CSE 123
Introduction to Computing

Lecture 10
Dialogue boxes and User forms

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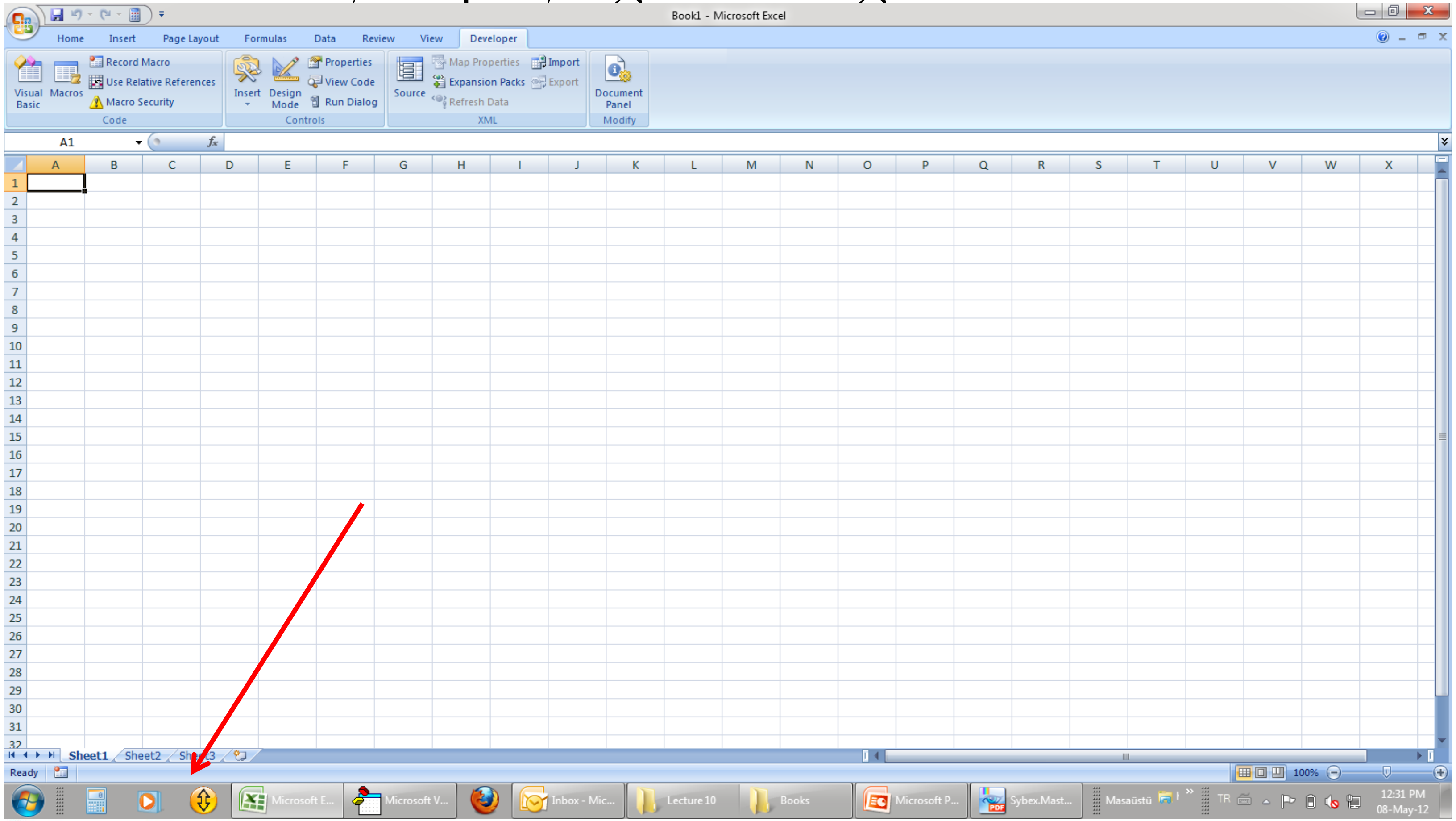
Üniversitesi

Communicating with the User

- User forms, message boxes, and input boxes are used to communicate with the user.
- There are five ways to communicate with the user in VBA
  - Displaying messages on the status bar at the bottom of the window – bit limited but effective
  - Displaying message box
  - Displaying an input box
  - Displating a user box
  - Communicating directly through the applications interface

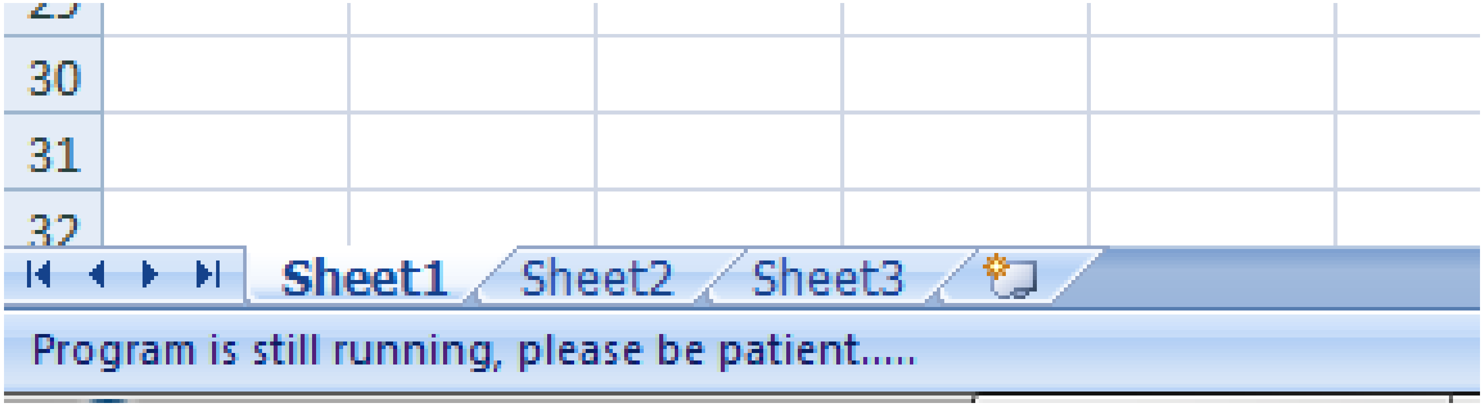
Displaying Status Bar in Excel

- You can prevent user to think that the procedure is frozen or chrashed by displaying a message on the status bar.



Displaying Status Bar in Excel

```
Sub bar()
Application.StatusBar = "Program is still running,_
   please be patient....."
End Sub
```



Program is still running, please be patient.....

Displaying Status Bar in Excel

- Progress indicators can be written in various ways

Application.StatusBar="Program is calculating the grade of 9th student"

.......10th student

.......11th student etc.

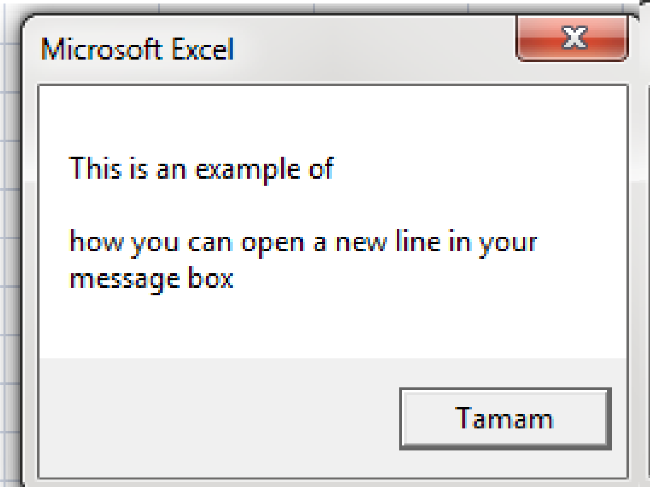
You need to use a loop to display the progress

Message Box

- Basics of Message box use was covered in earlier lectures
- To break string into more than one line;
  - vbCr or Chr(13)
  - vbLf or Chr(10)
  - vbCrLf
  - vbnew line
- comments can be used

