

Excel

VBA programming

Visual Basic for Applications

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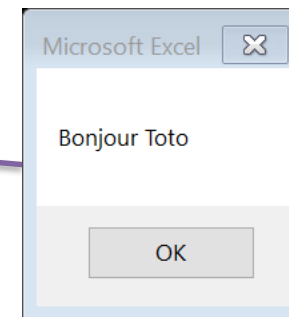
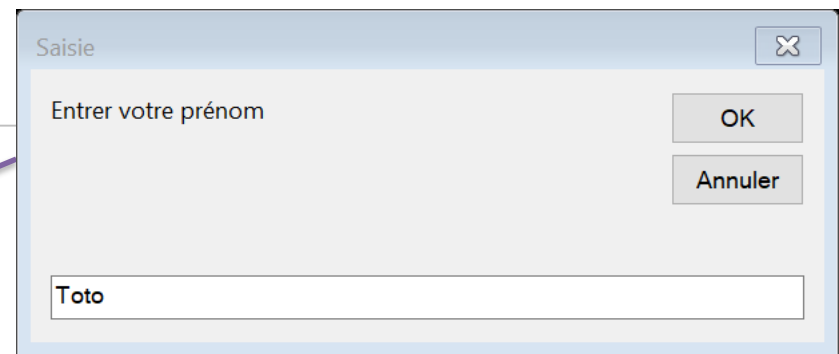
DIALOG BOXES

Dialogs allow you to interact with the user. We stick to the simpler ones here.

`InputBox()` for input, `MsgBox()` for display.

`InputBox()` is a function

```
Sub MyDialogBoxes()  
'var. intermediate  
Dim firstname As String  
'capture  
firstname = InputBox("Entrer votre prénom", "Saisie", "")  
'display  
MsgBox ("Bonjour " & firstname)  
End Sub
```

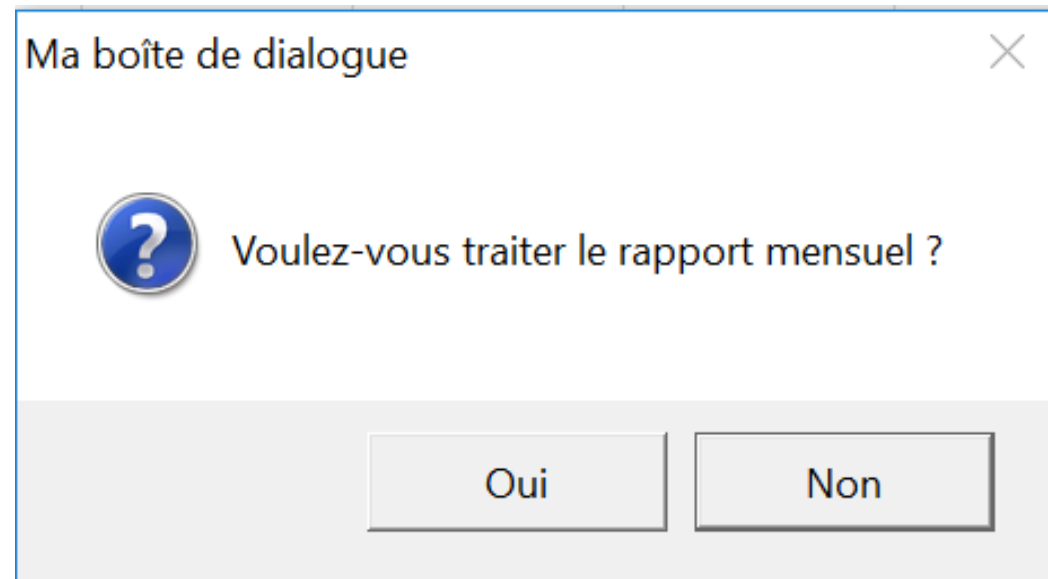


Note the concatenation of character strings to make the first name appear in the dialog box.

- Basic, "customizable" dialog box

vbOKOnly	0	Does not display that the ok button
vbOKCancel	1	Ok and Cancel
vbAbortRetryIgnore	2	Give up, start over, ignore
vbYesNoCancel	3	Yes, No, Cancel
vbYesNo	4	Yes No
vbRetryCancel	5	Start over, Cancel
vbCritical	16	Critical message icon
vbQuestion	32	Question Icon
vbExclamation	48	Exclamation mark icon
vbInformation	64	Information icon
vbDefaultButton1	0	The first button is default
vbDefaultButton2	256	The 2 th button is default
vbDefaultButton3	512	The 3 th button is default
vbDefaultButton4	768	The 4 th button is default
vbSystemModal	4096	Suspend everything until a response from the user

```
Sub MaMsgBox()  
Dim Config As Integer  
Dim Reponse As Integer  
Config = vbYesNo + vbQuestion + vbDefaultButton2  
Reponse = MsgBox("Voulez-vous traiter le rapport mensuel ?", Config, "Ma boîte de dialogue")  
If Reponse = vbYes Then  
    MsgBox ("Youpi")  
Else  
    MsgBox ("Ohhhh")  
End If  
End Sub
```

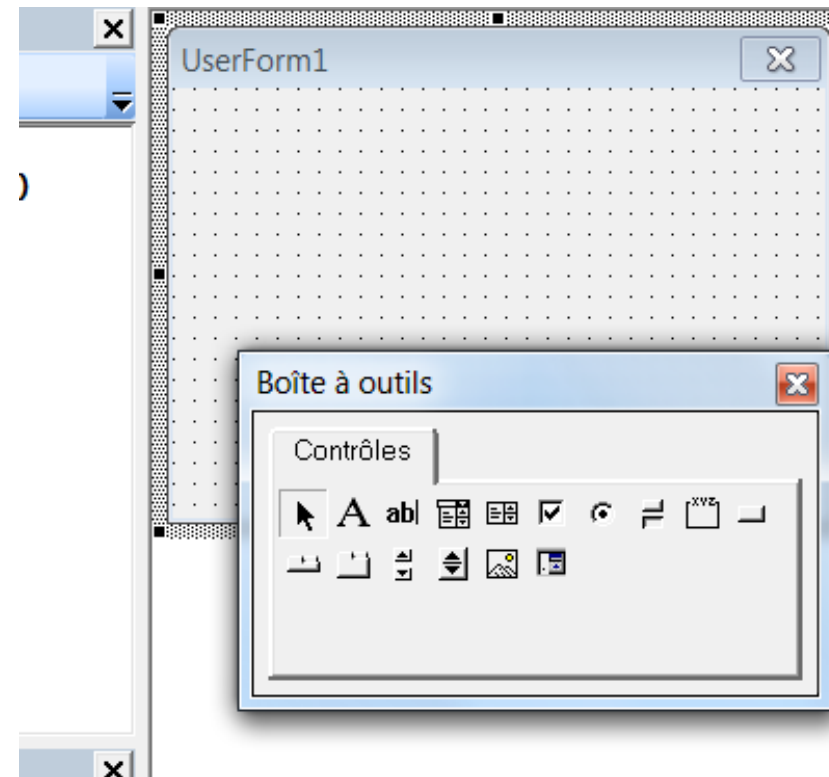
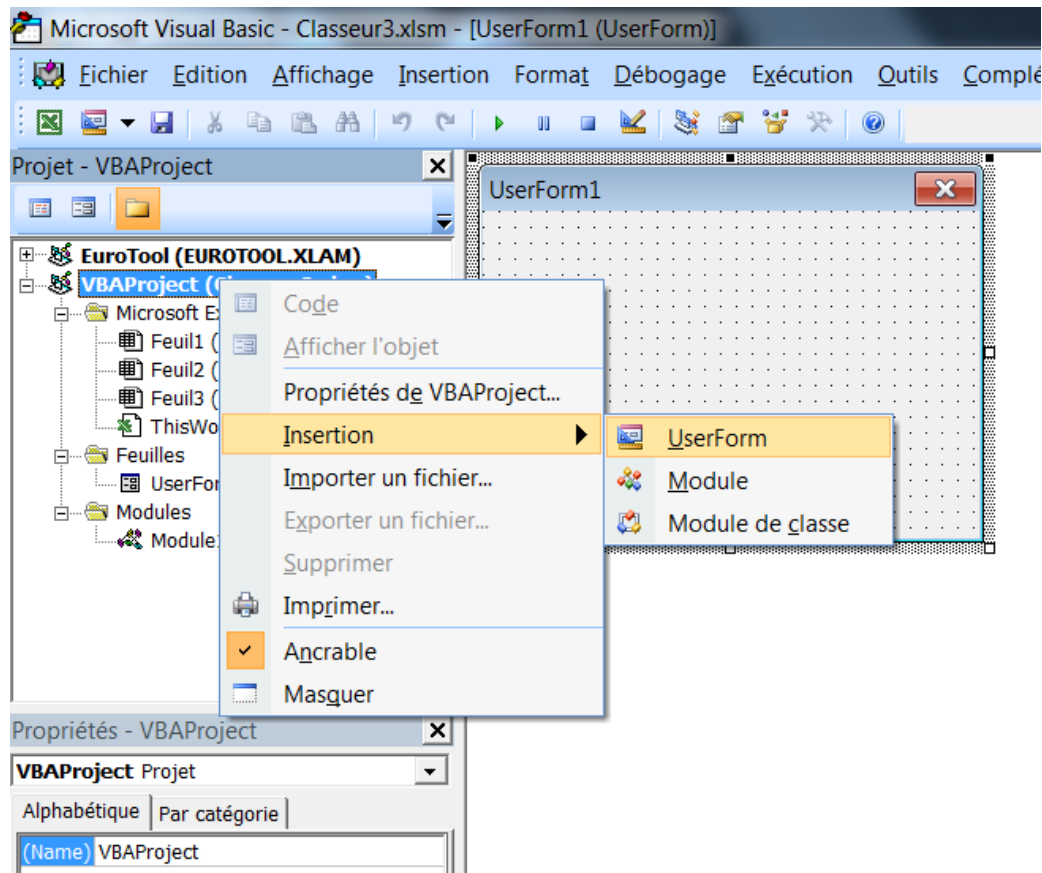


UserForm and graphic editor
The different controls

RAPID INTERFACE DEVELOPMENT

- 1) Imagine the dialog box: what is it for, where will it be used?
- 2) Create a new UserForm object in the VBE editor
- 3) Add controls
 - Text areas
 - Radio buttons
 - Checkboxes
 - Lists
- 4) Modify element properties
- 5) Write the event procedures for the various controls
- 6) Write the procedure displaying the dialog box.

