

Introduction to Microsoft Excel 2007 Macros

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A decorative graphic consisting of several horizontal lines of varying lengths and colors (teal, light blue, white) extending from the right side of the slide.

Contents

- Introduction to Macro
- Introduction to Visual Basic for Application
- Recording a Macro
- Looking at the code of Recorded Macro

Introduction to Visual Basic for Application

- Microsoft Excel 2007 in itself a tool which helps users to work with worksheets & workbooks with ease.
- This tool is one of the ultimate timesaver, but there are numerous events when you have to do repetitive tasks which are of a very little value but consume your precious time; yet engage you in a less productive activity, which Excel may do automatically.
- Microsoft Excel 2007 macro is the feature which eliminates or at-least minimize these events which take your precious time in repetitive tasks, and you will be able to capitalize this time in more productive & strategic activities

Introduction to Visual Basic for Application - cont...

- Apart from automating repetitive tasks Microsoft Excel Macros may also be used to create user interfaces
- User interfaces are screens where user can give inputs with ease also it enables input validations

Introduction to Visual Basic for Application - cont...

- **What is Visual Basic?**

Visual Basic is a language which is inherited from a very popular language BASIC. BASIC stands for Beginners All-purpose Symbolic Instruction Code. Visual Basic is called visual as you can do most of the program by click and go i.e. visually. It's an event driven & object based language.

- **What is Event Driven Language?**

When we say event driven it means that you can write triggers which will initiate on specific events for example when user opens any document or saves any document

- **What is Object Based Language?**

Object based language is language in which we can use objects & their properties i.e. we can use the Worksheet object and its property SheetName when some one clicks on a button

Introduction to Visual Basic for Application - cont...

- **Visual Basic for Application**

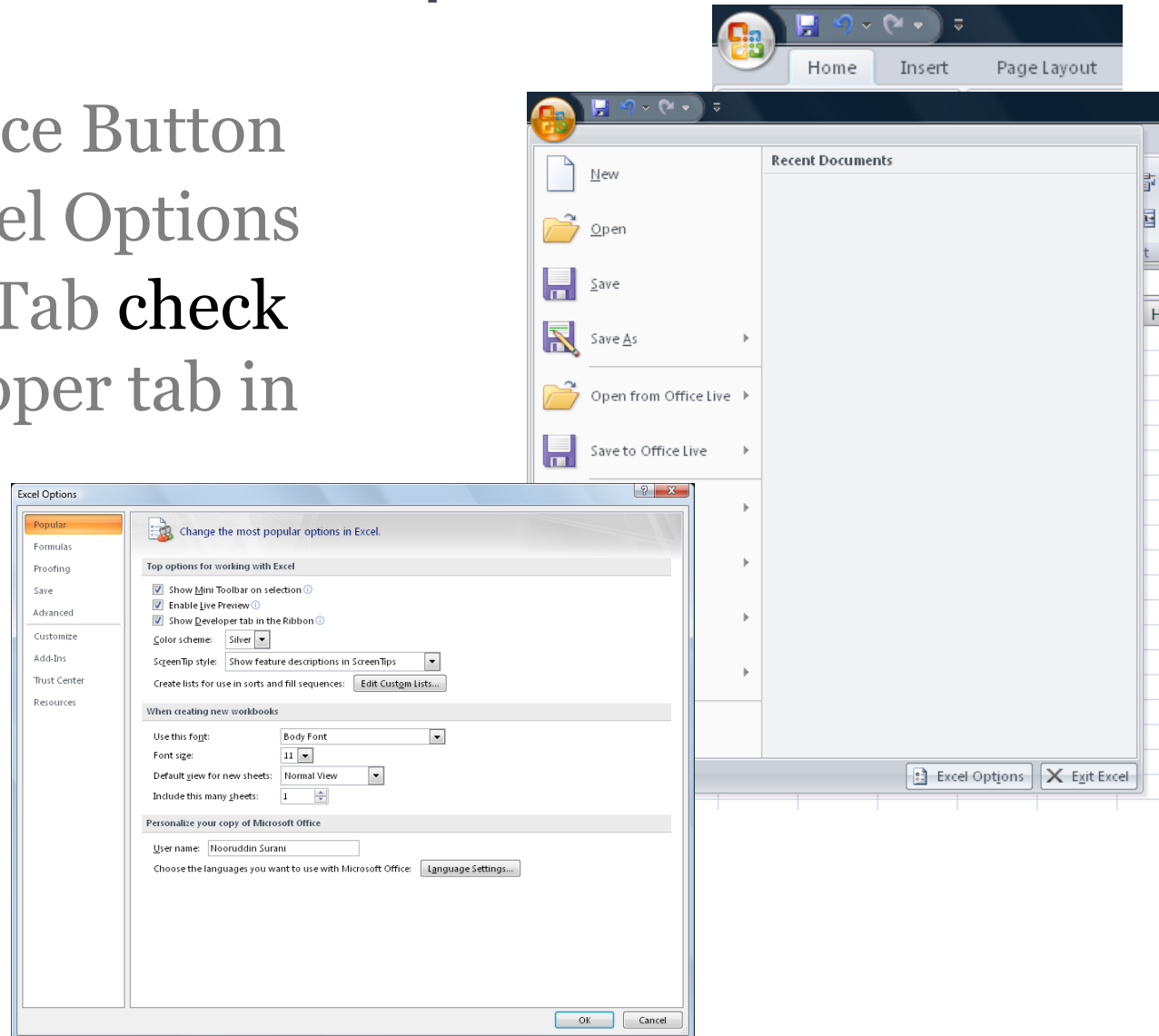
Visual Basic for Application is called VBA as it uses Visual Basic language and is capable of using application specific objects i.e. if we talk about VBA for Excel it can use Cell Object, Range Object, Worksheet Object, Workbook Object etc

