

Create Excel VBA Macro to do the following:

- Display Message box with your name, DOB, and predict your age after 10 years.
- Use loops to display message box, if active cell in the selected sheet has person's age ≥ 60 as "User is 60 or older", if age ≥ 20 as "User is 20 or older", otherwise as "not allowed"
- Use Range and sort method to sort the list by Division, by Category and by Total

Solution:

A Simple Exercise to start with:

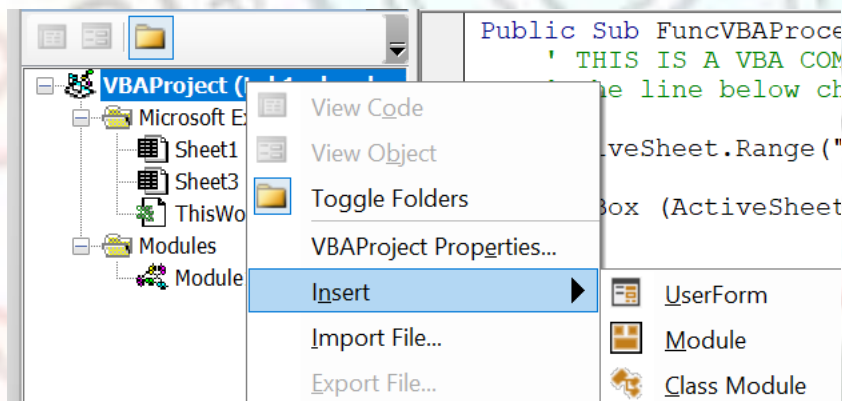
Create a spreadsheet as below.

	A	B
1	Hello World	
2		
3		
4		
5		
6		
7		

Ensure that Developer Tab is enabled in Customize Ribbon setting.

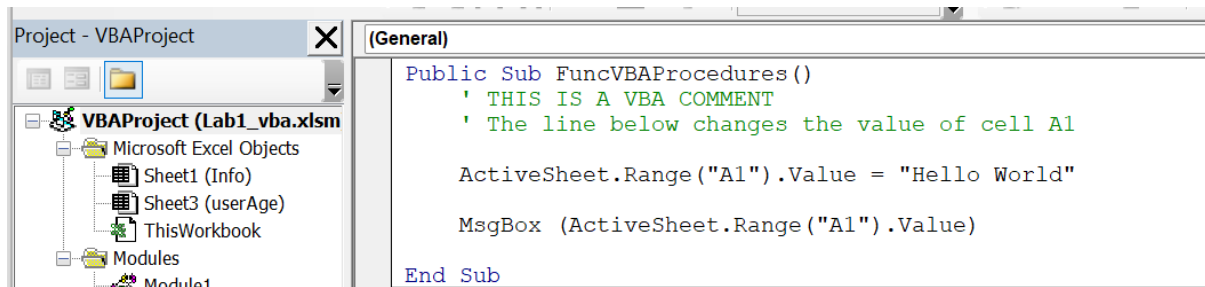
Click Visual Basic under Developer Tab and do the following in VB editor.

Select the project and click insert, select Module



A module page will be ready to write the VB code.

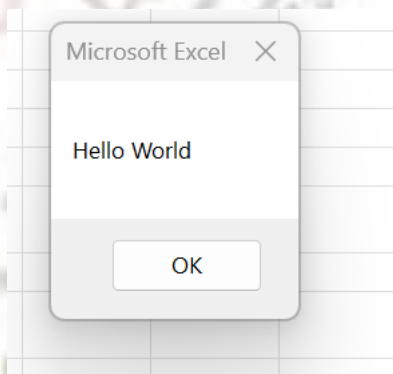
Write the code for 1a as shown below



Save the macro with appropriate name and Run the macro by clicking 'Run Macro' icon or by using key F5.