The graphic editor of UserForm

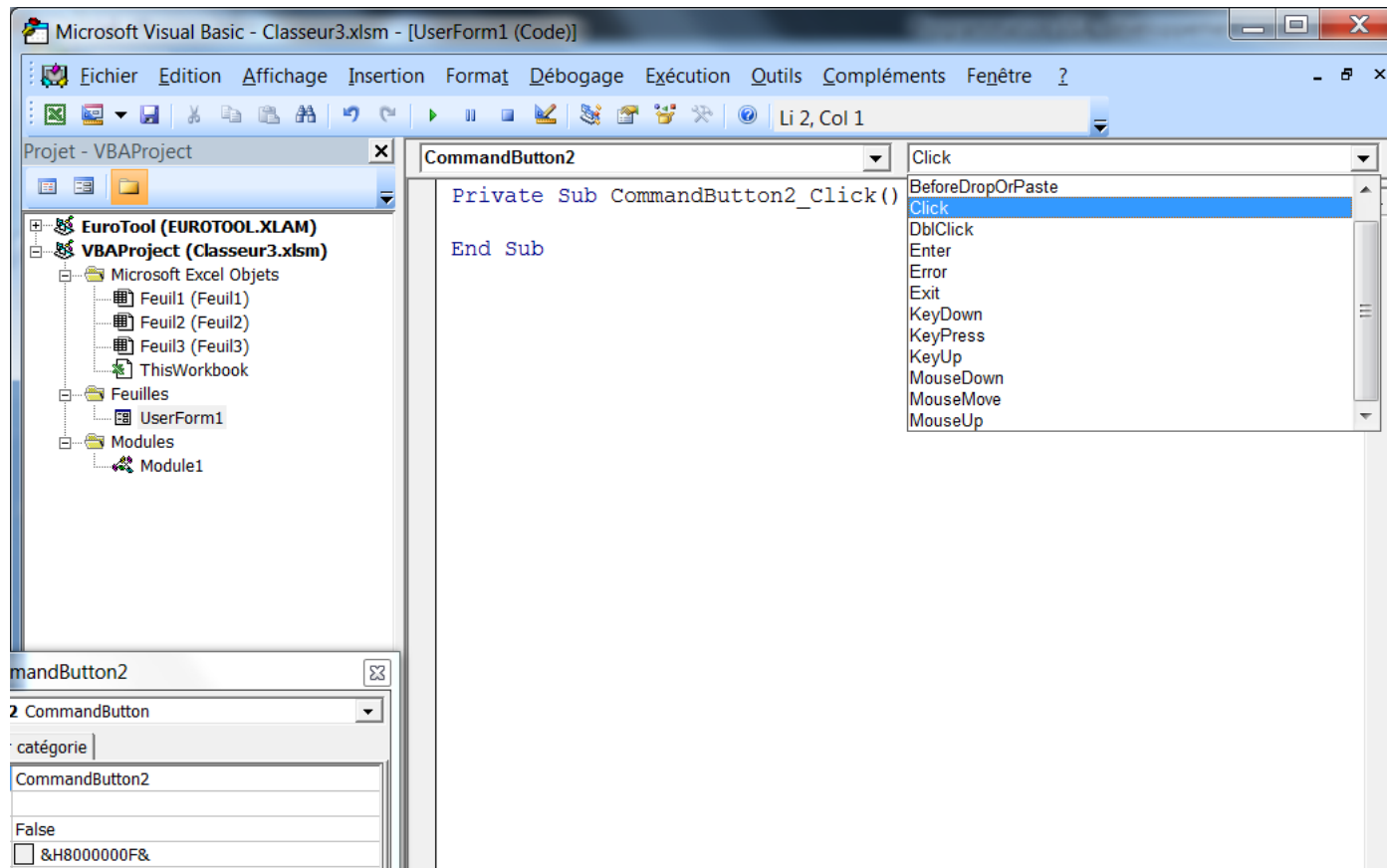


Edit control properties

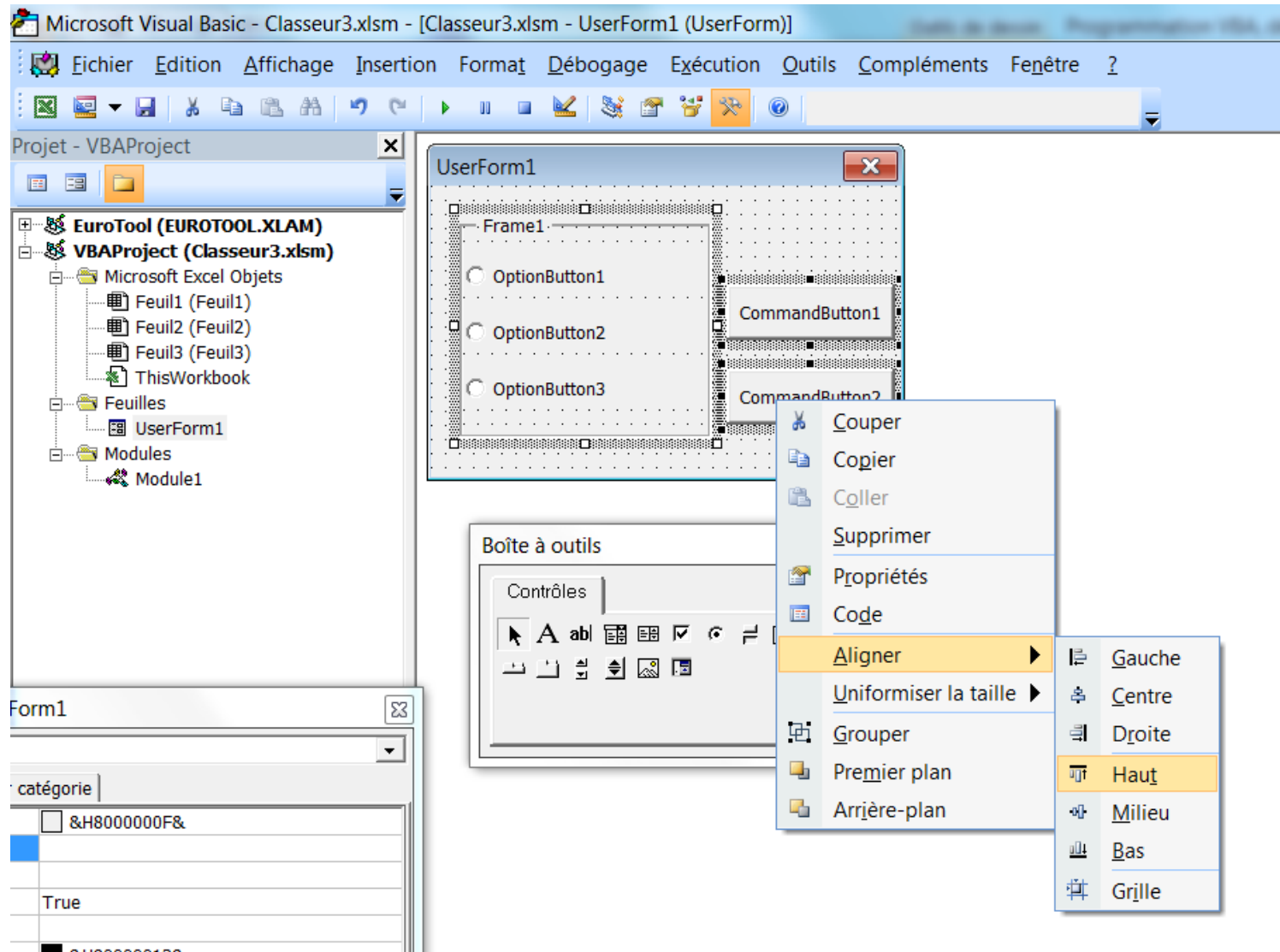
The screenshot displays the VBA editor interface. On the left, the Project Explorer shows the structure of the VBAProject (Classeur3.xlsm), including worksheets (Feuil1, Feuil2, Feuil3), ThisWorkbook, and a UserForm1. The main workspace shows the UserForm1 design grid with a Frame1 containing three OptionButtons and two CommandButtons. A 'Boîte à outils' (Toolbox) window is open, showing various controls. The Properties window for CommandButton2 is open on the right, displaying the following properties:

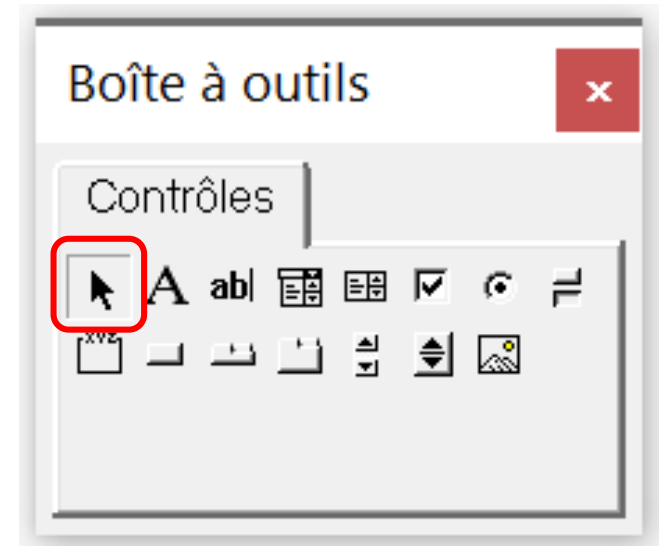
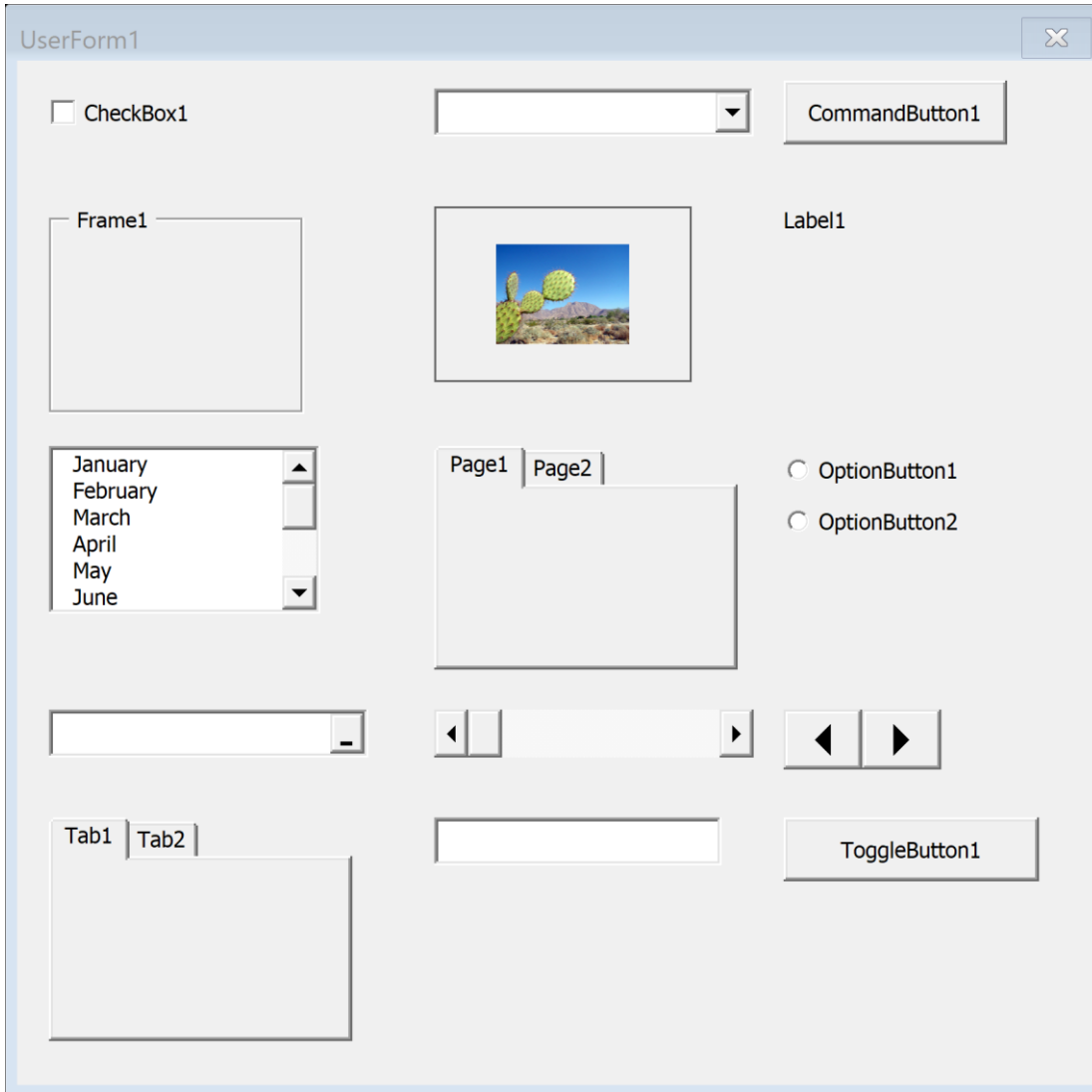
CommandButton2 CommandButton	
Alphabétique Par catégorie	
(Name)	CommandButton2
Accelerator	
AutoSize	False
BackColor	&H8000000F&
BackStyle	1 - fmBackStyleOpaque
Cancel	False
Caption	CommandButton2
ControlTipText	
Default	False
Enabled	True
Font	Tahoma
ForeColor	&H80000012&
Height	24
HelpContextID	0
Left	126
Locked	False
MouseIcon	(Aucun)
MousePointer	0 - fmMousePointerDefault
Picture	(Aucun)
PicturePosition	7 - fmPicturePositionAboveCenter
TabIndex	2
TabStop	True
Tag	
TakeFocusOnClick	True
Top	78
Visible	True
Width	72
WordWrap	False