Recording your first Macro

- Microsoft Excel 2007 provides you a very helpful option which enables you to record a macro and also modify and run afterwards
- Microsoft Excel 2007 don't provide you the macro recording option by default for enabling macro recording at first you need to enable the Developer Tab, *next slide defines step by step procedure to enable Developer Tab*

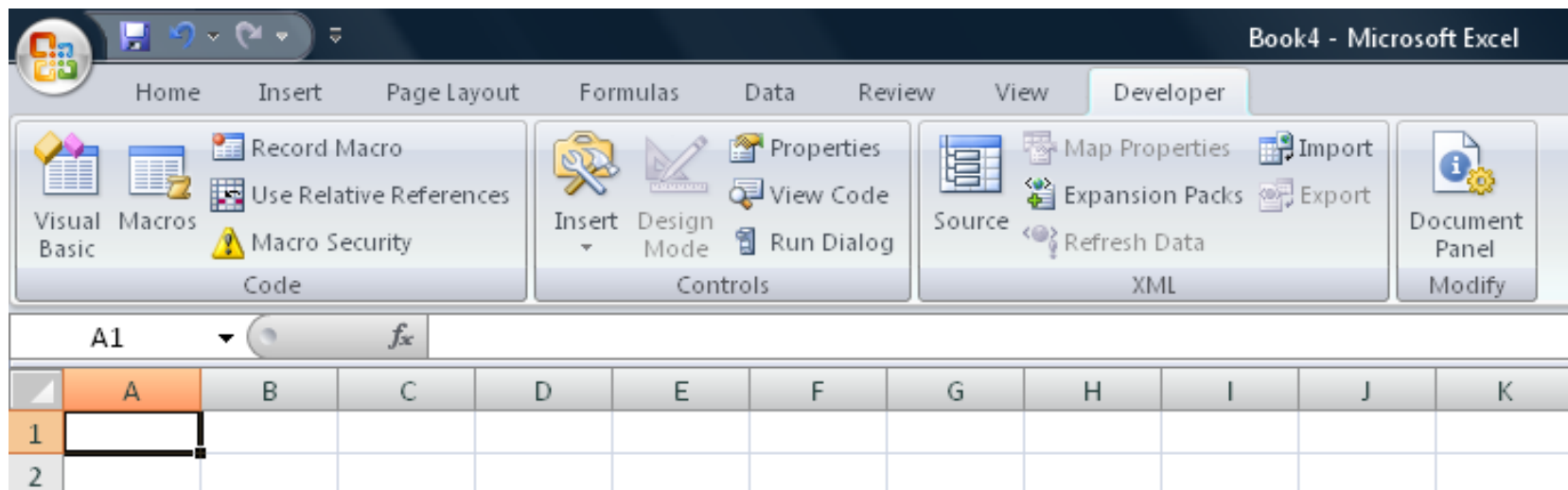
Enabling the Developer Tab

- Click on Office Button
- Click on Excel Options
- On Popular Tab check Show Developer tab in Ribbon



Enabling the Developer Tab