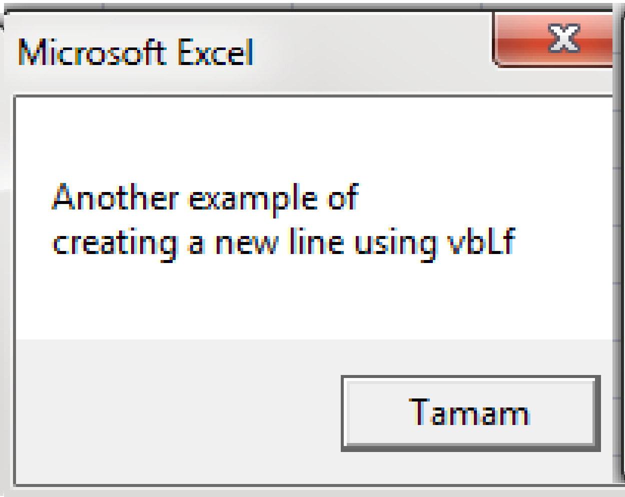
Message Box

```
Sub message()
MsgBox ("This is an example of" & vbCr & vbCr & "how you can_
    open a new line in your" & vbNewLine &_ "message box")
MsgBox ("Another example of " & vbLf & "creating a new line using_
    vbLf")
MsgBox ("Another example of " & vbCrLf & "creating new line using_
    vbCrLf")
End Sub
```

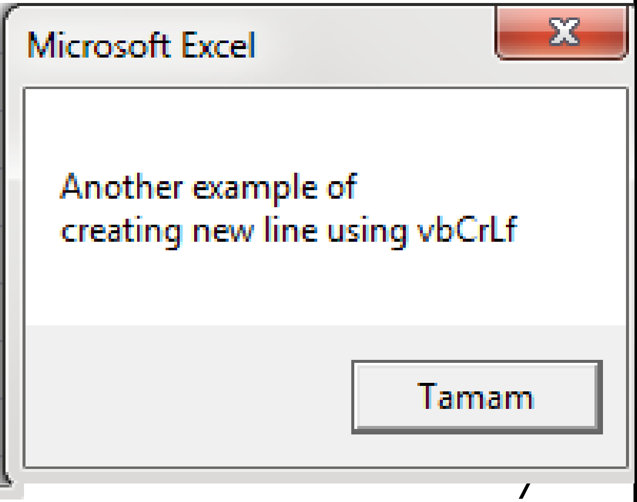


This is an example of

how you can open a new line in your
message box



Another example of
creating a new line using vbLf



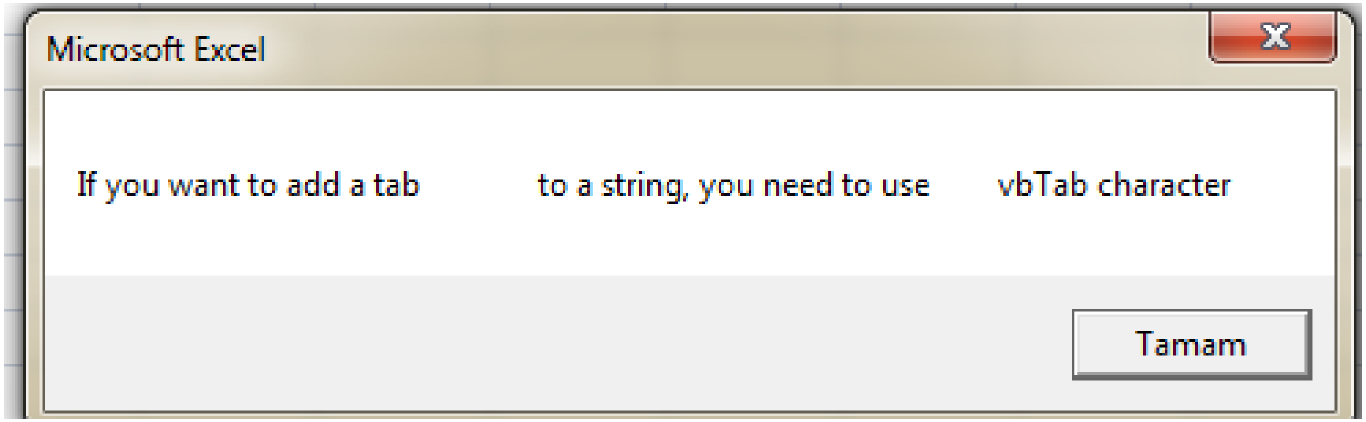
Another example of
creating new line using vbCrLf

Message Box

- Add a tab to a string
  - vbTab or Chr(9)
- To add bullets
  - Chr(149)

Message Box

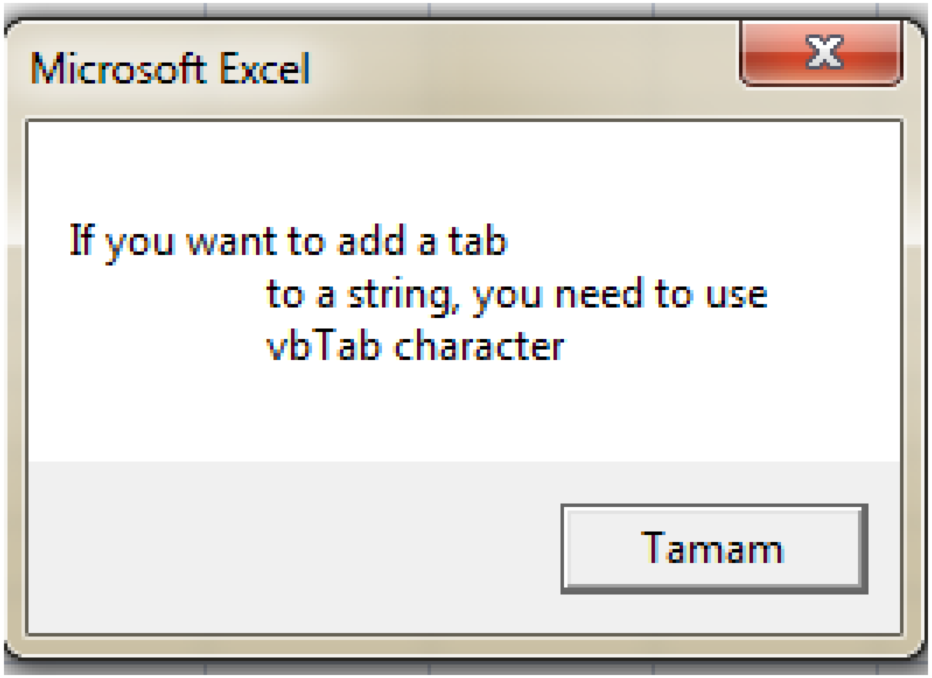
```
Sub message()
MsgBox ("If you want to add a tab" & vbTab & "to a string,_
    you need to use" & vbTab & "vbTab character")
End Sub
```