- Double-click on the control whose events you want to edit

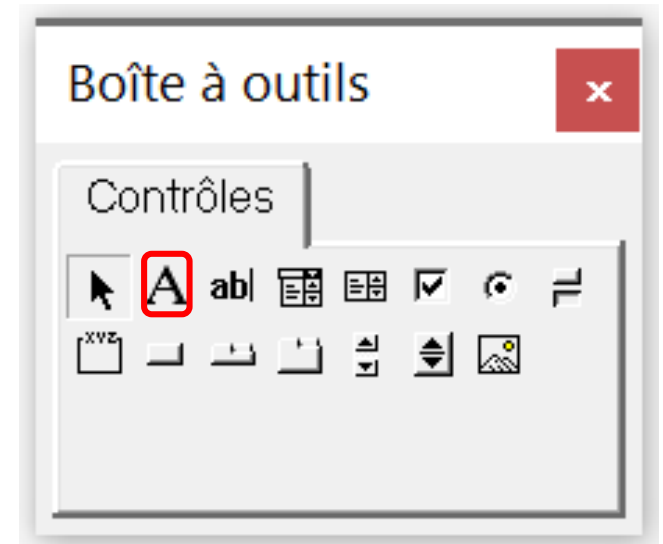
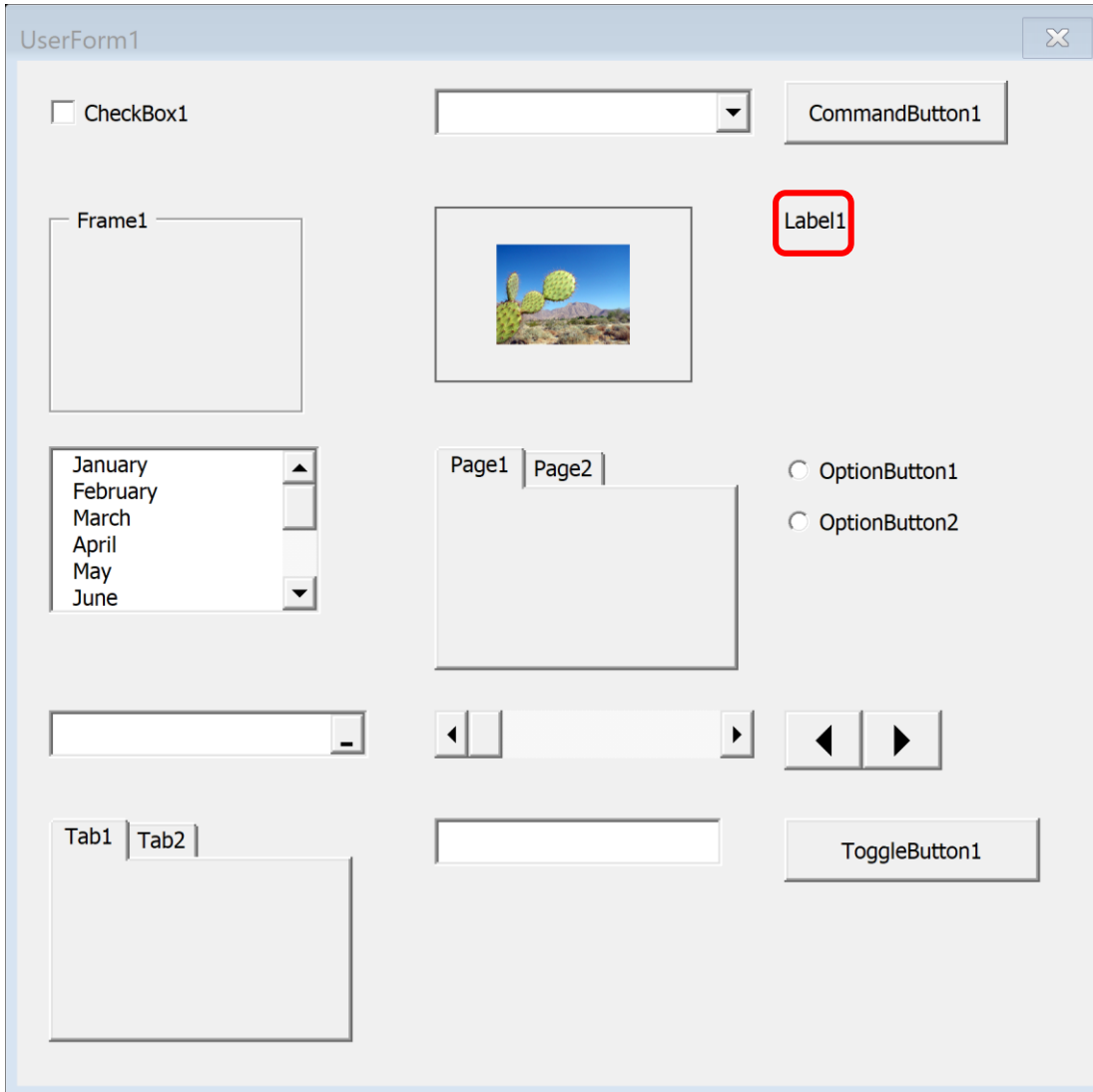


Adjusting UserForm Controls

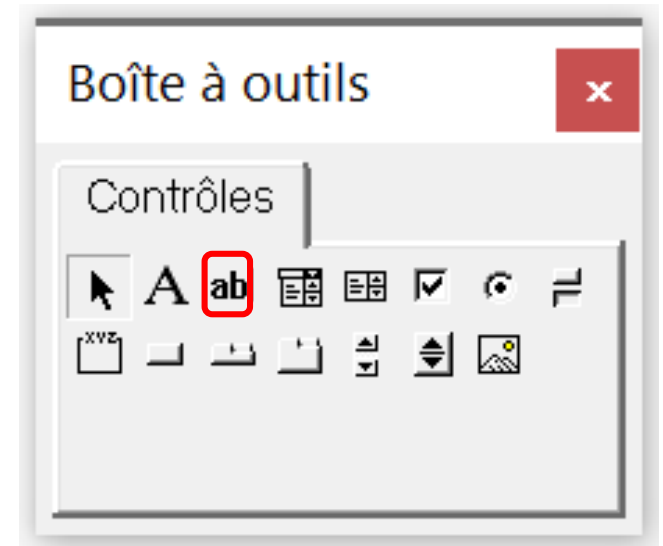
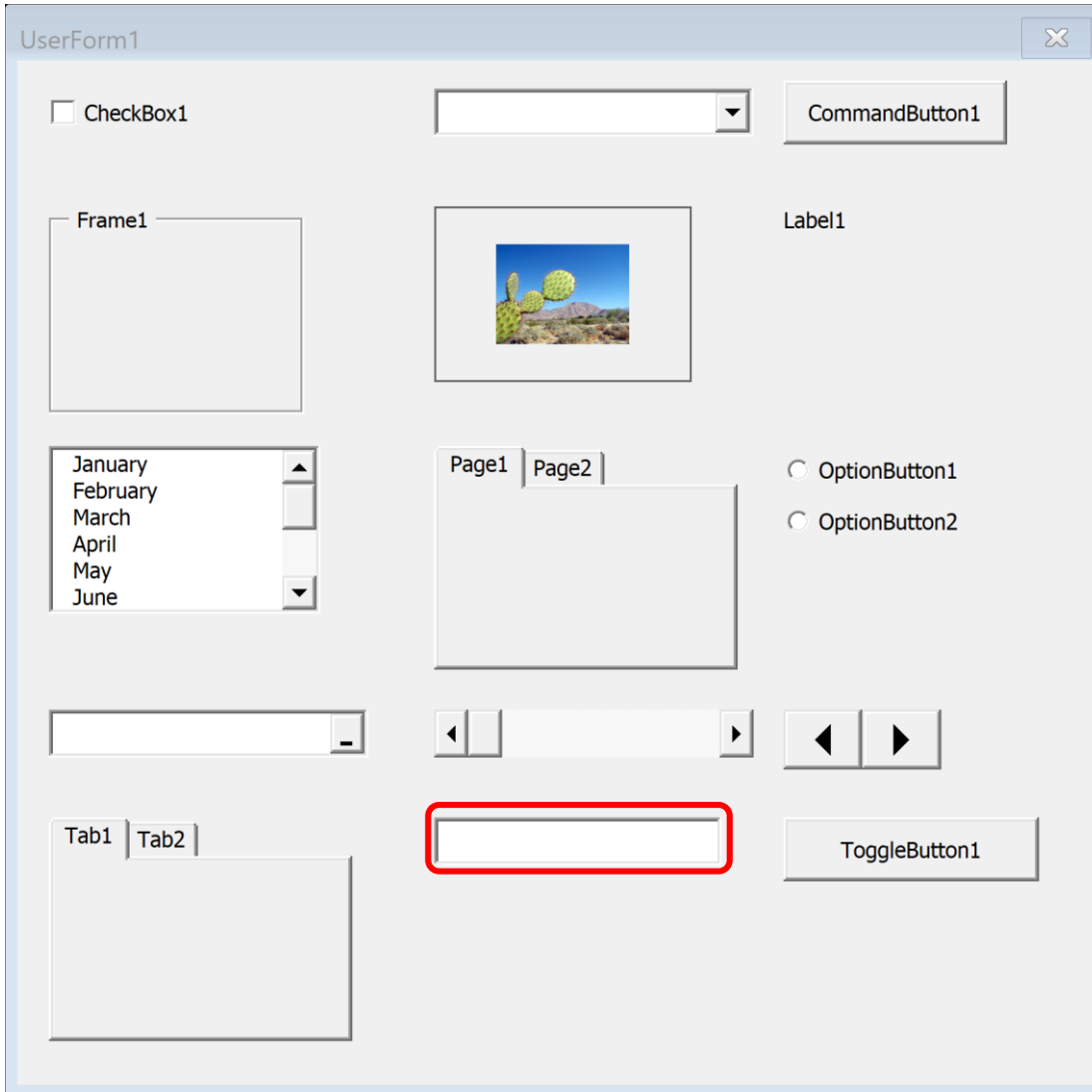




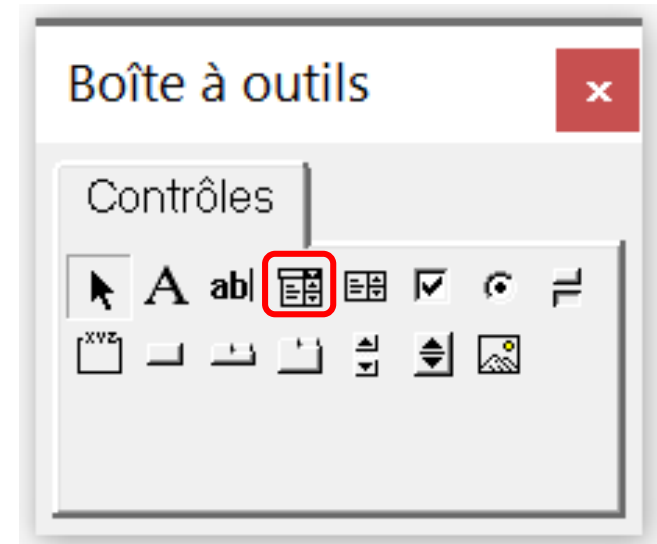
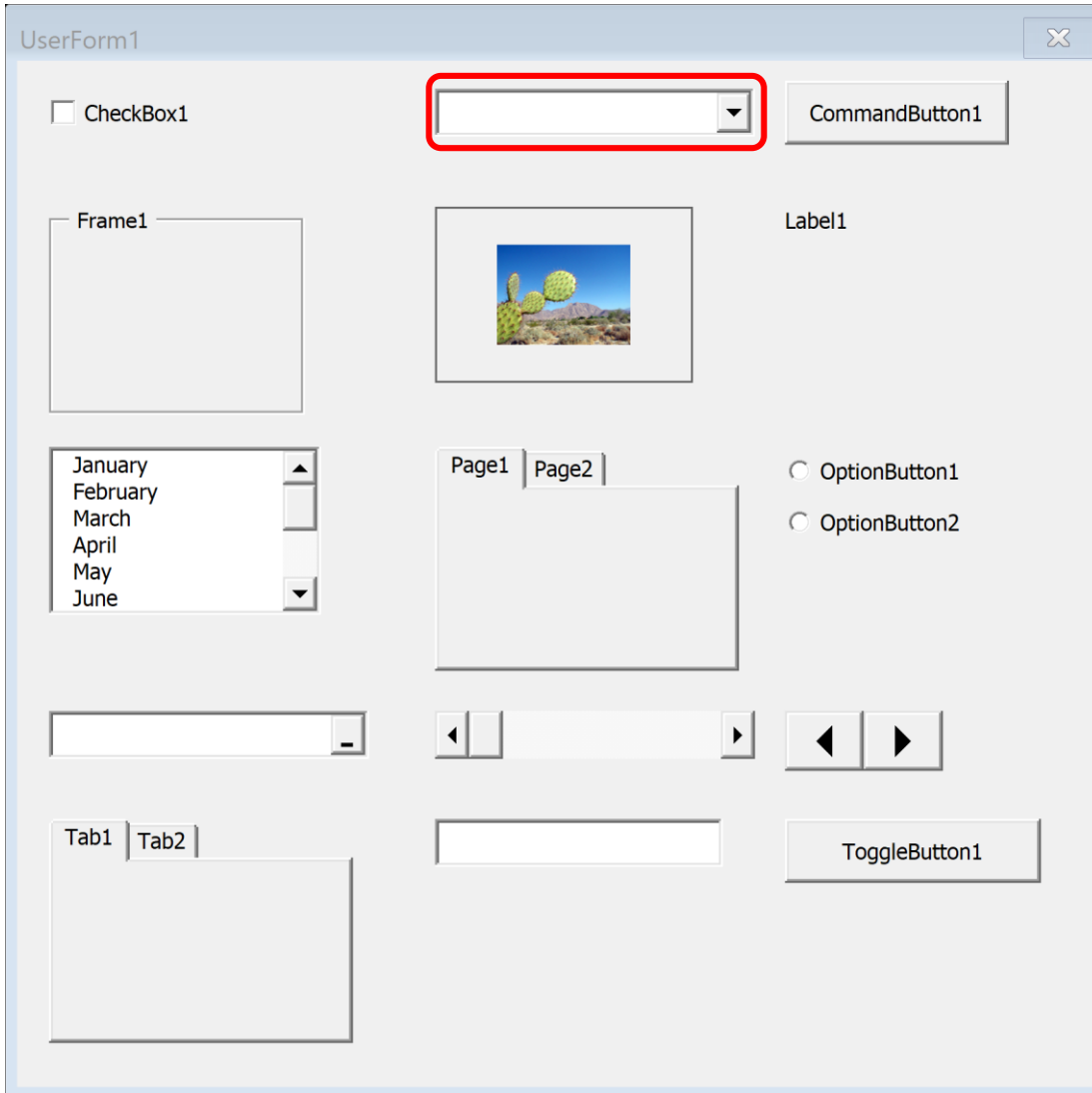
Select Objects is the only item in the toolbox that does not draw a control. When you select it, you can only resize or move a control that has already been drawn on a form.



