can add the Developer tab to the Excel Ribbon, if it's not there already:

- Click the Microsoft backstage Button, and then click Excel Options.

- Click customise  ribbon.

- Click the Popular commands , main tab, and add a check mark to Show Developer tab in the Ribbon



- Click OK, to close the Excel Options window.

## Macro Security Settings

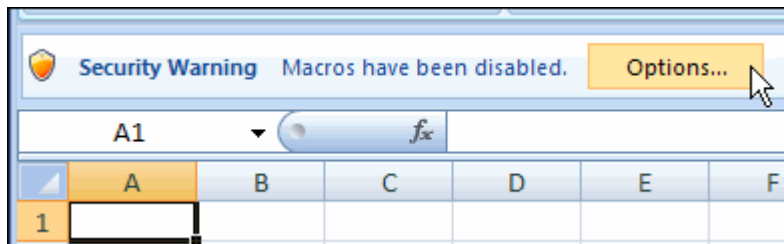
If you haven't run macros before, you might need to change your macro security level. (You may have to clear this with your IT department.)

- On the Ribbon, click the Developer tab, and in the Code group, click Macro Security.
- In the Macro Settings category, under Macro Settings, click Disable all macros with notification
- Click OK.
- If you changed the setting, close the workbook, and then reopen it.

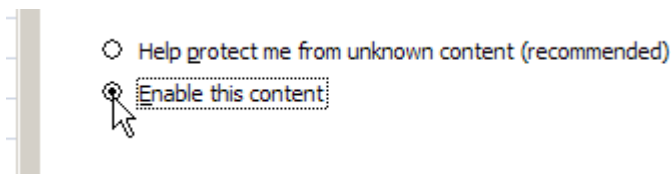
## Test the Macro

Now that the Developer tab is visible, you can get ready to test the macro. Open the Macro File First you'll open the file where the recorded macro is stored, and enable macros, by following these steps:

- Open the file (instrumentCode.xlsm) where you stored the macro that you recorded.
- If a security warning appears at the top of the worksheet, click the Options button.



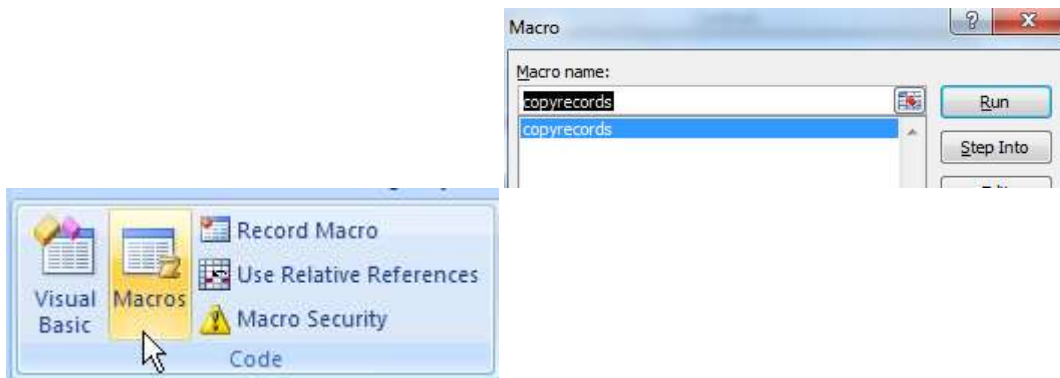
- Click Enable This Content, to allow the workbook's macros to run, and click OK.



## Run the Recorded Macro

Now, follow these steps to run the macro, to see if it works the way you want.

- On the Ribbon, click the Developer tab, and in the Code group, click Macros.



- In the Macro dialog box, click the macro that you want to run - CopyRecords.
- Click Run.



## Sample Data For Above Macro

If you have the electronic version simply copy and paste table into excel

DATE	COUNTRY	CHANNEL	DIVISION	PRODUCT	UNITS	PRICE	REVENUES
01/01/1993	Australia	Wholesale	Brass	Trumpet	7	£325.00	2275
01/01/1993	Japan	Retail	String	Violin	6	£599.00	3594
02/01/1993	Belgium	Wholesale	Brass	Trumpet	5	£400.00	2000
04/01/1993	Canada	Retail	Brass	Trumpet	5	£325.00	1625
05/01/1993	France	Retail	Brass	Trumpet	7	£325.00	2275
06/01/1993	Germany	Retail	Brass	Trumpet	3	£400.00	1200
08/01/1993	Italy	Wholesale	Electronic	MIDI Sequence	4	£350.00	1400
08/01/1993	UK	Wholesale	Electronic	MIDI Sequence	9	£350.00	3150
09/01/1993	USA	Wholesale	String	Violin	2	£599.00	1198
09/01/1993	Japan	Retail	Wind	Flute	7	£225.00	1575
10/01/1993	Australia	Wholesale	Electronic	Keyboard	8	£795.00	6360
11/01/1993	Belgium	Wholesale	Brass	Trumpet	4	£400.00	1600
13/01/1993	Canada	Retail	String	Violin	10	£400.00	4000
14/01/1993	France	Retail	Electronic	Keyboard	8	£150.00	1200
15/01/1993	Germany	Wholesale	Wind	Flute	4	£225.00	900
16/01/1993	UK	Retail	Brass	Trumpet	2	£325.00	650
17/01/1993	USA	Retail	Brass	Trumpet	8	£299.00	2392
17/01/1993	Italy	Retail	Brass	Trumpet	5	£169.00	845
18/01/1993	Australia	Wholesale	Brass	Trumpet	4	£400.00	1600
18/01/1993	Japan	Retail	Brass	Trumpet	10	£400.00	4000
19/01/1993	Belgium	Retail	Brass	Trumpet	3	£450.00	1350
21/01/1993	Canada	Retail	String	Violin	10	£600.00	6000
22/01/1993	France	Retail	Brass	Trumpet	3	£450.00	1350
23/01/1993	Germany	Wholesale	Electronic	Keyboard	1	£150.00	150
25/01/1993	Italy	Retail	Wind	Flute	8	£225.00	1800
25/01/1993	UK	Retail	String	Violin	1	£300.00	300
26/01/1993	USA	Wholesale	Brass	Trumpet	4	£400.00	1600