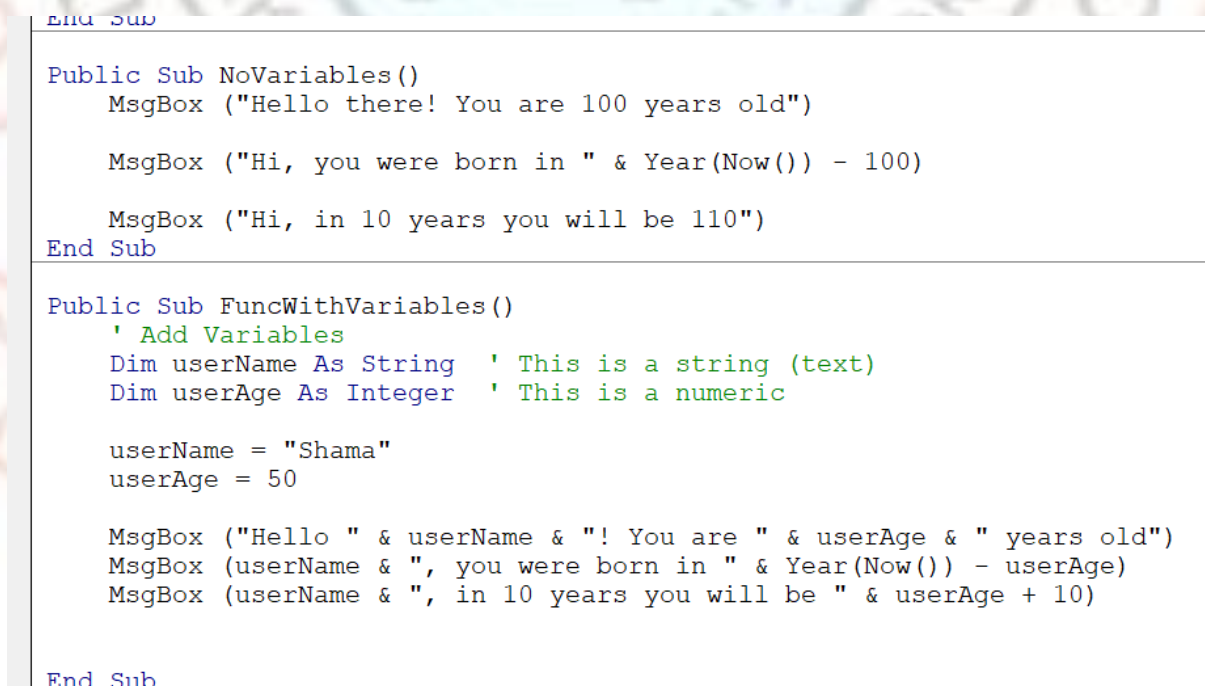
Select the macro name and click run button

Observe the output:

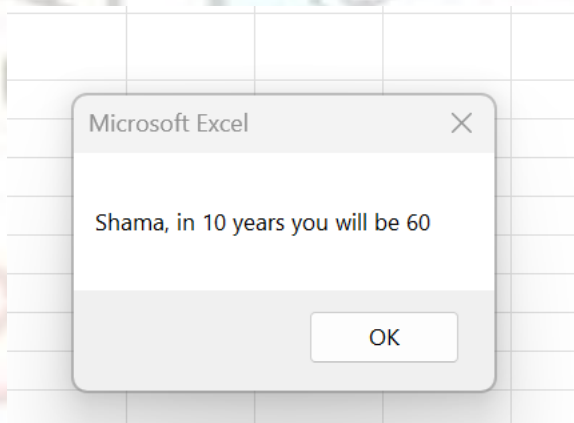
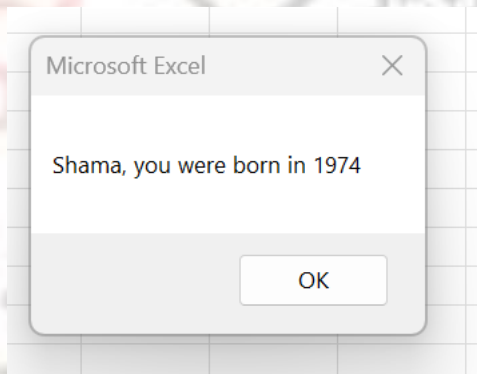
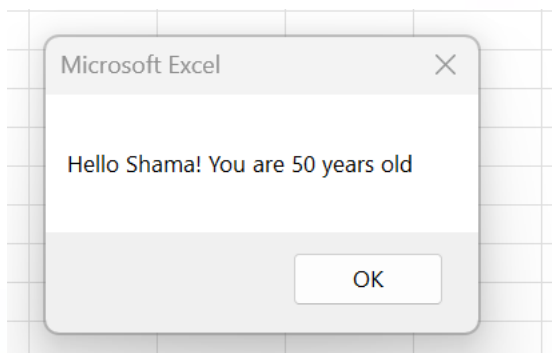


1a. Display Message box with your name, DOB, and predict your age after 10 years.