Microsoft Excel

If you want to add a tab	to a string, you need to use	vbTab character

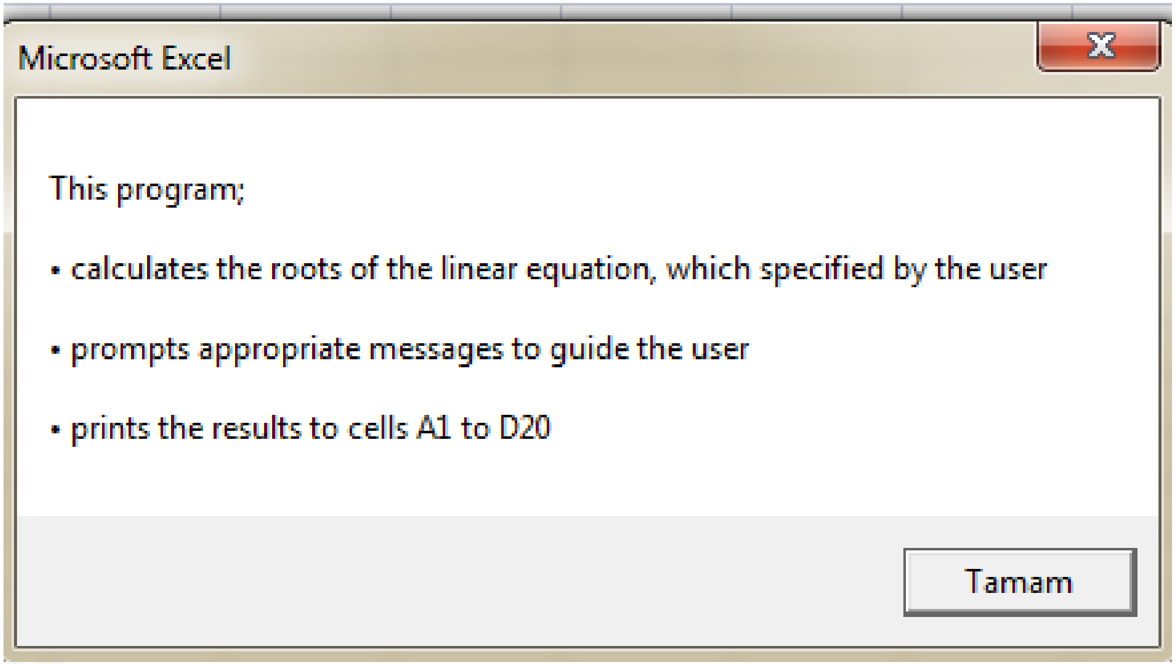
Message Box



If you want to add a tab
	to a string, you need to use
	vbTab character

Message Box

```
MsgBox ("This program; " & vbCr & vbCr & Chr(149) & _
 " calculates  the roots of the linear equation, which specified by the
   user"_ & vbCr & vbCr & Chr(149) & _
" prompts appropriate messages to guide the user" & vbCr & vbCr & _
   Chr(149) & " prints the results to cells A1 to D20")
```



Microsoft Excel

This program;

- calculates the roots of the linear equation, which specified by the user
- prompts appropriate messages to guide the user
- prints the results to cells A1 to D20

Message Box Buttons Argument

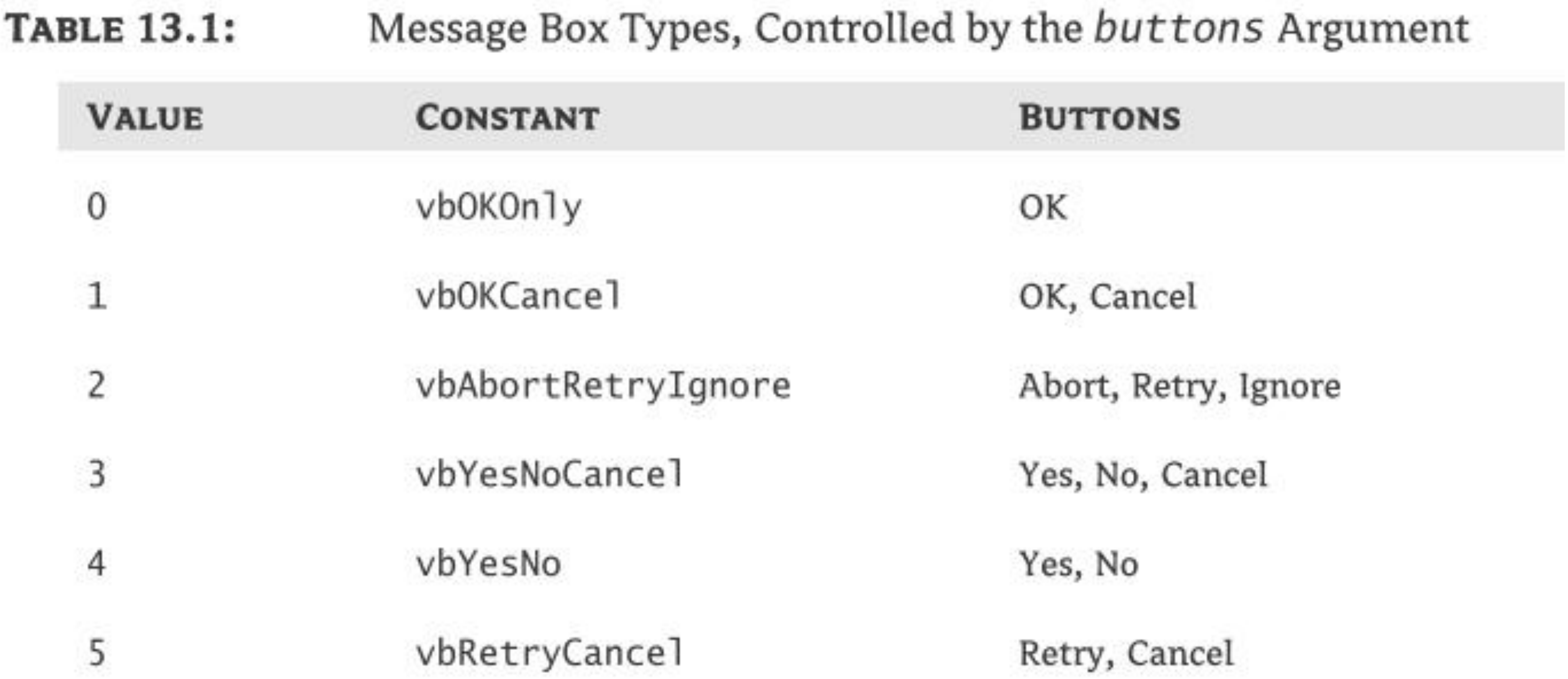


TABLE 13.1: Message Box Types, Controlled by the *buttons* Argument

VALUE	CONSTANT	BUTTONS
0	vbOKOnly	OK
1	vbOKCancel	OK, Cancel
2	vbAbortRetryIgnore	Abort, Retry, Ignore
3	vbYesNoCancel	Yes, No, Cancel
4	vbYesNo	Yes, No
5	vbRetryCancel	Retry, Cancel

Ref: Mansfield R. Mastering VBA for Microsoft Office 2007. Wilwy Publishing. 2008