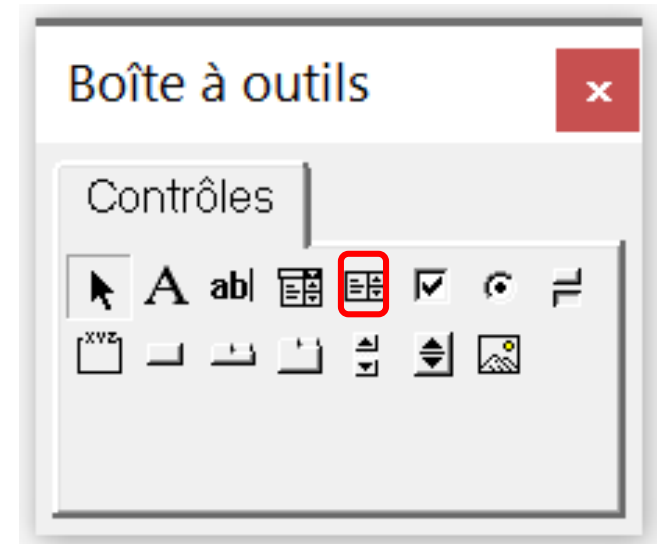
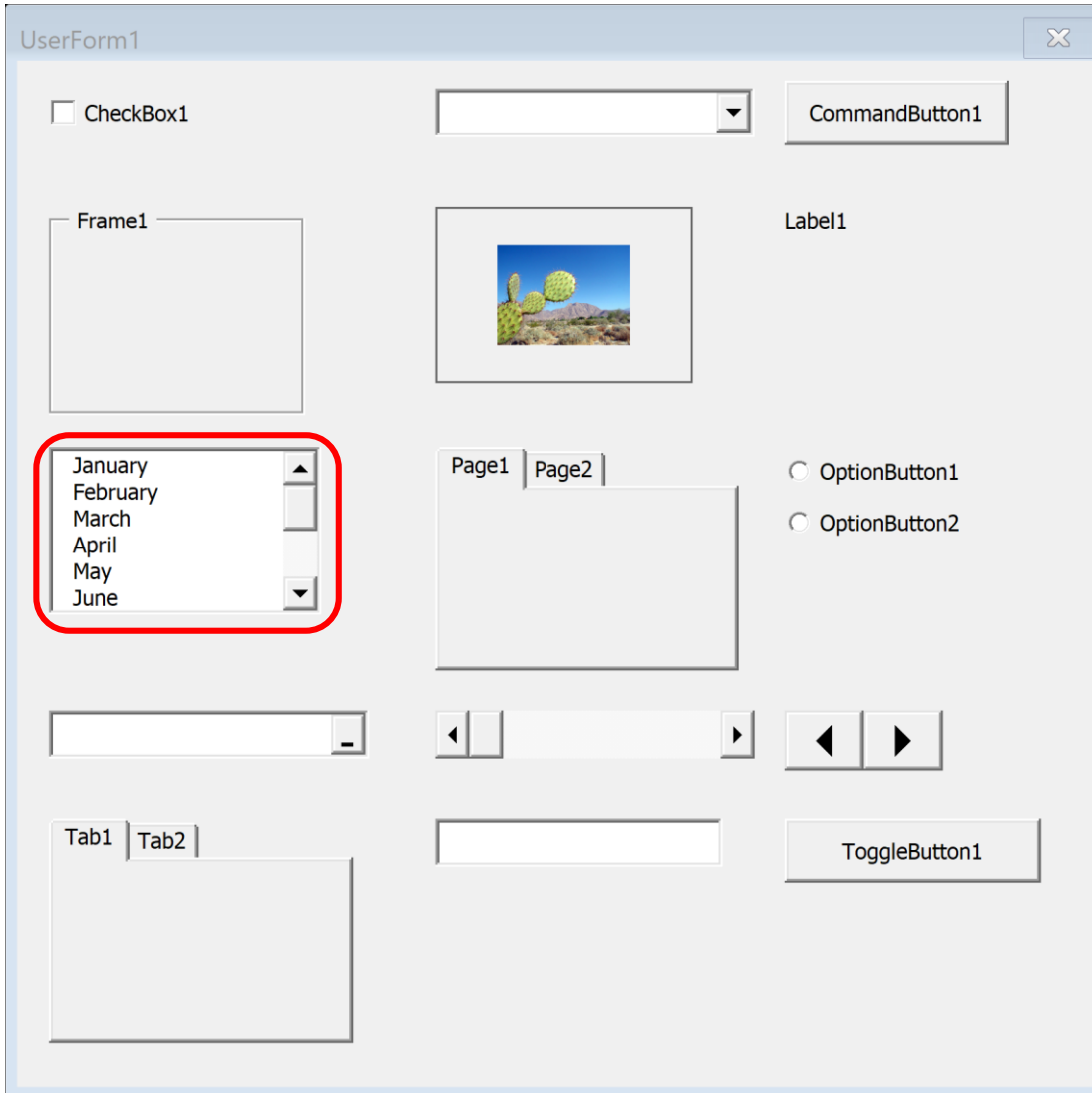
A **Label** control simply displays text in your dialog box.



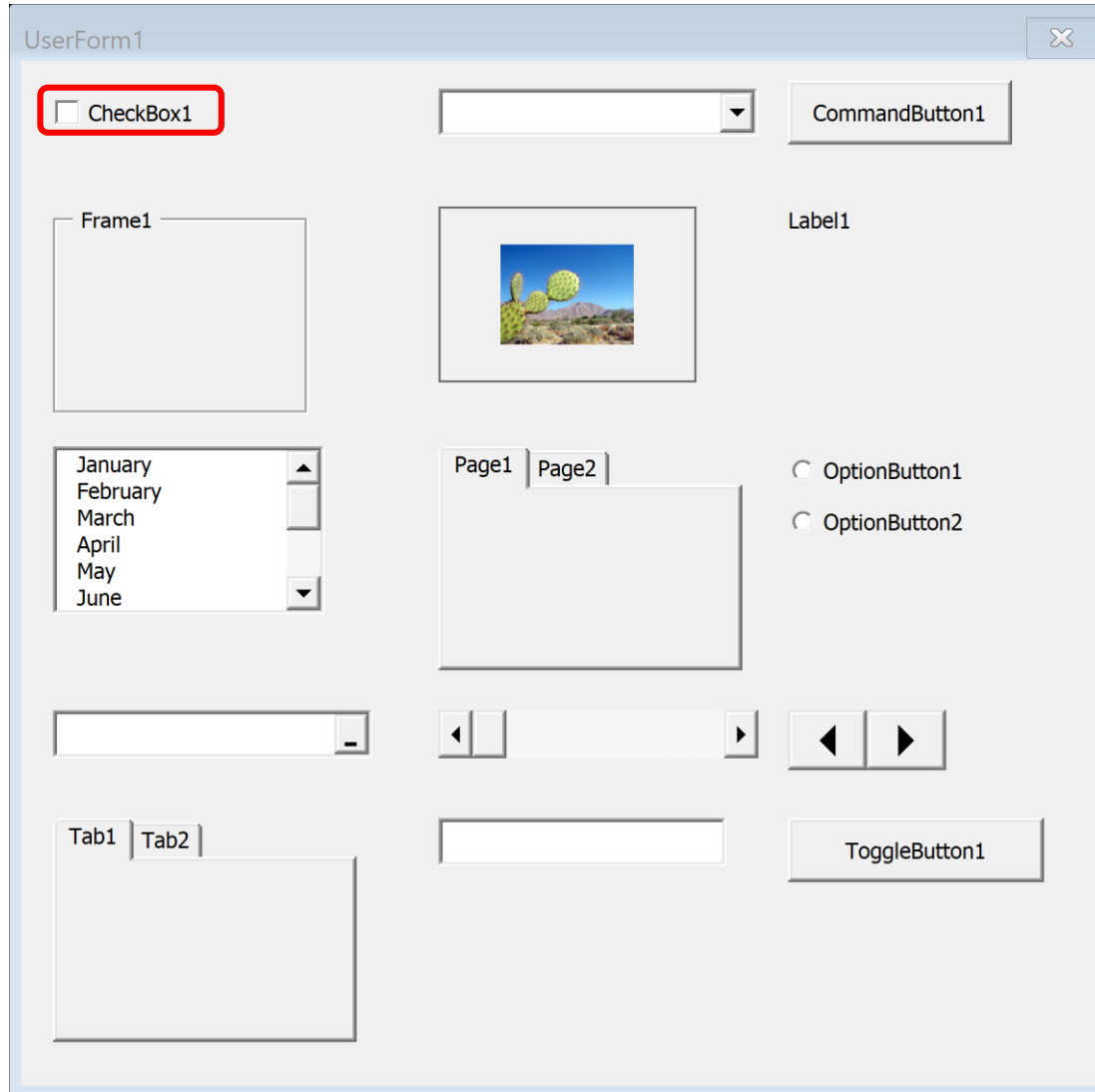
A **TextBox** control lets the user type text or a value.