- Once you are done with the process you will have the Developer Tab ready

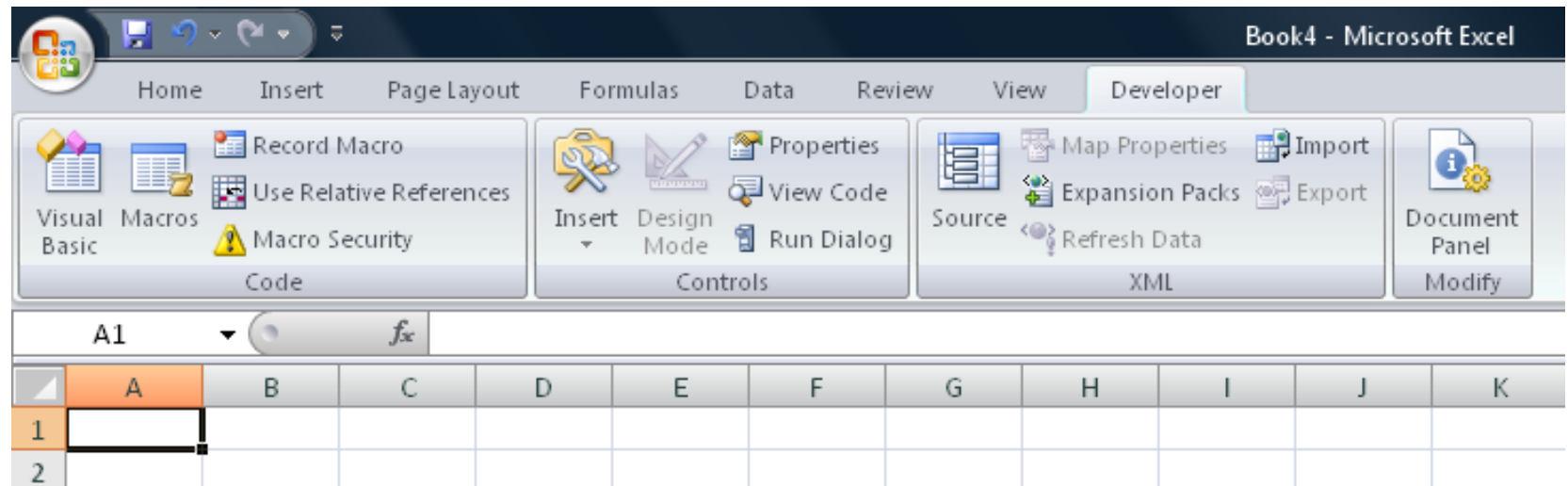


Recording your first Macro

- When you record macro Microsoft Excel 2007 provides you with 2 options either you can record a macro using Absolute References or Relative References
- If you go for Absolute References Excel's behavior will be:
 - You record a macro in Cell A1 type “Excel is Great” format **Bold** Cell B1
 - Whenever you play / run this macro Excel will always type “Excel is Great” in Cell A1 and format **Bold** Cell B1 no matter wherever your cursor is