Message Box Icons

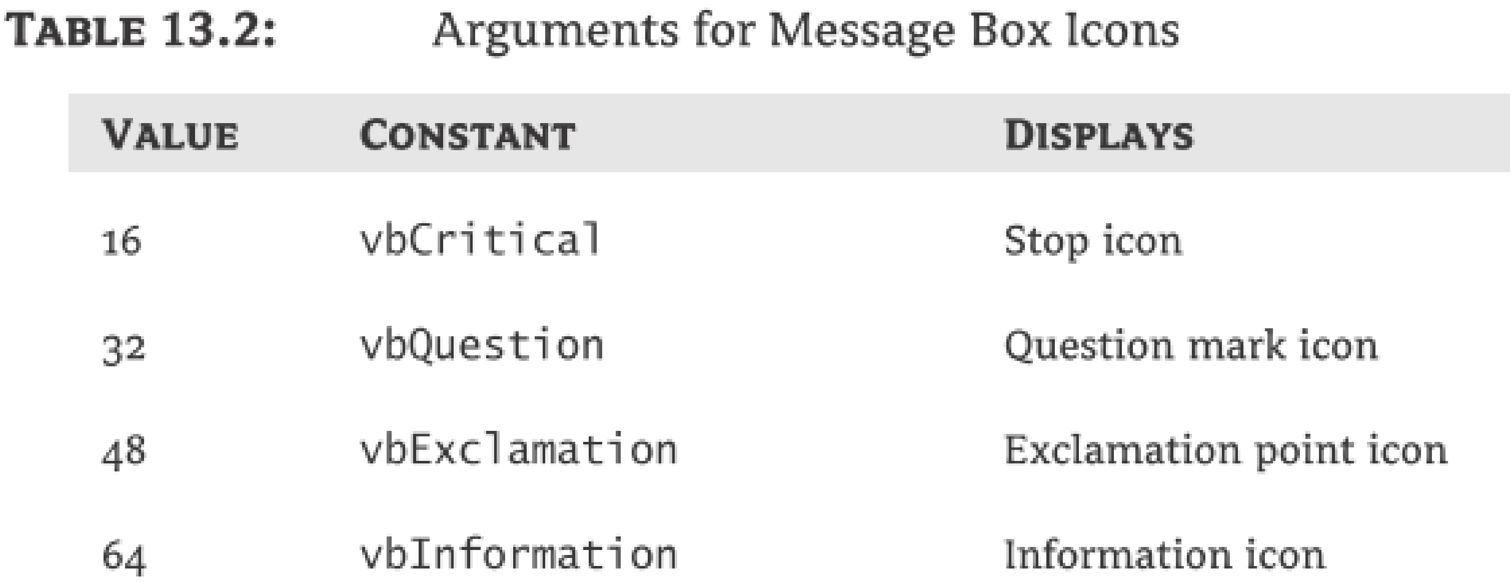


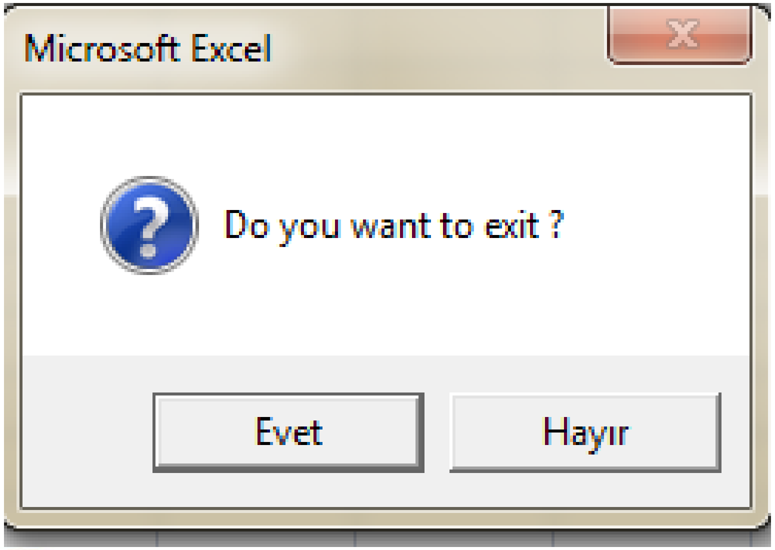
TABLE 13.2: Arguments for Message Box Icons

VALUE	CONSTANT	DISPLAYS
16	`vbCritical`	Stop icon
32	`vbQuestion`	Question mark icon
48	`vbExclamation`	Exclamation point icon
64	`vbInformation`	Information icon

Ref: Mansfield R. Mastering VBA for Microsoft Office 2007. Wilwy Publishing. 2008

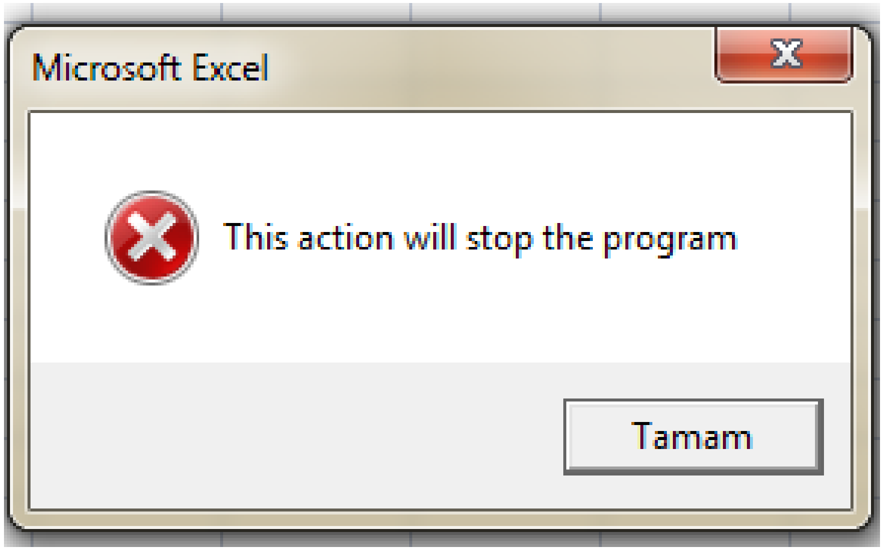
Message Box Icons

```
Sub Message2()
a = MsgBox("Do you want to exit ?", vbQuestion + vbYesNo)
.....
b = MsgBox("This action will stop the program", vbCritical)
End Sub
```



Microsoft Excel

Do you want to exit ?



Microsoft Excel

This action will stop the program

Setting a Default Button for a Message Box

- If the procedure can destroy someones work if they run it inadvertently then it would be a good idea to set a default button of No or Cancel