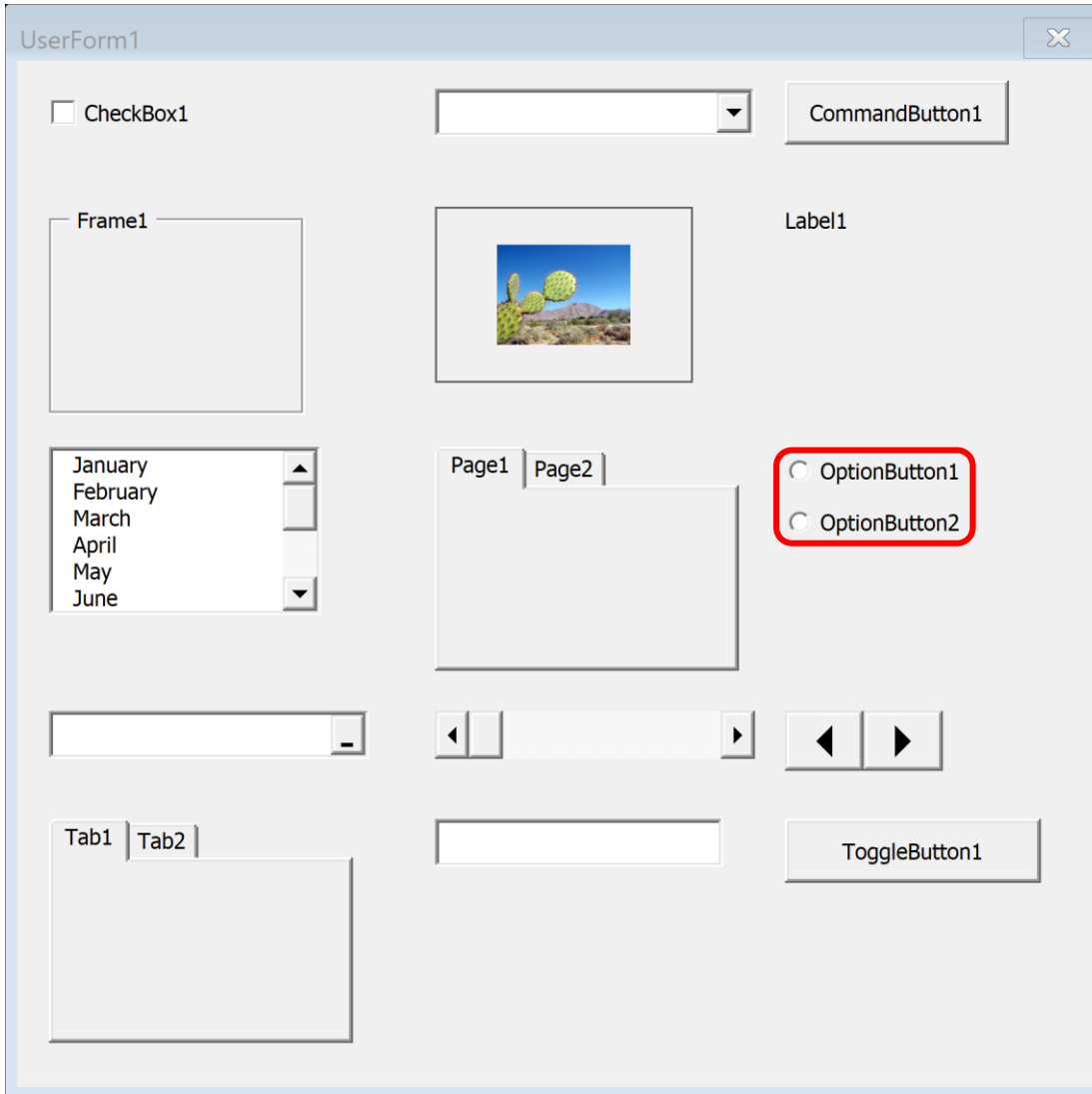
A **ComboBox** control presents a list of items in a drop-down box and displays only one item at a time. Unlike a **Listbox** control, you can set up a **ComboBox** to allow the user to enter a value that doesn't appear in the list of items.



The **ListBox** control presents a list of items, and the user can select an item (or multiple items). ListBox controls are very flexible. For example, you can specify a worksheet range that holds the ListBox items, and this range can consist of multiple columns. Or you can fill the ListBox with items by using VBA.

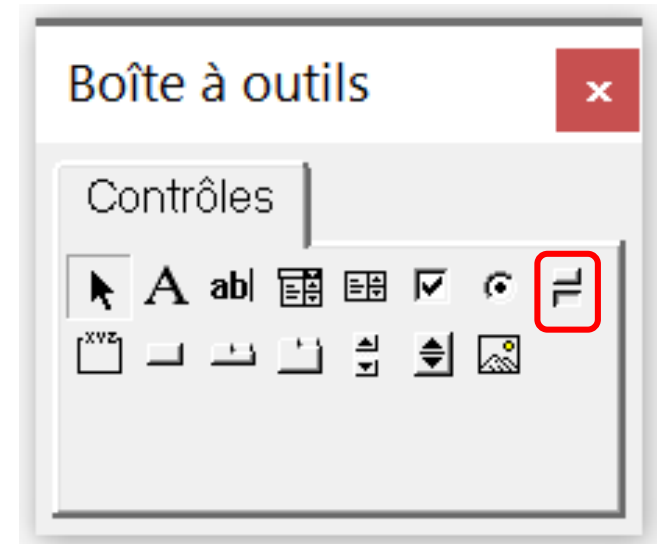
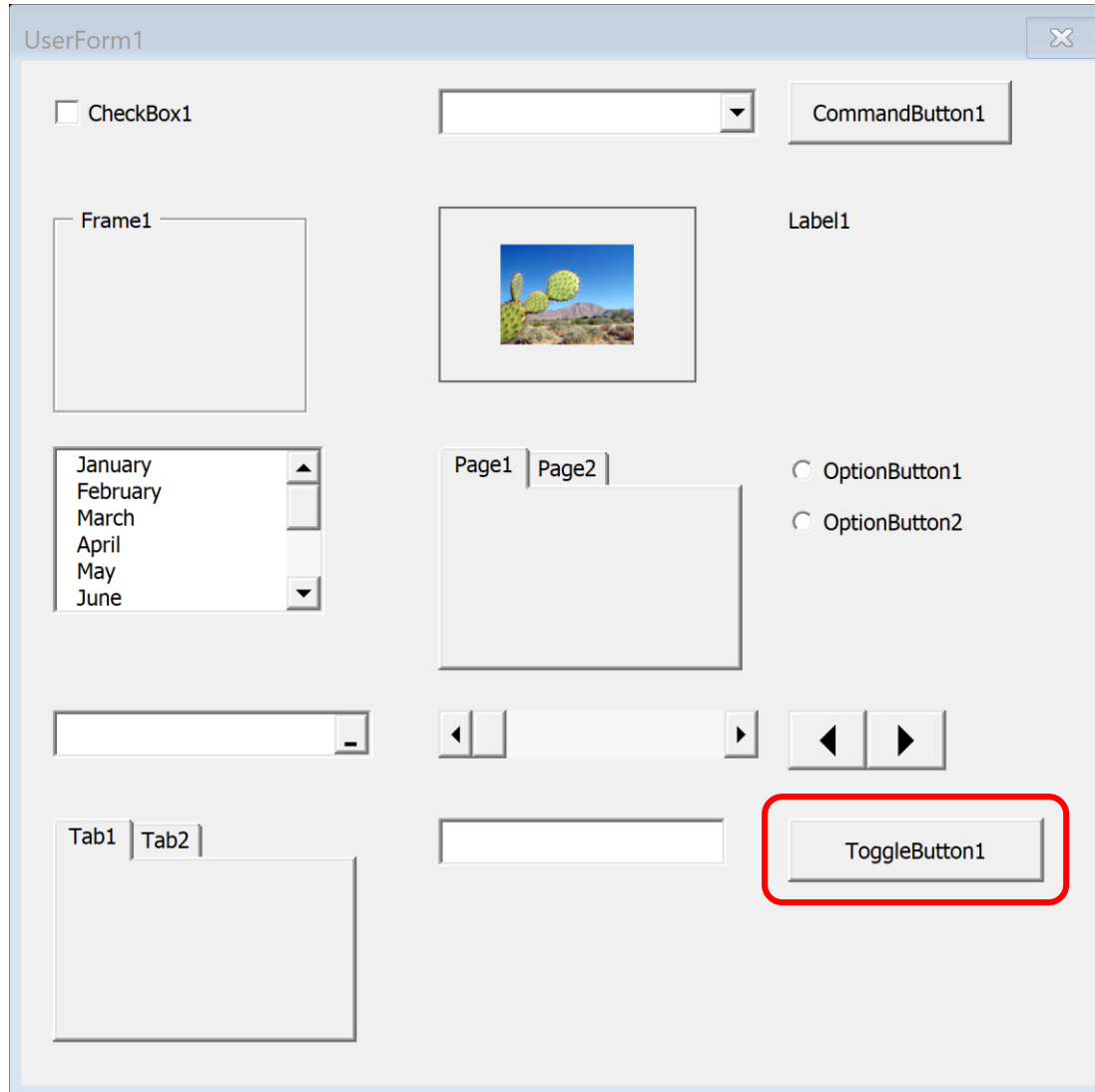


A **CheckBox** control is useful for getting a binary choice: yes or no, true or false, on or off, and so on. When a CheckBox is checked, it has a value of True; when it's not checked, the CheckBox value is False.

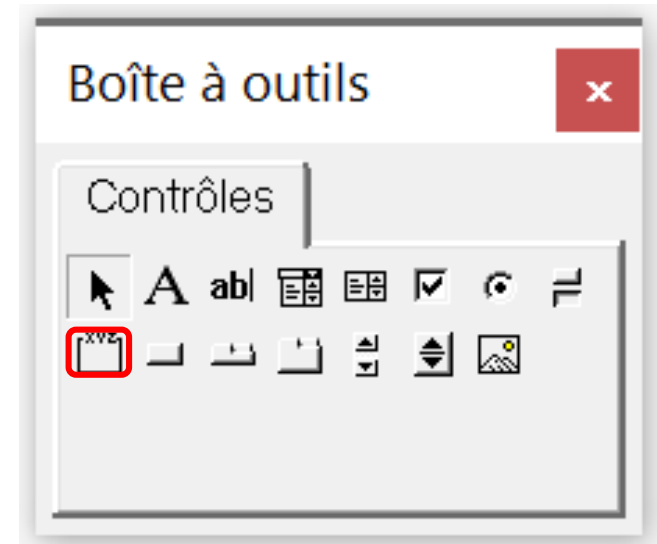
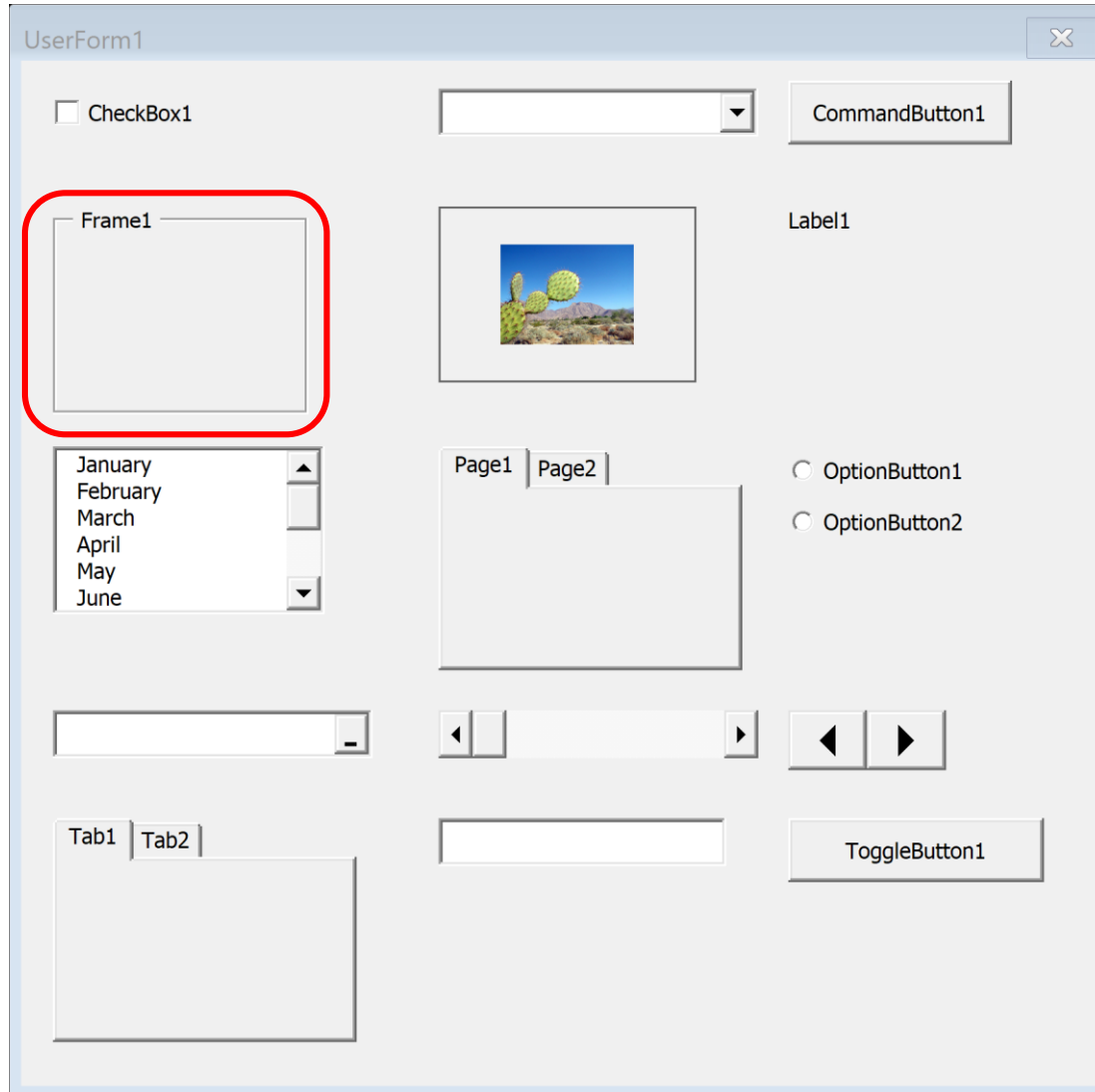


OptionButton controls are useful when the user needs to select one item from a small number of choices. OptionButtons are always used in groups of at least two. When one OptionButton is selected, the other OptionButtons in its group are deselected.