Write the new procedure in VBA module editor as below:



Run the macro and verify the output.



- d) 1b. Use loops to display message box, if active cell in the selected sheet has person's age ≥ 60 as "User is 60 or older", if age ≥ 20 as "User is 20 or older", otherwise as "not allowed"

Input sample is as below:

	A	B	C
1	USER	AGE	
2	Hari	16	
3	Janardhar	22	
4	Robo	25	
5	Suma		
6	Aradhya	18	
7	Charlie	120	
8	Prathima	24	
9	Julie	21	
10	Bhairav	16	
11	Loganand	26	
12	Tiger	45	
13	Jack	18	

Vba code :



3	Janardhar	22
4	Robo	25
5	Suma	
5	Aradhya	18
7	Charlie	120
8	Prathima	24
9	Julie	21
0	Bhairav	16
1	Loganand	26
2	Tiger	45
3	Jack	18
4		
5		
6		
7		
8		
9		
0		
1		

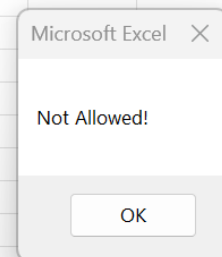
Microsoft Excel

User is 21 or older

OK

Try the same with all three options : with loops (for all range values), with select (for individual cell value) and with logic (for individual cell value)

A	B	C	D	E	F	G	H	I	J	K
USER	AGE									
Hari	16									
Janardhar	22									
Robo	25									
Suma										
Aradhya	18									
Charlie	120									
Prathima	24									
Julie	21									
Bhairav	16									
Loganand	26									
Tiger	45									
Jack	18									



1c. Use Range and sort method to sort the list by Division, by Category and by Total

Create spreadsheet with values according to Division, Category ,month wise and total details as shown below:

C	D	E	F	G	H	I
Division	Category	Jan	Feb	Mar	Total	
West	Telephone	₹ 700.00	₹ 750.00	₹ 750.00	₹ 2,200.00	
South	Telephone	₹ 700.00	₹ 750.00	₹ 750.00	₹ 2,200.00	
North	Telephone	₹ 980.00	₹ 850.00	₹ 950.00	₹ 2,780.00	
East	Telephone	₹ 900.00	₹ 850.00	₹ 850.00	₹ 2,600.00	
West	Telemarketing	₹ 3,800.00	₹ 3,700.00	₹ 3,750.00	₹ 11,250.00	
South	Telemarketing	₹ 6,980.00	₹ 6,310.00	₹ 6,375.00	₹ 19,665.00	
North	Telemarketing	₹ 3,200.00	₹ 3,760.00	₹ 3,750.00	₹ 10,710.00	
East	Telemarketing	₹ 3,825.00	₹ 3,725.00	₹ 3,750.00	₹ 11,300.00	
West	Technical Support	₹ 300.00	₹ 100.00	₹ 150.00	₹ 550.00	
South	Technical Support	₹ 730.00	₹ 525.00	₹ 430.00	₹ 1,685.00	
North	Technical Support	₹ 800.00	₹ 950.00	₹ 750.00	₹ 2,500.00	
East	Technical Support	₹ 800.00	₹ 650.00	₹ 700.00	₹ 2,150.00	
West	Supplies	₹ 2,000.00	₹ 1,800.00	₹ 1,900.00	₹ 5,700.00	
South	Supplies	₹ 745.00	₹ 780.00	₹ 900.00	₹ 2,425.00	
North	Supplies	₹ 2,410.00	₹ 1,850.00	₹ 2,390.00	₹ 6,650.00	
East	Supplies	₹ 3,300.00	₹ 3,500.00	₹ 3,700.00	₹ 10,500.00	
West	Software	₹ 1,150.00	₹ 1,200.00	₹ 1,435.00	₹ 3,785.00	
South	Software	₹ 1,150.00	₹ 1,200.00	₹ 1,400.00	₹ 3,750.00	
North	Software	₹ 1,150.00	₹ 1,255.00	₹ 1,400.00	₹ 3,805.00	
East	Software	₹ 2,025.00	₹ 2,200.00	₹ 1,650.00	₹ 5,875.00	
West	Salaries	₹ 72,000.00	₹ 70,000.00	₹ 70,000.00	₹ 2,12,000.00	
South	Salaries	₹ 56,900.00	₹ 62,800.00	₹ 60,870.00	₹ 1,80,570.00	
West	Rent	₹ 5,000.00	₹ 5,000.00	₹ 5,000.00	₹ 15,000.00	
South	Rent	₹ 4,700.00	₹ 4,700.00	₹ 4,700.00	₹ 14,100.00	
North	Rent	₹ 6,020.00	₹ 6,020.00	₹ 6,020.00	₹ 18,060.00	
East	Rent	₹ 8,000.00	₹ 8,000.00	₹ 8,000.00	₹ 24,000.00	
West	Overhead	₹ 775.00	₹ 750.00	₹ 700.00	₹ 2,225.00	
South	Overhead	₹ 2,140.00	₹ 2,310.00	₹ 2,000.00	₹ 6,450.00	
North	Overhead	₹ 850.00	₹ 750.00	₹ 800.00	₹ 2,400.00	
East	Overhead	₹ 1,250.00	₹ 1,250.00	₹ 1,250.00	₹ 3,750.00	
West	Miscellaneous	₹ 14,500.00	₹ 13,500.00	₹ 15,500.00	₹ 43,500.00	