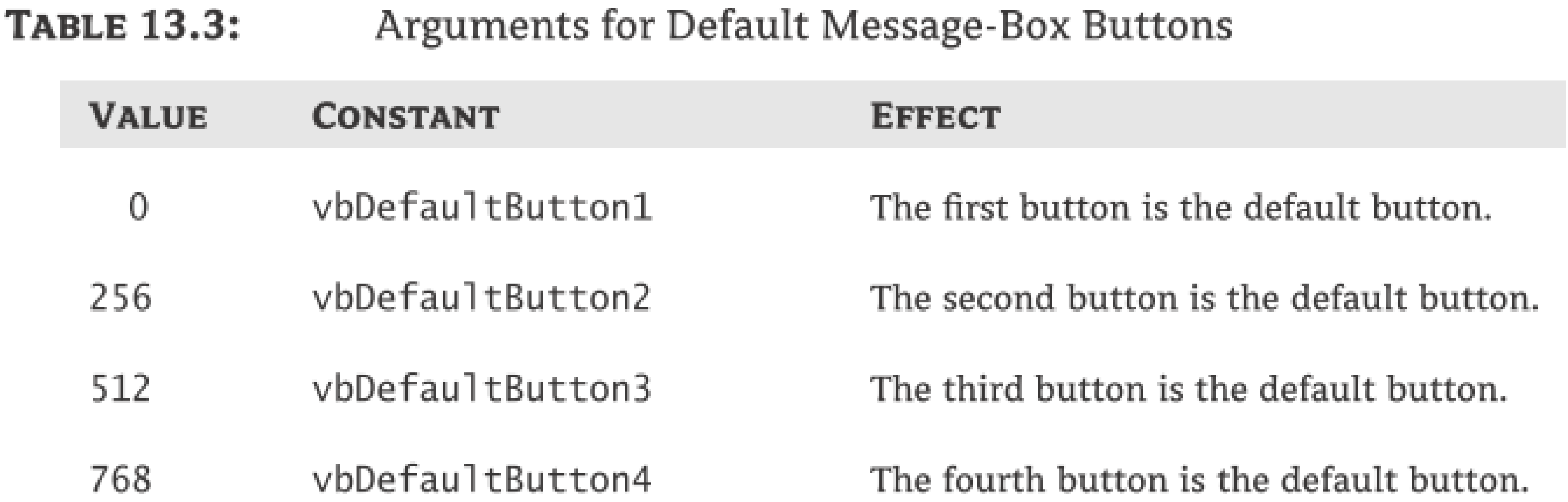


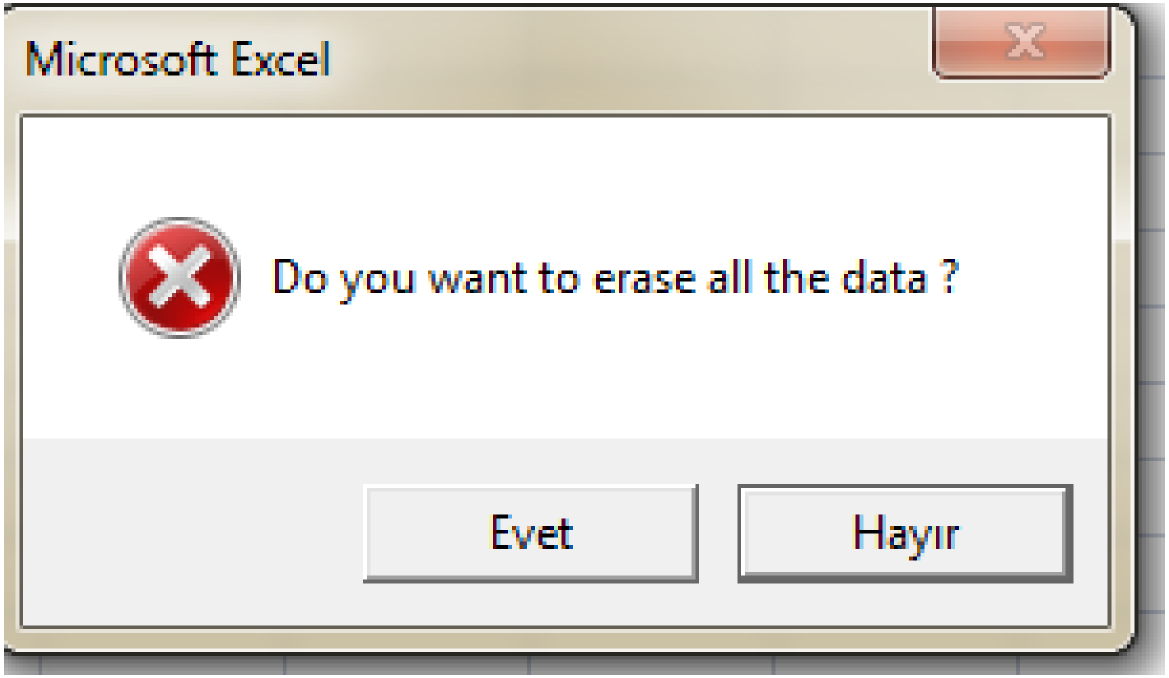
TABLE 13.3: Arguments for Default Message-Box Buttons

VALUE	CONSTANT	EFFECT
0	vbDefaultButton1	The first button is the default button.
256	vbDefaultButton2	The second button is the default button.
512	vbDefaultButton3	The third button is the default button.
768	vbDefaultButton4	The fourth button is the default button.

Ref: Mansfield R. Mastering VBA for Microsoft Office 2007. Wilwy Publishing. 2008

Setting a Default Button for a Message Box

```
y = MsgBox("Do you want to erase all the data ?", _
    vbYesNo + vbCritical + vbDefaultButton2)
```



Do you want to erase all the data ?

Adding Help Button to your Messagebox

- vbMsgBoxHelpButton constant is used

```
y = MsgBox("Do you want to erase all the data ?", vbYesNo + _
    vbCritical + vbDefaultButton2 + vbMsgBoxHelpButton)
```

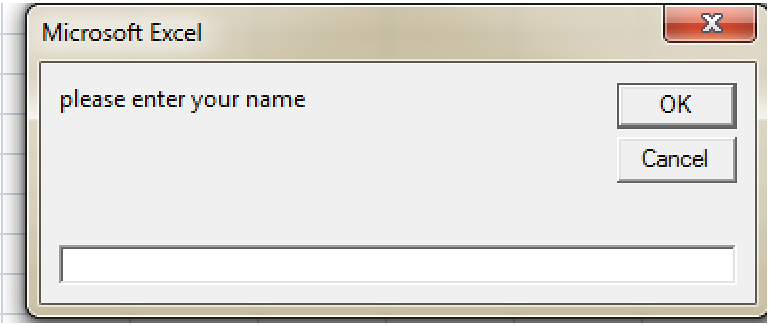
- You need to specify the help file as well

```
y = MsgBox("Do you want to erase all the data ?", vbYesNo + _
    vbCritical + vbDefaultButton2 + _
    vbMsgBoxHelpButton,“c:\Windows\Help\My_Help.chm” )
```

InputBox

- Basics have been covered

y = InputBox("please enter your name")



Microsoft Excel

please enter your name

Dialogue Boxes

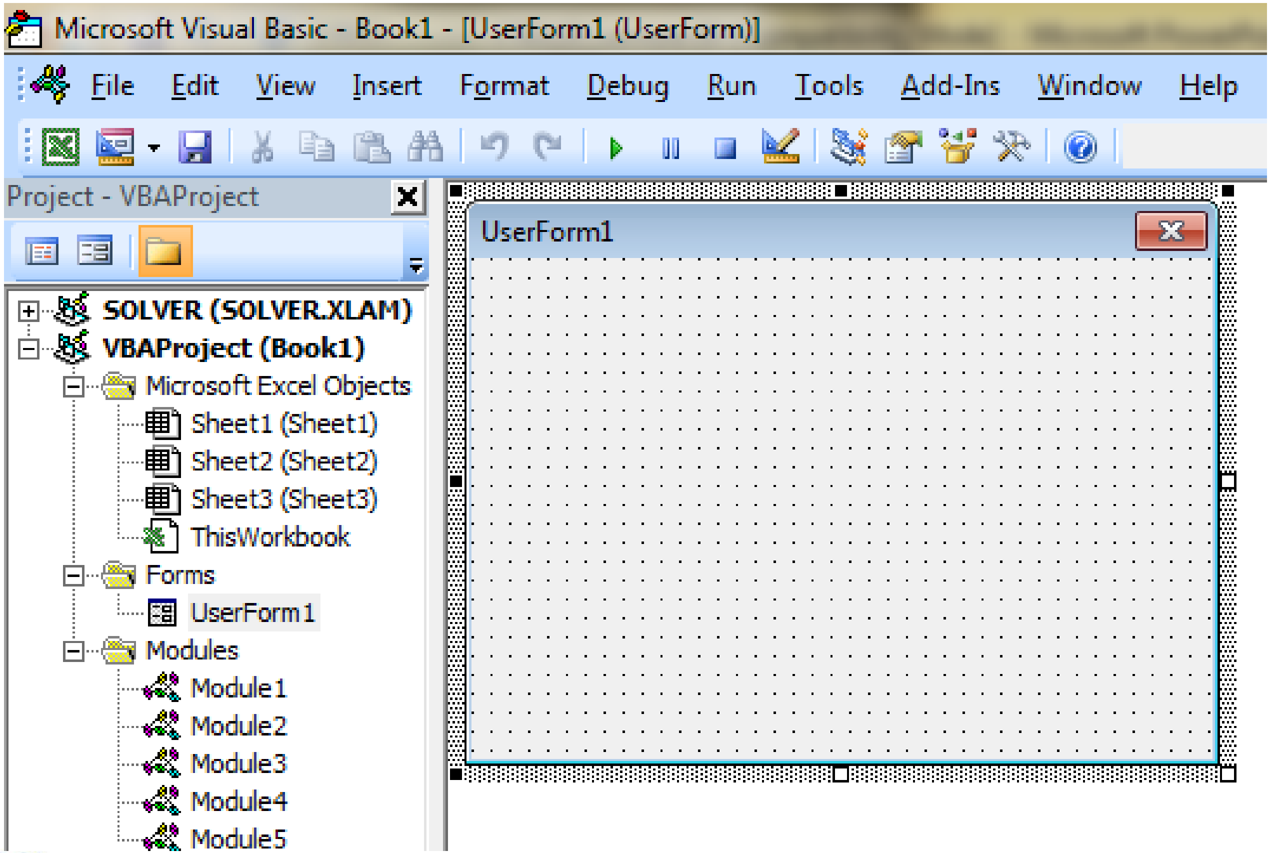
- Most of the time message boxes and/or input boxes will not be enough, becuase
  - You can only use limited amount of buttons
  - You can present only certain amount of information
- Custom dialogue boxes are created instead

Dialogue Boxes

- User forms are used to implement dialogue boxes
- A user form is a blank sheet on which you can place controls (buttons, check boxes etc.)
- A code is attached to the controls in the form
- Each user form is an object and contains number of other objects that you can manipulate