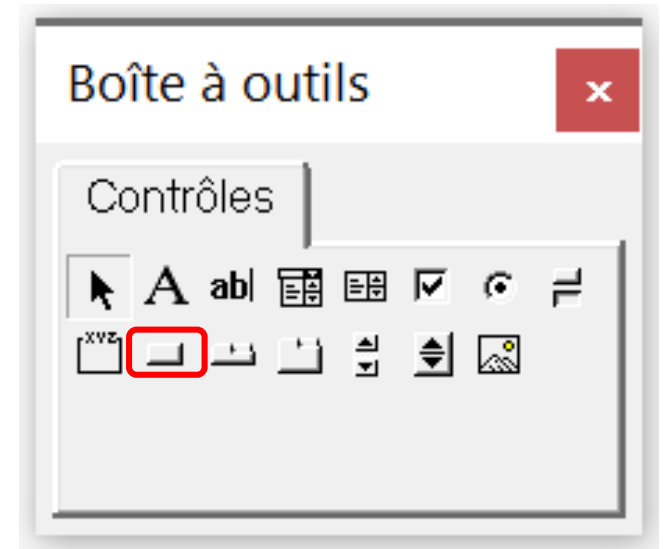
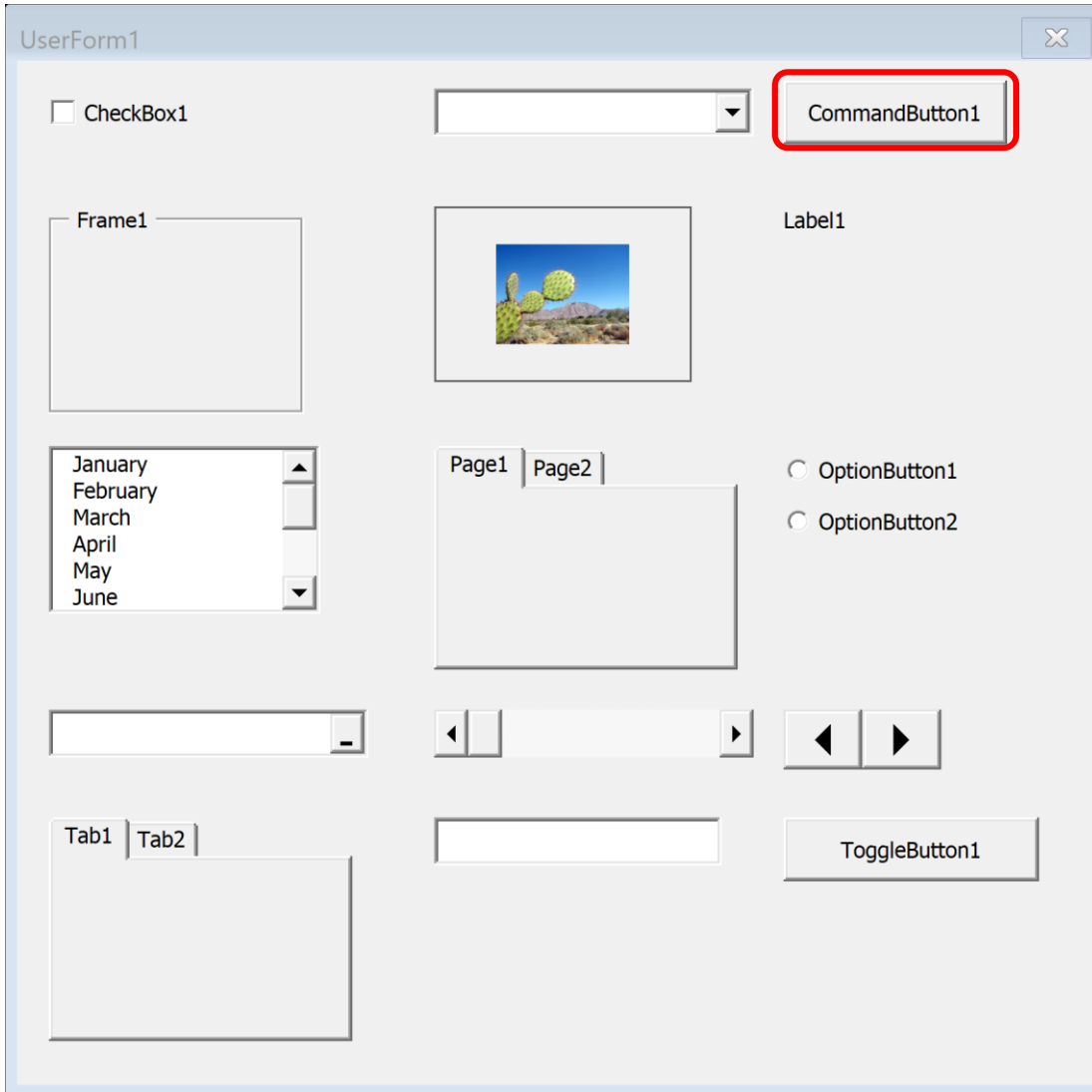
If your UserForm contains more than one set of OptionButtons, the OptionButtons in each set must share a unique `GroupName` property value. Otherwise, all OptionButtons become part of the same set. Alternatively, you can enclose the OptionButtons in a `Frame` control, which automatically groups the OptionButtons contained in the frame.



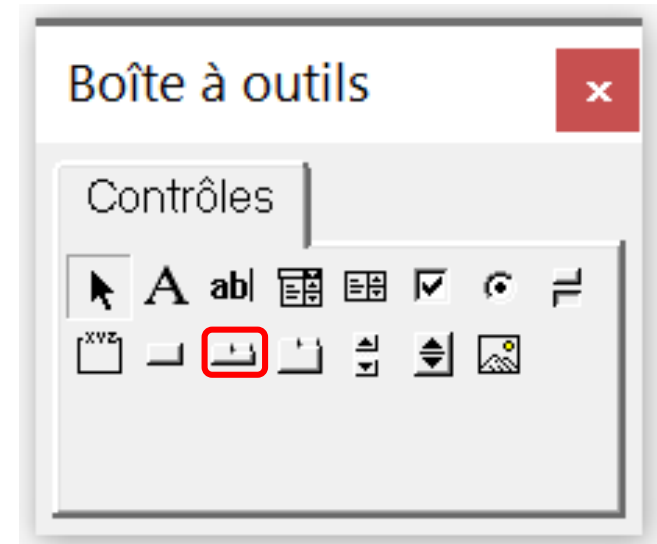
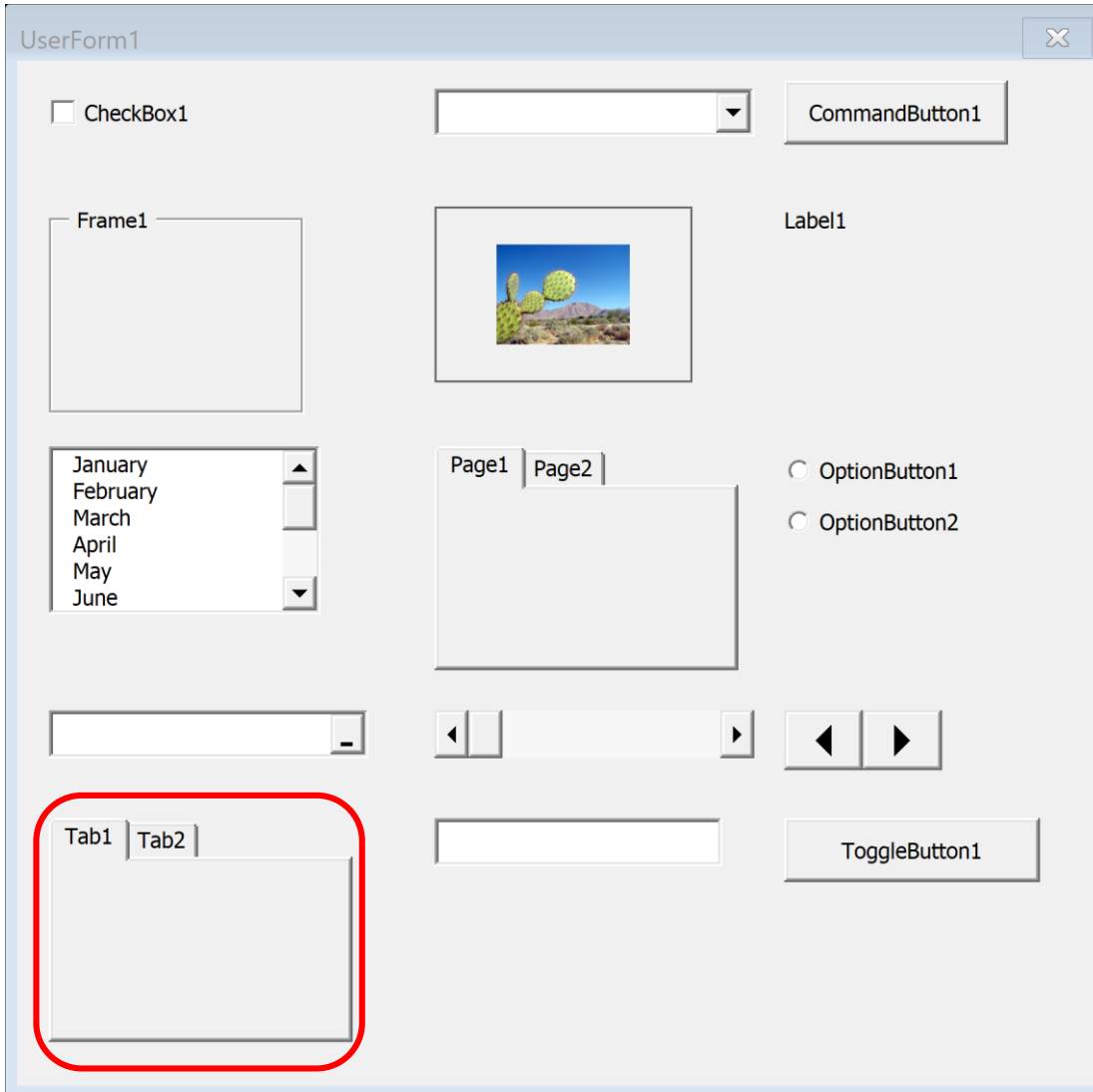
A **ToggleButton** control has two states: on and off. Clicking the button toggles between these two states, and the button changes its appearance. Its value is either True (pressed) or False (not pressed). I think a CheckBox is much clearer.



