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VBA CODE WITH SHORT EXPLANATIONS – BEGINNER TOPICS

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' --------------------------------------------------

' Writing your First VBA Macro

' --------------------------------------------------

' This macro writes simple text into cell A1.

' Steps: Open VB Editor → Insert Module → paste this code → run it.


Sub FirstMacro()

    Range("A1").Value = "Hello VBA"

End Sub




' --------------------------------------------------

' Beginning a subroutine

' --------------------------------------------------

' A subroutine starts with Sub and ends with End Sub.

' The name (here SimpleSub) is what you see in the Macros list.


Sub SimpleSub()

    MsgBox "This is a simple subroutine."

End Sub




' --------------------------------------------------

' Laying out Code Neatly

' --------------------------------------------------

' Use blank lines and indent (tab) to make code easy to read.
```

```
Sub NeatCode()
    Dim x As Integer      ' declare variable

    x = 10              ' set value
    MsgBox "Value of x is " & x
End Sub



' ---------------------------------------------------
' Writing comments
' ---------------------------------------------------
' Comments start with a single quote (').
' VBA ignores comments when running the code.

Sub CommentExample()
    ' This is a comment line.
    MsgBox "This line will run."  ' comment at end of line
End Sub



' ---------------------------------------------------
' Writing VBA Instructions
' ---------------------------------------------------
' Each line is one instruction for Excel.
' Here we write values to cells and then add them.

Sub InstructionExample()
    Range("A1").Value = 5         ' first number
    Range("A2").Value = 10        ' second number
    Range("A3").Value = Range("A1").Value + Range("A2").Value  ' sum
End Sub
```

```vba
' --------------------------------------------------

' Basic VBA Grammar

' --------------------------------------------------

' Structure:

'   Sub Name()

'       declarations

'       instructions

'   End Sub


Sub GrammarExample()

    Dim userName As String        ' declaration

    userName = "Student"          ' assignment

    MsgBox "Hello, " & userName    ' instruction using variable

End Sub



' --------------------------------------------------

' Changing the Value of Cells

' --------------------------------------------------

' Real-time example: writes a label and a number into cells B1 and B2.


Sub ChangeCellValue()

    Range("B1").Value = "Total"

    Range("B2").Value = 100

End Sub



' --------------------------------------------------

' Formatting a Cell
' --------------------------------------------------

' Example: bold text, yellow background, and number format on B2.


Sub FormatCell()

  With Range("B2")

    .Font.Bold = True           ' bold text

    .Interior.Color = vbYellow    ' yellow fill color

    .NumberFormat = "#,##0"       ' format as number with thousands separator

  End With

End Sub




' --------------------------------------------------

' Running a VBA Code

' --------------------------------------------------

' This macro just reminds how to run any Sub.


Sub RunCodeHelp()

  MsgBox "To run a macro: put cursor inside the Sub and press F5, or use Developer → Macros →
Run."

End Sub




' --------------------------------------------------

' Saving Files Containing Code

' --------------------------------------------------

' Reminder: you must save as .xlsm to keep the code.


Sub SaveWithCodeNote()

  MsgBox "Use File → Save As → choose 'Excel Macro-Enabled Workbook (*.xlsm)'."

End Sub
```

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' --------------------------------------------------

' Running a Subroutine (calling from another Sub)

' --------------------------------------------------

' One subroutine can run another using Call or just the name.


Sub RunOtherSub()

   Call FirstMacro          ' run FirstMacro

   MsgBox "FirstMacro has been run."

End Sub



' --------------------------------------------------

' Reopening Files and Security

' --------------------------------------------------

' When you reopen a file with macros, Excel may show a security warning.


Sub SecurityNote()

   MsgBox "On reopening, if you see a security warning, click 'Enable Content' to allow macros (only for trusted files)."

End Sub



' --------------------------------------------------

' HOW TO USE THIS FILE

' --------------------------------------------------

' 1. Open Excel.

' 2. Press Alt + F11 to open the VB Editor.

' 3. Insert → Module.

' 4. Paste all this code into the new module.
' 5. Save the workbook as Excel Macro-Enabled Workbook (*.xlsm).

' 6. To run a macro: put cursor inside any Sub and press F5,

'    or in Excel: Developer → Macros → select macro name → Run.

' --------------------------------------------------
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