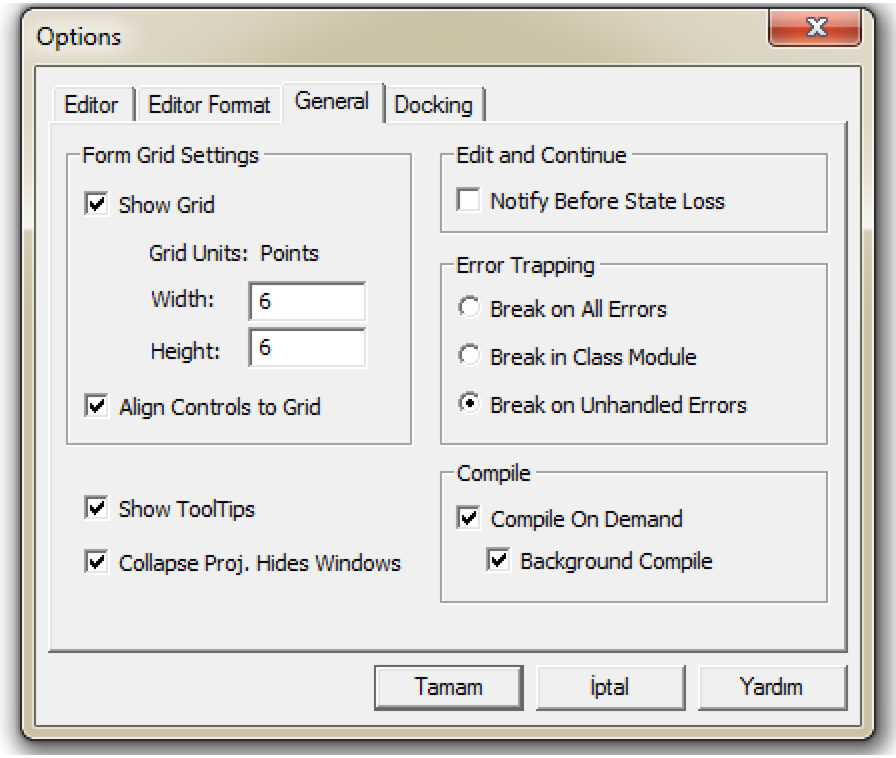
Inserting a User Form

- Open the Visual Basic Editor
- Insert → UserForm



User Forms

- Grid Settings: Tools→Options→General



Form Grid Settings

☑ Show Grid

Grid Units: Points

Width: 6

Height: 6

☑ Align Controls to Grid

☑ Show ToolTips

☑ Collapse Proj. Hides Windows

Edit and Continue

□ Notify Before State Loss

Error Trapping

○ Break on All Errors

○ Break in Class Module

● Break on Unhandled Errors

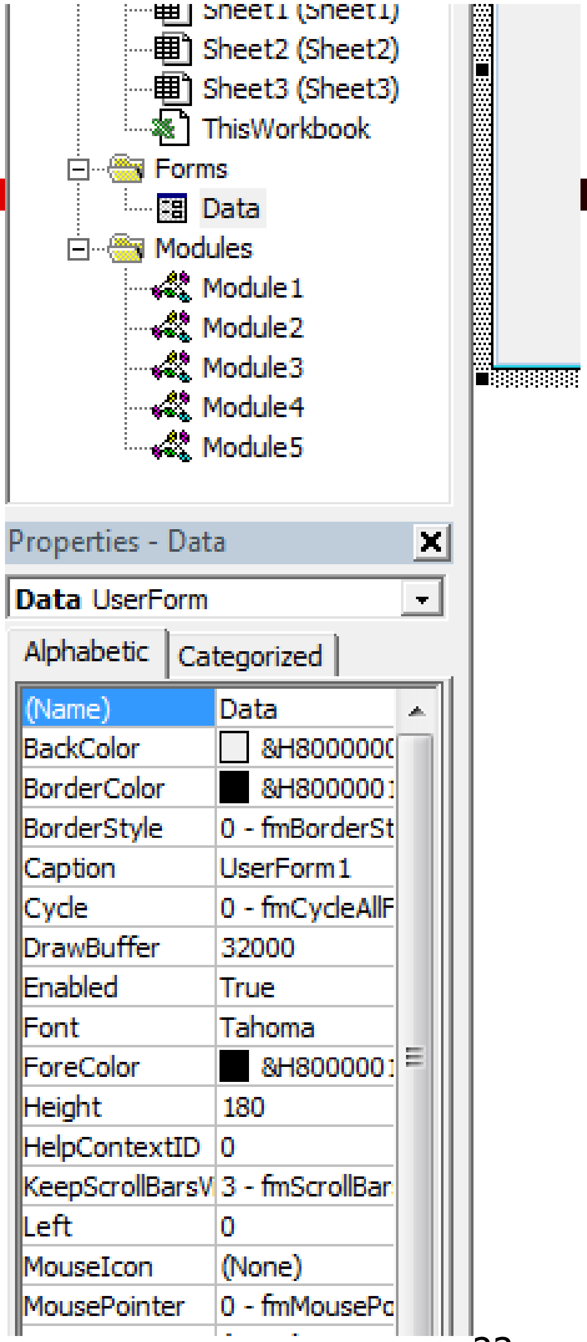
Compile

☑ Compile On Demand

☑ Background Compile

Renaming User Form

- Default name for the first user name you have created is UserForm1
- Properties window
- You can change the name of the user form, color, font etc. from the properties window.



Sheet1 (Sheet1)
Sheet2 (Sheet2)
Sheet3 (Sheet3)
ThisWorkbook
Forms
Data
Modules
Module1
Module2
Module3
Module4
Module5