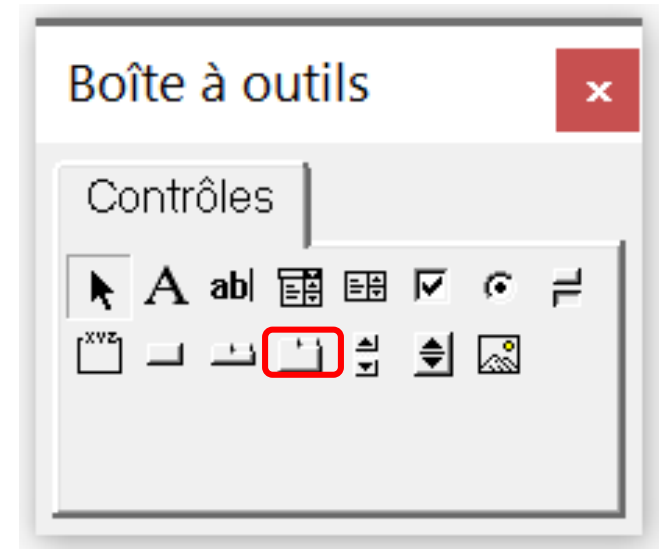
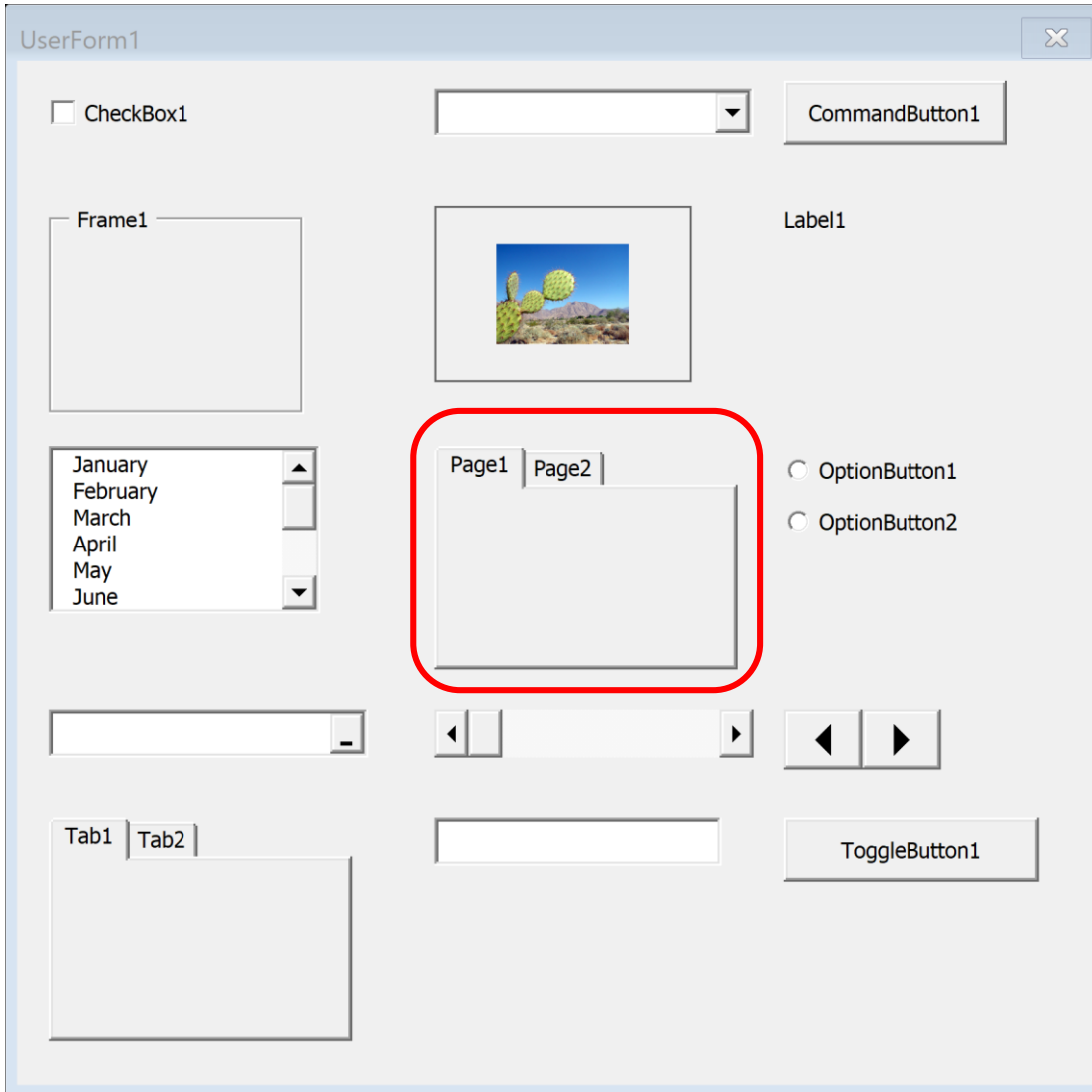
A **Frame** control is used to enclose other controls. You enclose controls either for aesthetic purposes or to logically group a set of controls. A Frame is particularly useful when the dialog box contains more than one set of `OptionButton` controls.



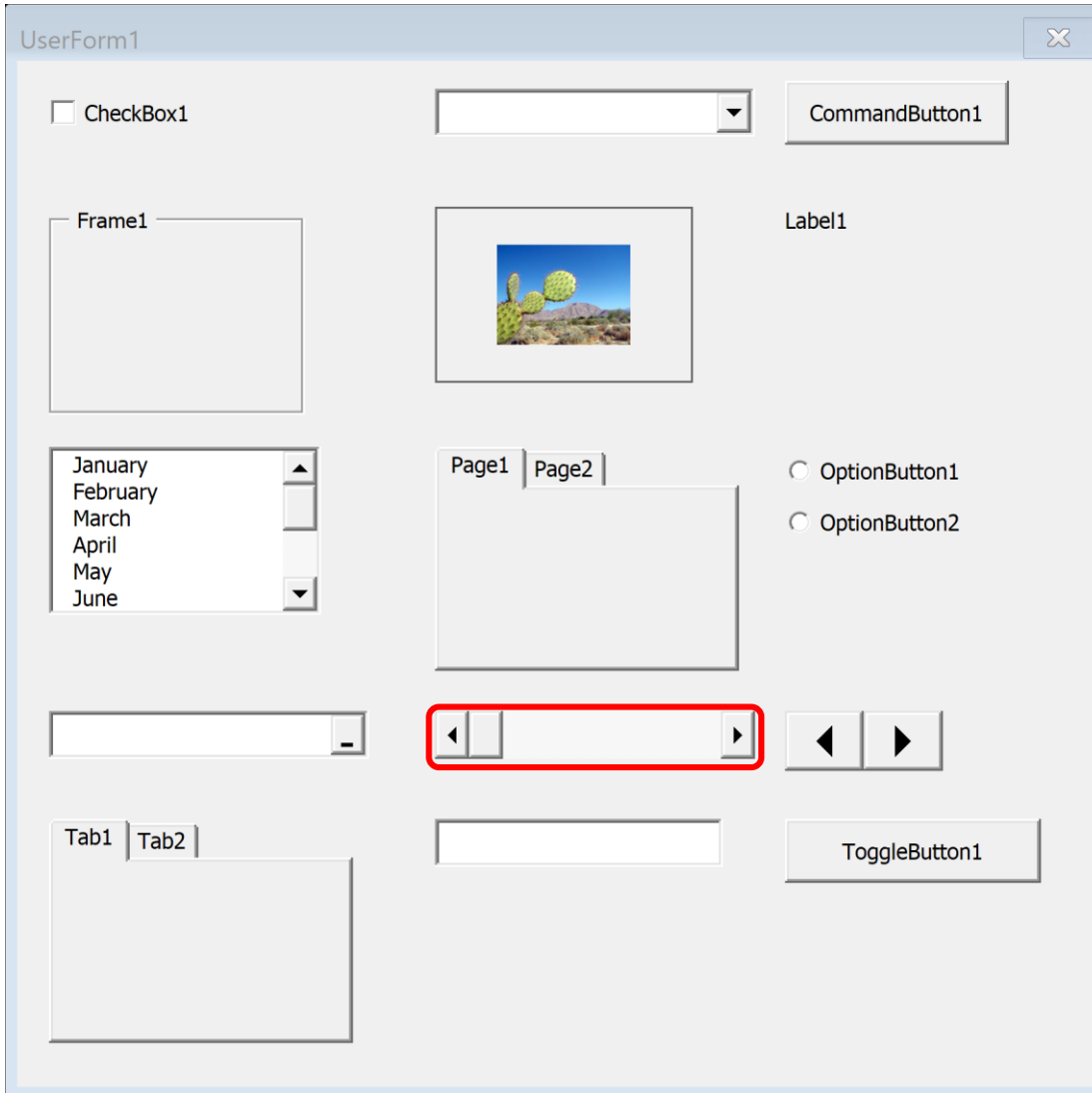
Every dialog box that you create will probably have at least one **CommandButton** control. Usually, your UserForms will have one CommandButton labeled OK and another labeled Cancel.



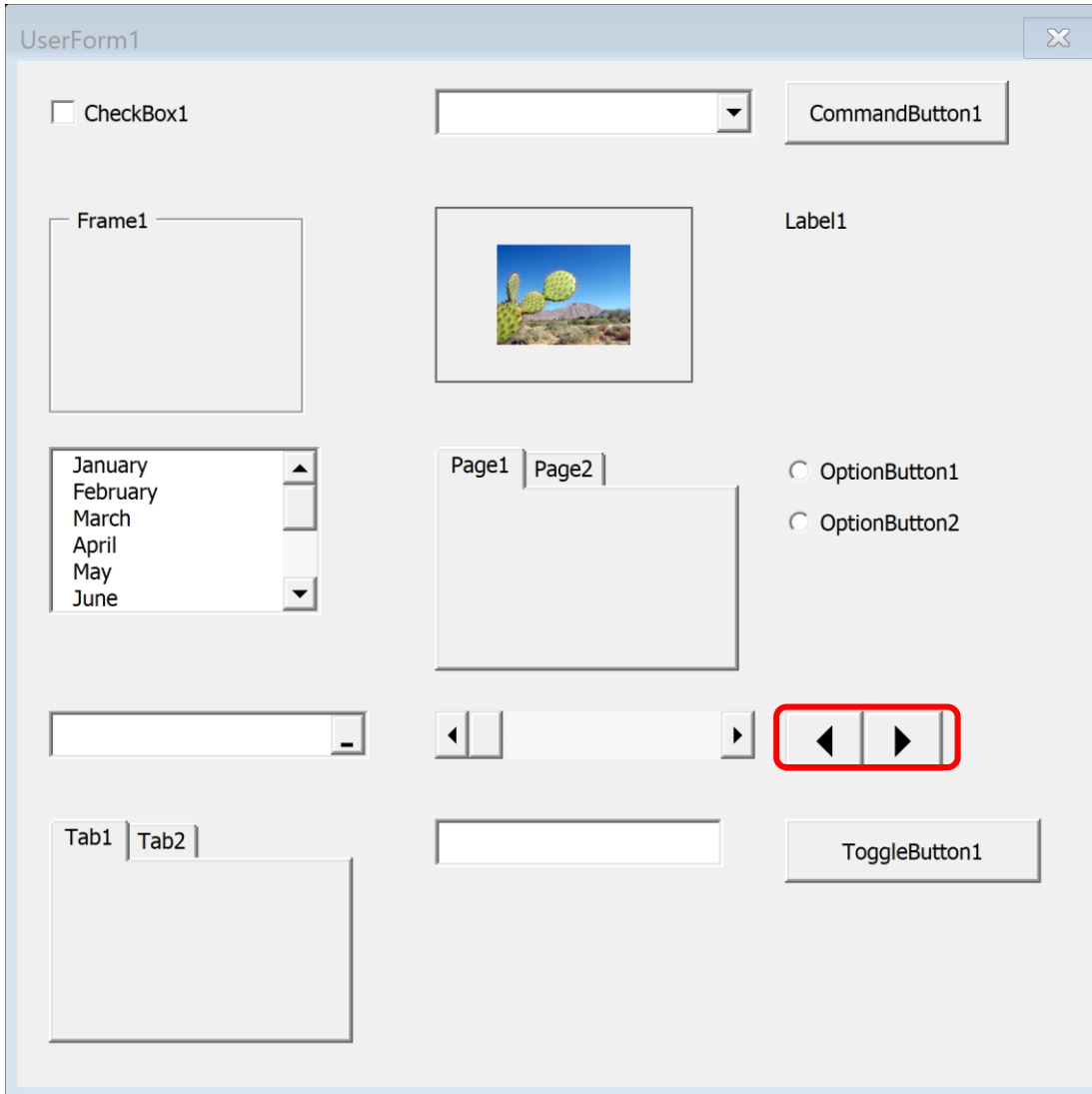
A **TabStrip** control is similar to a MultiPage control, but it's not as easy to use. A TabStrip control, unlike a MultiPage control, doesn't serve as a container for other objects. Generally, you'll find that the MultiPage control is much more versatile.



A **MultiPage** control lets you create tabbed dialog boxes, such as the Format Cells dialog box. By default, a MultiPage control has two pages, but you can add any number of additional pages.