Write vba code for sorting by Division (Cell C), sorting by Category (Cell D) and by Total (Cell H) respectively as shown below.

```

Public Sub UserSortInput()
    ' get the sort order from the user
    Dim sortOrder As Integer
    Dim promptMSG As String
    Dim tryAgain As Integer

    On Error GoTo errHandler

    promptMSG = "How would you like to sort the list?" & vbCrLf & _
        "1 - Sort by Division" & vbCrLf & _
        "2 - Sort by Category" & vbCrLf & _
        "3 - Sort by Total"

    sortOrder = InputBox(promptMSG, "Sort Order")

    If sortOrder = 1 Then
        DivisionSort
    ElseIf sortOrder = 2 Then
        CategorySort
    ElseIf sortOrder = 3 Then
        TotalSort
    Else
errHandler:
        tryAgain = MsgBox("Invalid Value! Try again?", vbYesNo)

        If tryAgain = 6 Then
            UserSortInput
        End If
    End If
End Sub

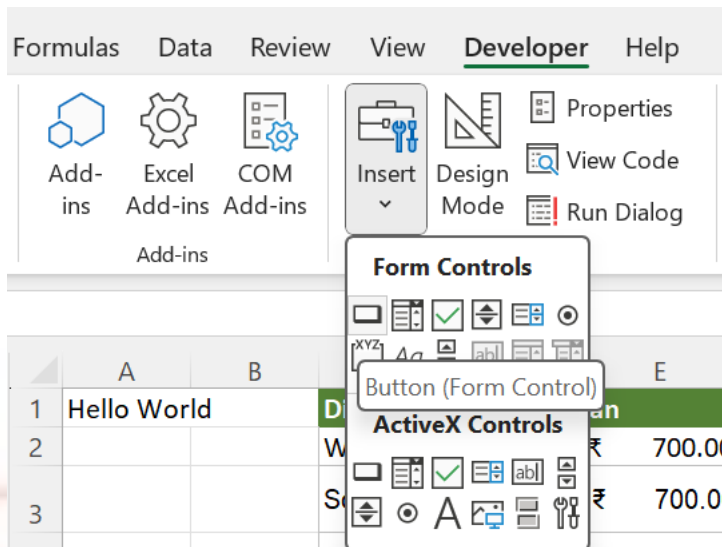
Public Sub DivisionSort()