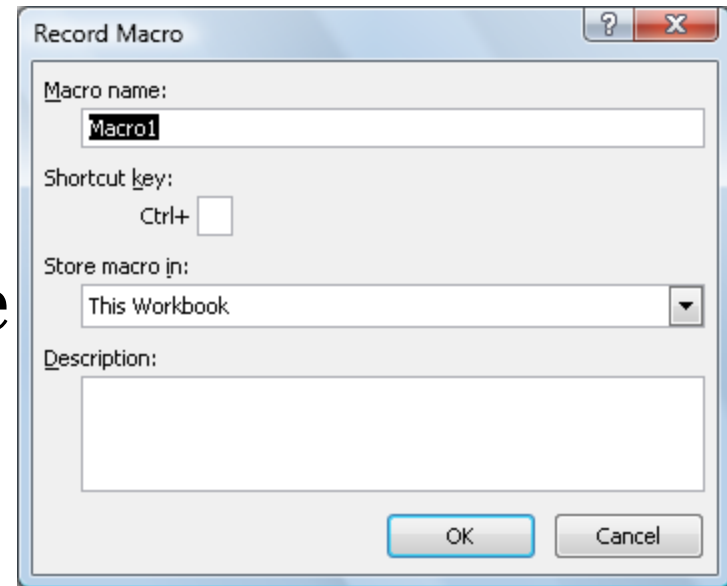
Recording your first Macro

1. Click Developer Tab
2. Click on Use Relative Reference
3. Click on Record Macro



Recording your first Macro

- As soon as you press record macro button the following screen will appear
- In the Macro name box you have to type the name of macro
- In Shortcut key you can type short cut key which invoke the Macro
- Store macro (will discussed later)
- You can also provide description of the macro

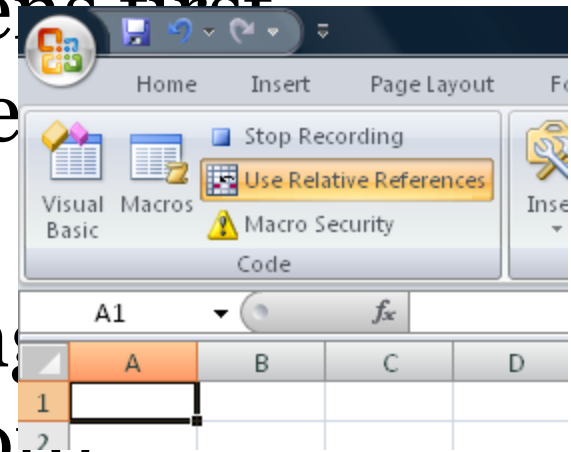


Recording your first Macro

- As soon as you press OK in the previous dialog box two things happen first record macro button change to Stop Recording

- Secondly Excel starts looking for your action and will record the same

- Please follow steps on the following slide to complete recording

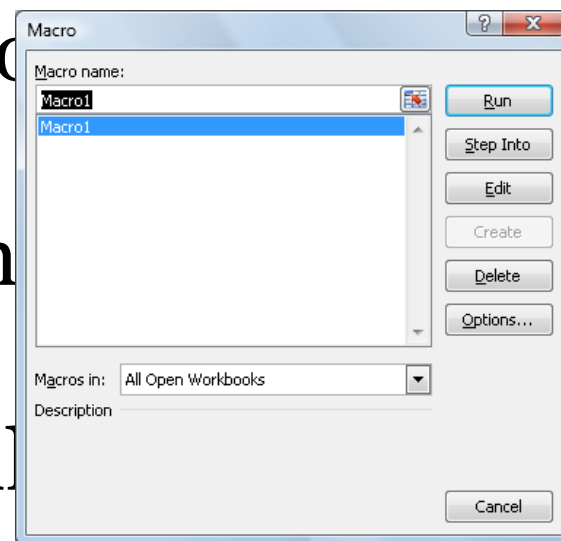


Recording your first Macro

1. Click on Cell A1 type “Excel is Great”
2. Select cells from A1:C1 click on Home Tab and click on Merge & Center
3. Press Bold & Italics
4. Now click on Developer Tab and click on Stop recording