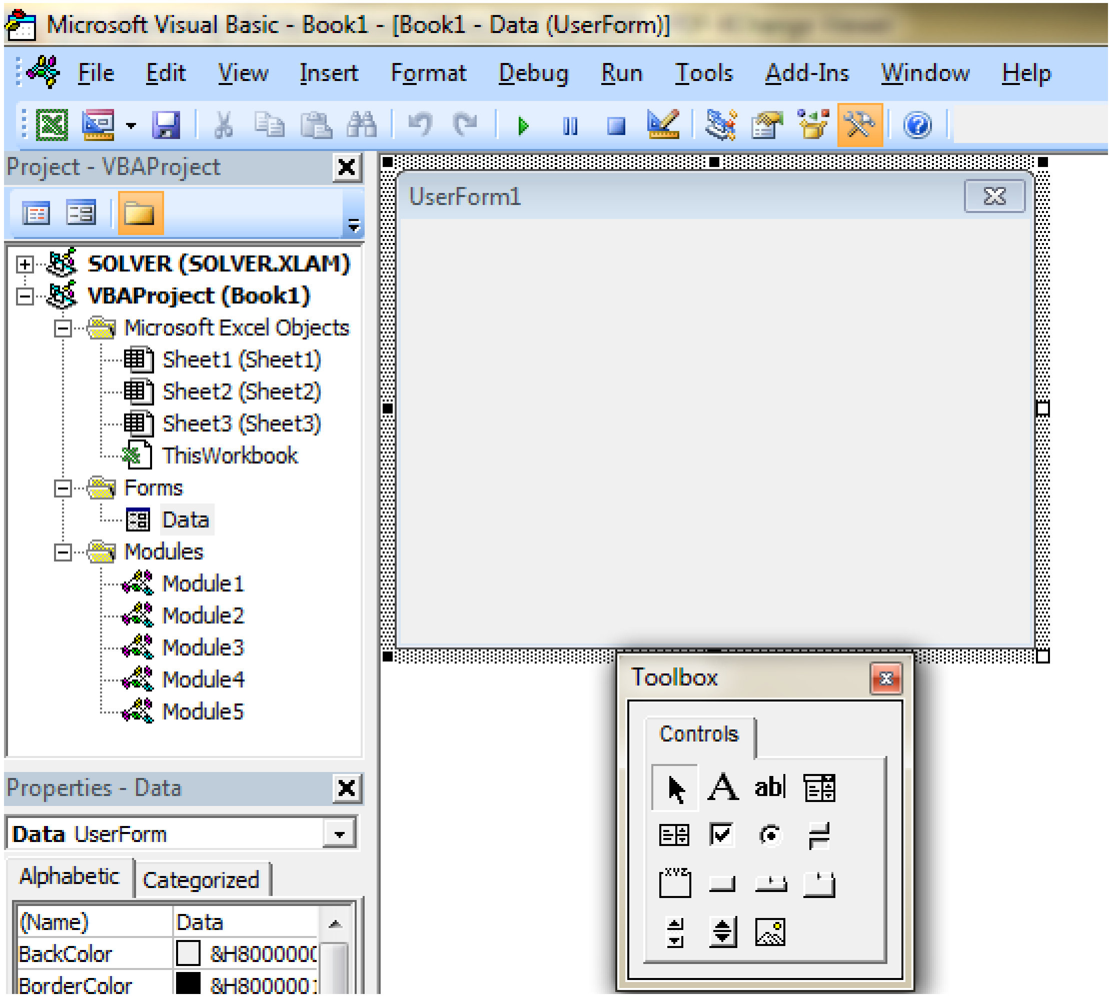
Properties - Data

Data UserForm

(Name)	Data
BackColor	□ &H8000000
BorderColor	■ &H8000001
BorderStyle	0 - fmBorderSt
Caption	UserForm1
Cycle	0 - fmCycleAllF
DrawBuffer	32000
Enabled	True
Font	Tahoma
ForeColor	■ &H8000001
Height	180
HelpContextID	0
KeepScrollBarsV	3 - fmScrollBar
Left	0
MouseIcon	(None)
MousePointer	0 - fmMousePo

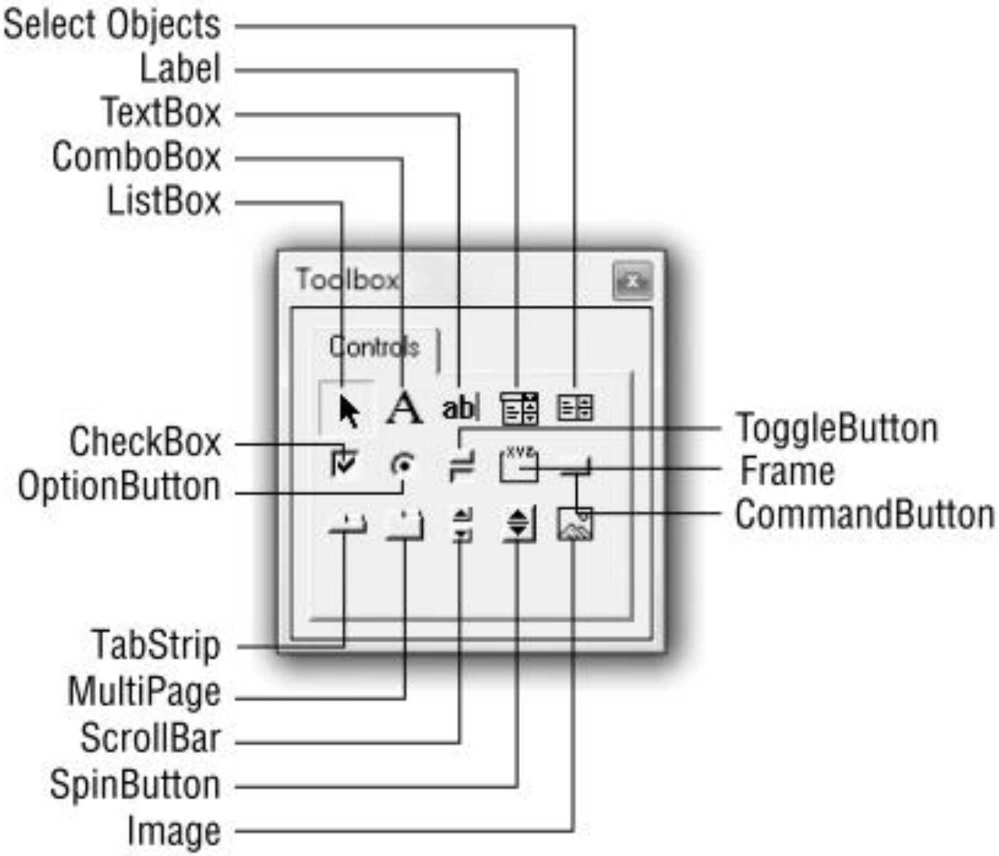
Adding Controls to the User Form

- View → Toolbox



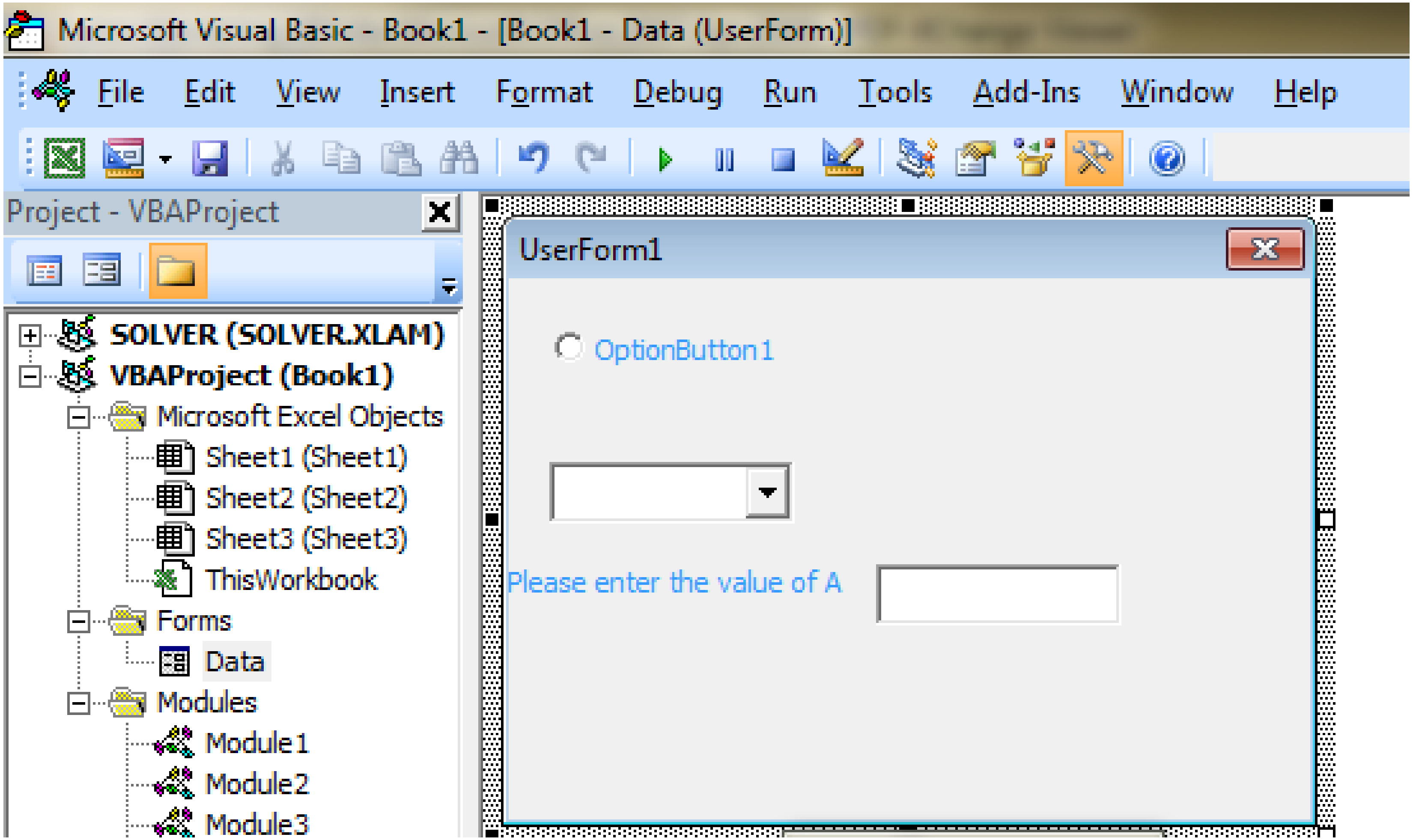
(Name)	Data
BackColor	&H8000000
BorderColor	&H800000