    ' sorts the list by the Division
    Columns("C:H").Sort key1:=Range("C2"), order1:=xlDescending, Header:=xlYes
End Sub

Public Sub CategorySort()
    ' sorts the list by the Category
    Columns("C:H").Sort key1:=Range("D2"), order1:=xlDescending, Header:=xlYes
End Sub

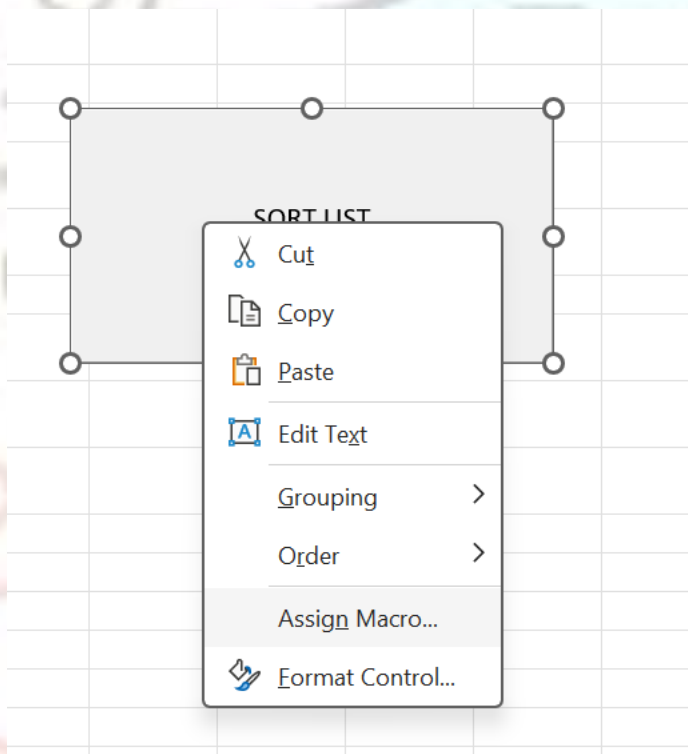
Public Sub TotalSort()
    ' sorts the list by the Total
    Columns("C:H").Sort key1:=Range("H2"), order1:=xlDescending, Header:=xlYes
End Sub

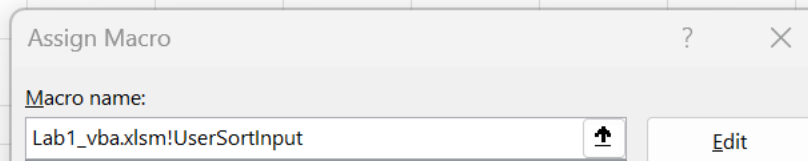
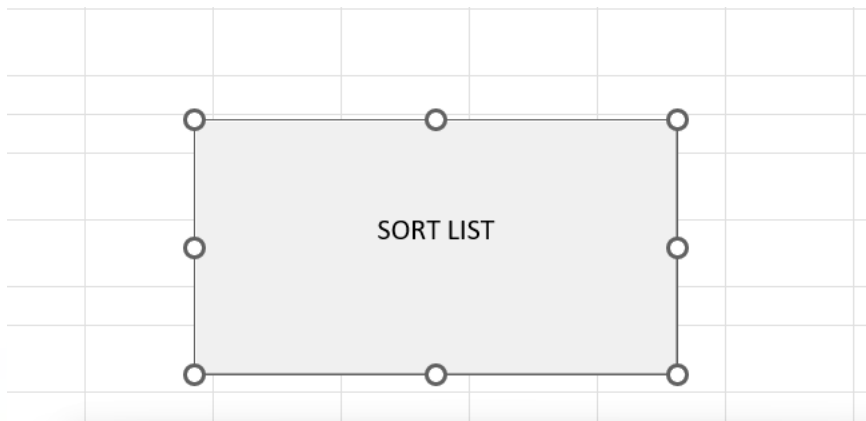
```

Select insert option under controls and click button



After placing the button, edit the name for button and click assign macro





Give the macro name as shown above. (with the module written to access user input for sorting). Now, Examine the output with user interface by choosing the options for each methods.

Click the button and make your choice and verify the output.