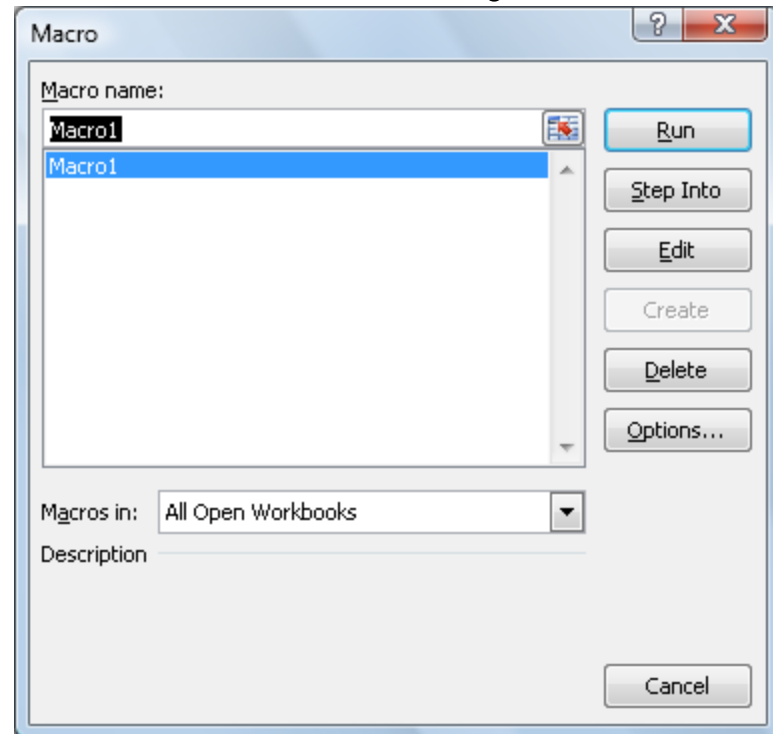
Playing your Macro

- You can execute the macro you just recorded by either clicking on the Macro button on the Developer Tab or by pressing **Alt F8** , you can see the list of Recorded macros in the dialog press Run button to execute the macro as soon as you press run you can see that your recorded macro will execute



Behind the scenes

- To see what Excel did behind the scenes you can either click on Macros button on Developer Tab and select Edit or you can press Alt F11



What it looks like

- This is what Excel did behind the scenes, it written the code for you. You can change the code if you want. You can either close the window or press Alt F11 again to go back to your Excel normal screen

```
Sub Macro1()  
    ' Macro1 Macro  
    '   
    ActiveCell.FormulaR1C1 = "Excel is Great"  
    ActiveCell.Range("A1:C1").Select  
    With Selection  
        .HorizontalAlignment = xlCenter  
        .VerticalAlignment = xlBottom  
        .WrapText = False  
        .Orientation = 0  
        .AddIndent = False  
        .IndentLevel = 0  
        .ShrinkToFit = False  
        .ReadingOrder = xlContext  
        .MergeCells = False  
    End With  
    Selection.Merge  
    Selection.Font.Bold = True  
    Selection.Font.Italic = True  
End Sub
```

Conclusion

- Macros are used to automate tasks or you can use macros to develop user interfaces
- Excel Macro use a language called VBA (Visual Basic for Applications), which is both Event Driven and Object Based
- The easiest way to look at macro is by using the Excel's record Macro Feature
- You can even edit Excel's recorded macro by yourself