Adding Controls to the User Form



Ref: Mansfield R. Mastering VBA for Microsoft Office 2007. Wilwy Publishing. 2008

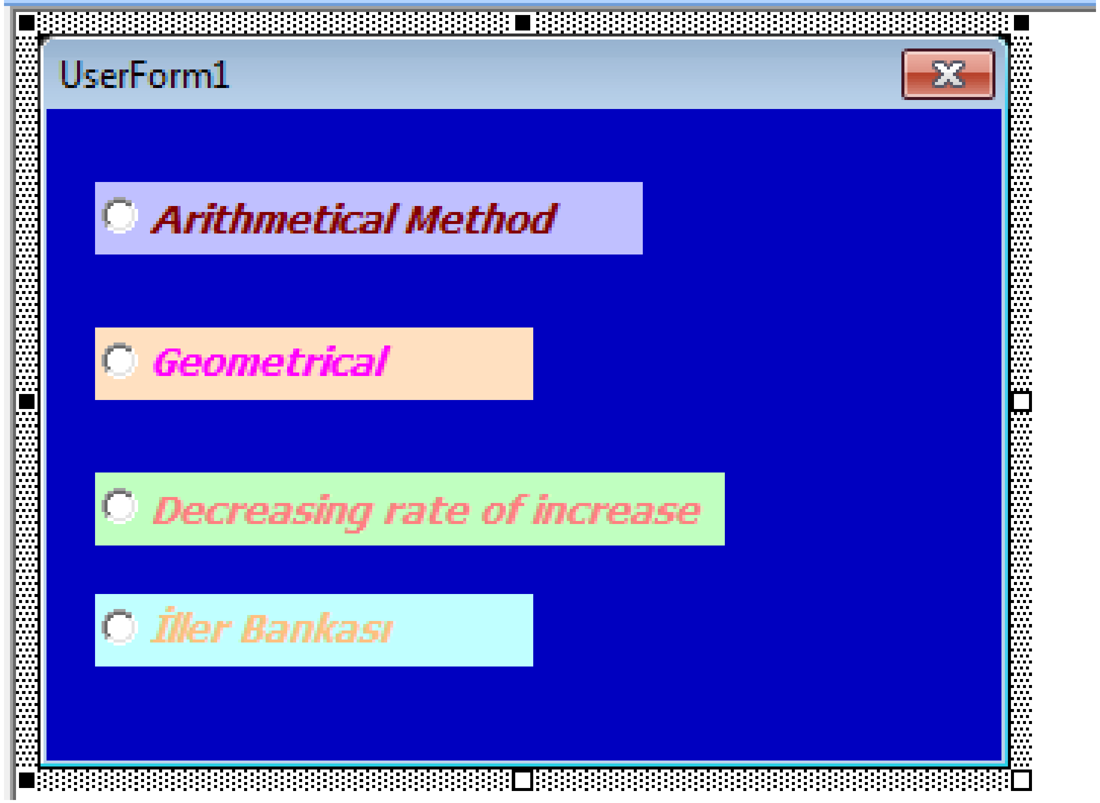
User Forms



Microsoft Visual Basic - Book1 - [Book1 - Data (UserForm)]
File
Edit
View
Insert
Format
Debug
Run
Tools
Add-Ins
Window
Help
Project - VBAProject
SOLVER (SOLVER.XLAM)
VBAProject (Book1)
Microsoft Excel Objects
Sheet1 (Sheet1)
Sheet2 (Sheet2)
Sheet3 (Sheet3)
ThisWorkbook
Forms
Data
Modules
Module1
Module2
Module3
UserForm1
○ OptionButton1
Please enter the value of A

User Forms

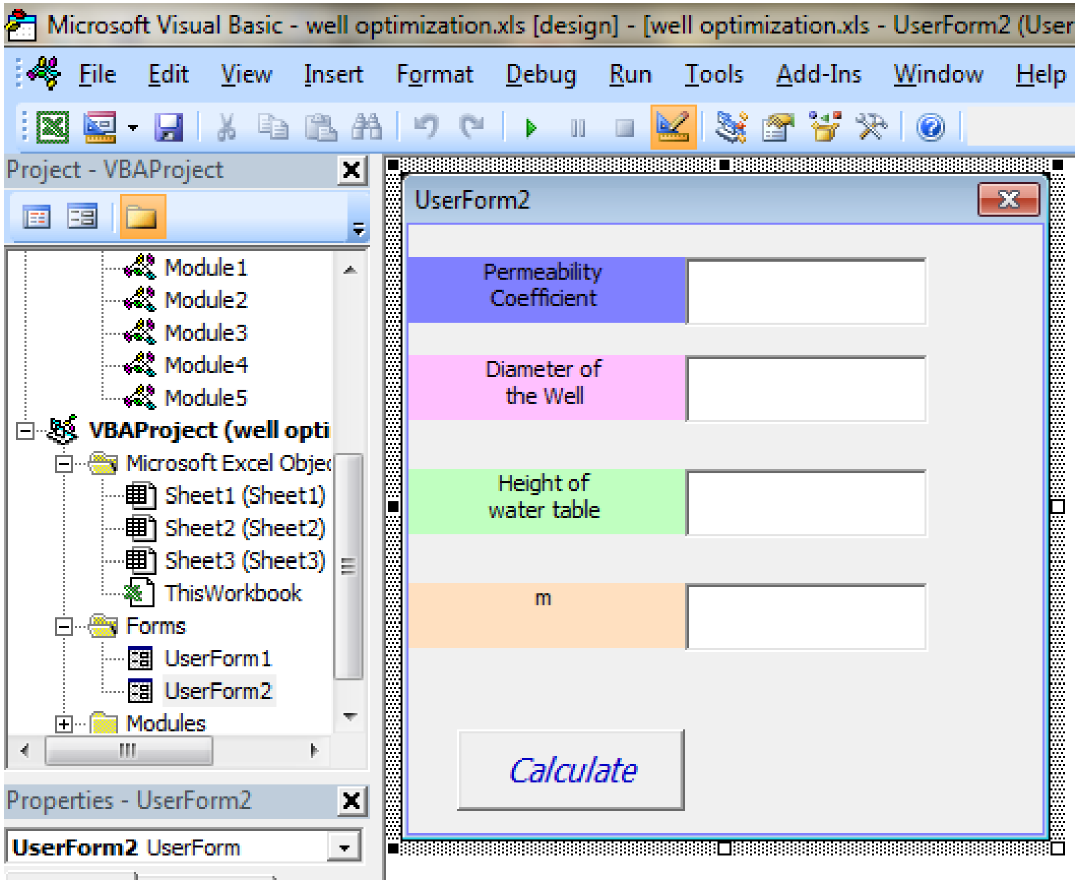
- Double clicking to form opens the code window



```
Private Sub OptionButton1_Click()
Dim t(1000), y(1000), Ka(1000)
......
......
End Sub
```

User Form

```
Private Sub well_Click()
k = Val(TextBox1.Text)
rad = Val(TextBox2.Text)
H = Val(TextBox3.Text)
m = Val(TextBox4.Text)
UserForm2.Hide
……
End Sub
```



Microsoft Visual Basic - well optimization.xls [design] - [well optimization.xls - UserForm2 (User
File
Edit
View
Insert
Format
Debug
Run
Tools
Add-Ins
Window
Help
Project - VBAProject
Module1
Module2
Module3
Module4
Module5
VBAProject (well opti
Microsoft Excel Objec
Sheet1 (Sheet1)
Sheet2 (Sheet2)
Sheet3 (Sheet3)
ThisWorkbook
Forms
UserForm1
UserForm2
Modules
Properties - UserForm2
UserForm2 UserForm
UserForm2
Permeability Coefficient
Diameter of the Well
Height of water table
m
Calculate