26/01/1993	Japan	Wholesale	Wind	Flute	8	£225.00	1800
27/01/1993	Australia	Wholesale	Wind	Flute	10	£225.00	2250
28/01/1993	Belgium	Retail	Electronic	Keyboard MIDI	3	£795.00	2385
30/01/1993	Canada	Retail	Electronic	Sequence MIDI	2	£350.00	700
31/01/1993	France	Retail	Electronic	Sequence	4	£429.00	1716
01/02/1993	Germany	Retail	String	Violin	5	£229.00	1145
02/02/1993	UK	Wholesale	Wind	Flute	9	£225.00	2025
03/02/1993	USA	Wholesale	String	Violin MIDI	3	£599.00	1797
03/02/1993	Italy	Retail	Electronic	Sequence	7	£429.00	3003
04/02/1993	Australia	Retail	String	Violin MIDI	5	£229.00	1145
04/02/1993	Japan	Wholesale	Electronic	Sequence MIDI	6	£350.00	2100
05/02/1993	Belgium	Wholesale	Electronic	Sequence MIDI	1	£429.00	429
07/02/1993	Canada	Retail	Electronic	Sequence	3	£429.00	1287
08/02/1993	France	Wholesale	String	Violin	8	£400.00	3200
09/02/1993	Germany	Retail	Electronic	Keyboard	7	£150.00	1050
11/02/1993	Italy	Retail	Brass	Trumpet	6	£169.00	1014
11/02/1993	UK	Wholesale	Electronic	Keyboard	9	£150.00	1350
12/02/1993	USA	Retail	Brass	Trumpet	3	£299.00	897
12/02/1993	Japan	Wholesale	Brass	Trumpet	10	£299.00	2990
13/02/1993	Australia	Wholesale	Brass	Trumpet	5	£169.00	845
14/02/1993	Belgium	Retail	Wind	Flute	9	£225.00	2025
16/02/1993	Canada	Wholesale	String	Violin	7	£400.00	2800
17/02/1993	France	Retail	Brass	Trumpet	3	£450.00	1350
18/02/1993	Germany	Retail	String	Violin	7	£400.00	2800
19/02/1993	UK	Wholesale	String	Violin	6	£599.00	3594
20/02/1993	USA	Wholesale	Electronic	Keyboard	6	£150.00	900
20/02/1993	Italy	Wholesale	String	Violin	1	£300.00	300
21/02/1993	Australia	Retail	Brass	Trumpet	3	£169.00	507
21/02/1993	Japan	Wholesale	String	Violin MIDI	9	£400.00	3600
22/02/1993	Belgium	Retail	Electronic	Sequence	1	£350.00	350

## Excel Keyboard Shortcuts

Key Stroke	Action
F1	Help
F4	Apply Absolute Cell Referencing Repeat Last Menu Function
CTRL + F12	Open Workbook
ALT	Toggle Ribbon Bar Shortcuts
ALT + F8	View Macros
ALT + F11	VBA Code Window
CTRL+SHIFT+:	Enters the current time.
CTRL + K	Insert Hyperlink
CTRL + R	Fills cells to the right
SHIFT + F3	Insert function Dialog Box
CTRL + P	Print
CTRL + S	Save
F11	Creates a chart of the data in the current range in a separate Chart sheet.
SHIFT+F11	Insert Worksheet
F12	Save As dialog box
CTRL+SPACEBAR	Selects an entire column in a worksheet.
SHIFT+SPACEBAR	selects an entire row in a worksheet
CTRL+SHIFT+SPACEBAR	selects the entire worksheet
If the worksheet contains data, CTRL+SHIFT+SPACEBAR select the current region. Pressing CTRL+SHIFT+SPACEBAR a second time selects the current region and its summary rows. Pressing CTRL+SHIFT+SPACEBAR a third time selects the entire worksheet.	
ALT+F1	creates an embedded chart of the data in the current range
CTRL+F1	Displays or hides the ribbon.

There are many more keyboard shortcuts, Press F1 for help then type in keyboard shortcuts; this will give you a comprehensive list of all shortcuts.

## **Excel summary**

In this module you have learnt the basics of recording macros; this has prepared you for attending the two day course for Excel VBA.

## **What's next?**

- Introduction to VBA
- Visual Basic Editor
- Object Programming
- Programming Basics
- Control Structures
- Custom Dialog Boxes
- Debugging and Error Handling
- The on error resume next statement