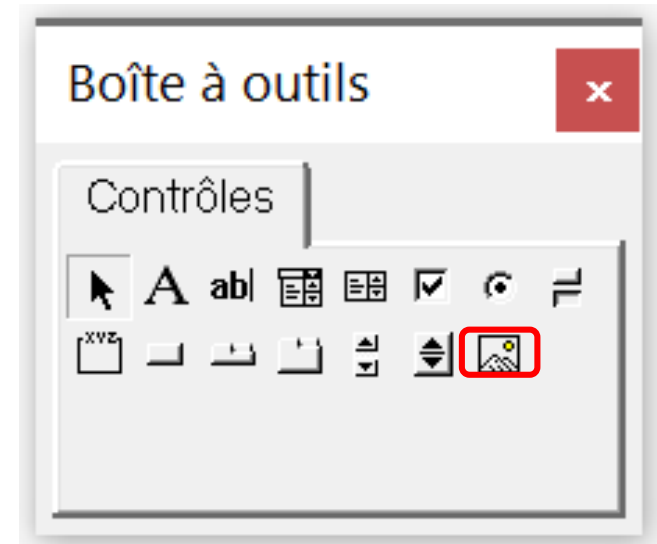
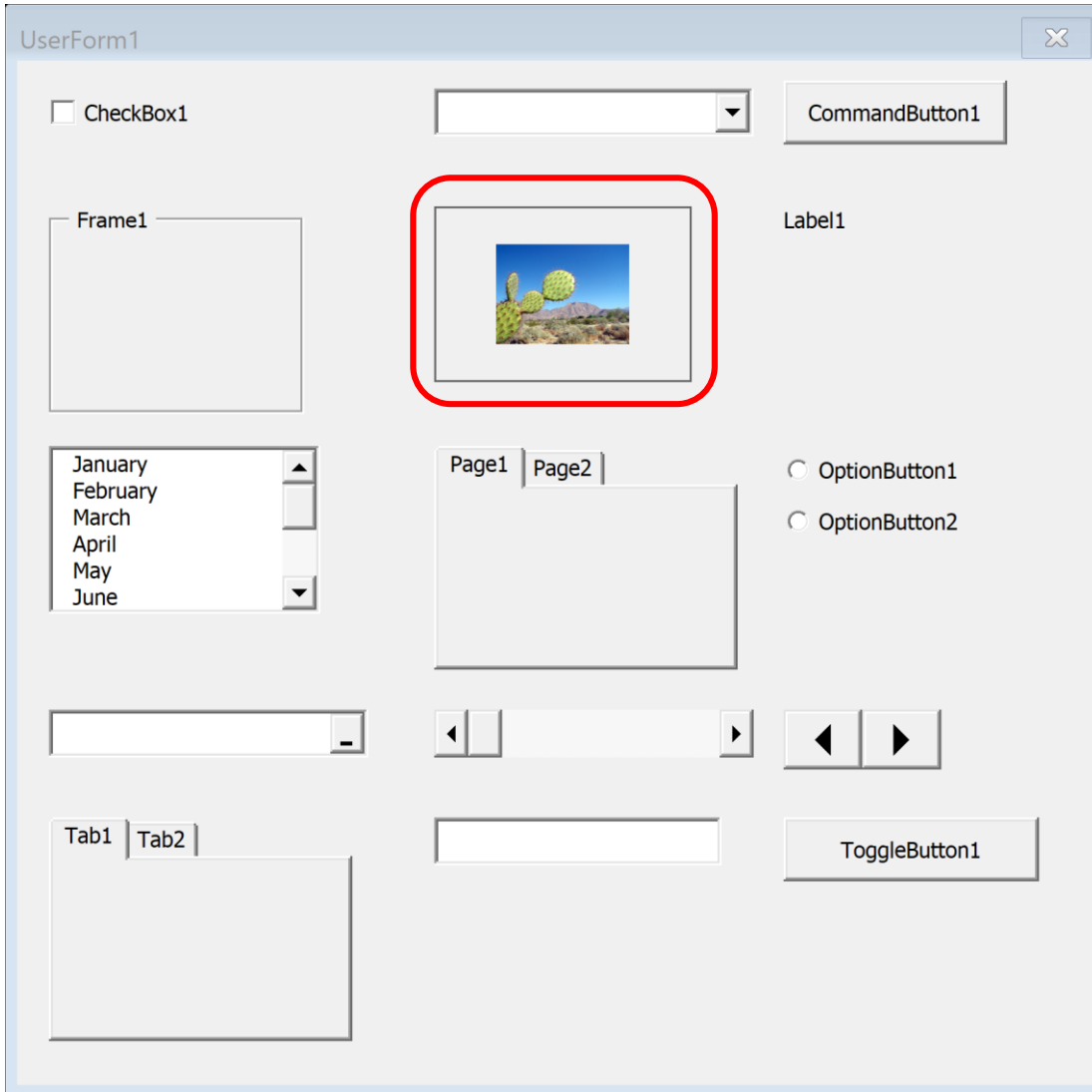


The **ScrollBar** control is similar to a SpinButton control. The difference is that the user can drag the ScrollBar button to change the control's value in larger increments. The ScrollBar control is most useful for selecting a value that extends across a wide range of possible values.

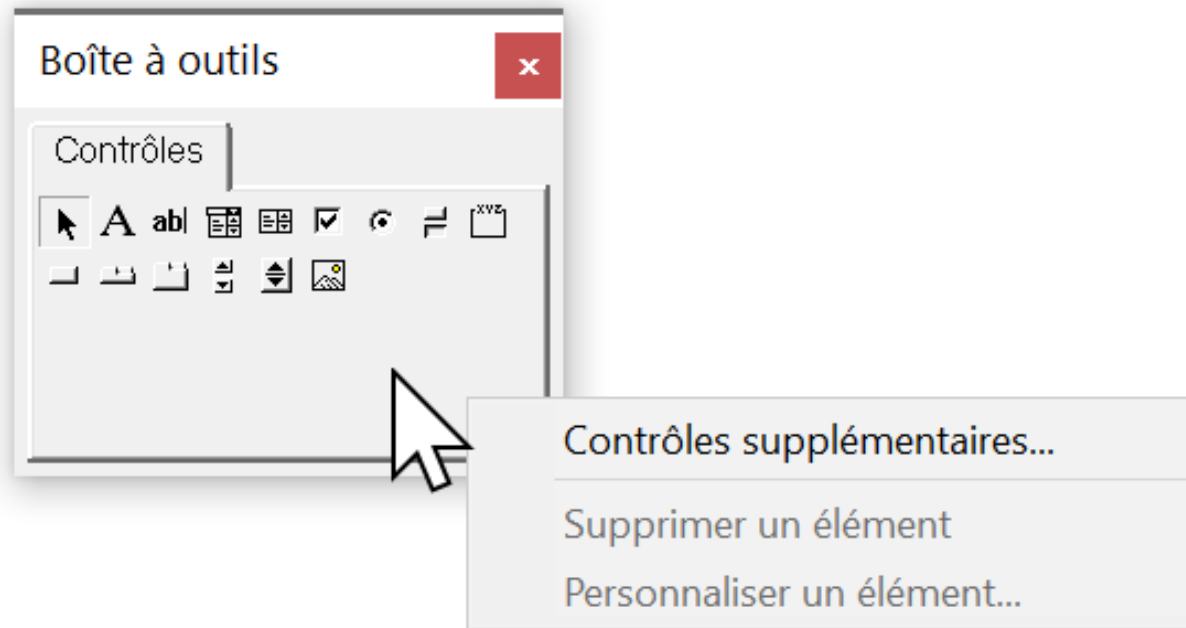


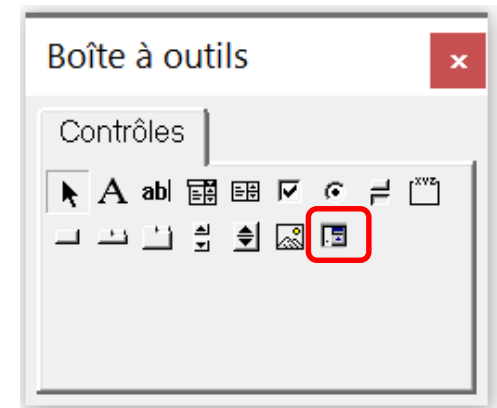
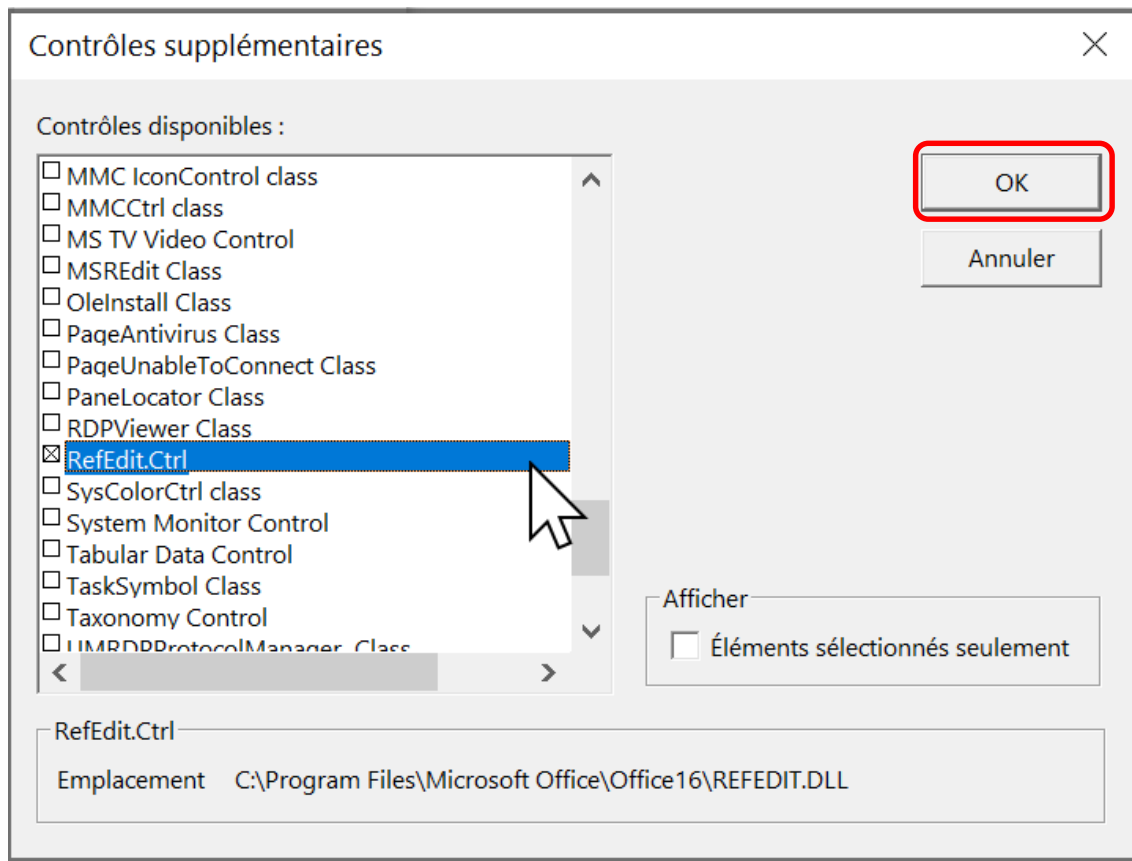
The **SpinButton** control lets the user select a value by clicking either of two arrows: one to increase the value and the other to decrease the value.

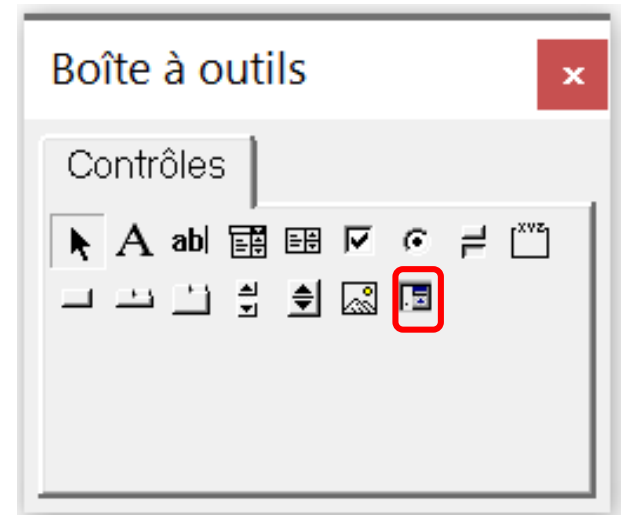
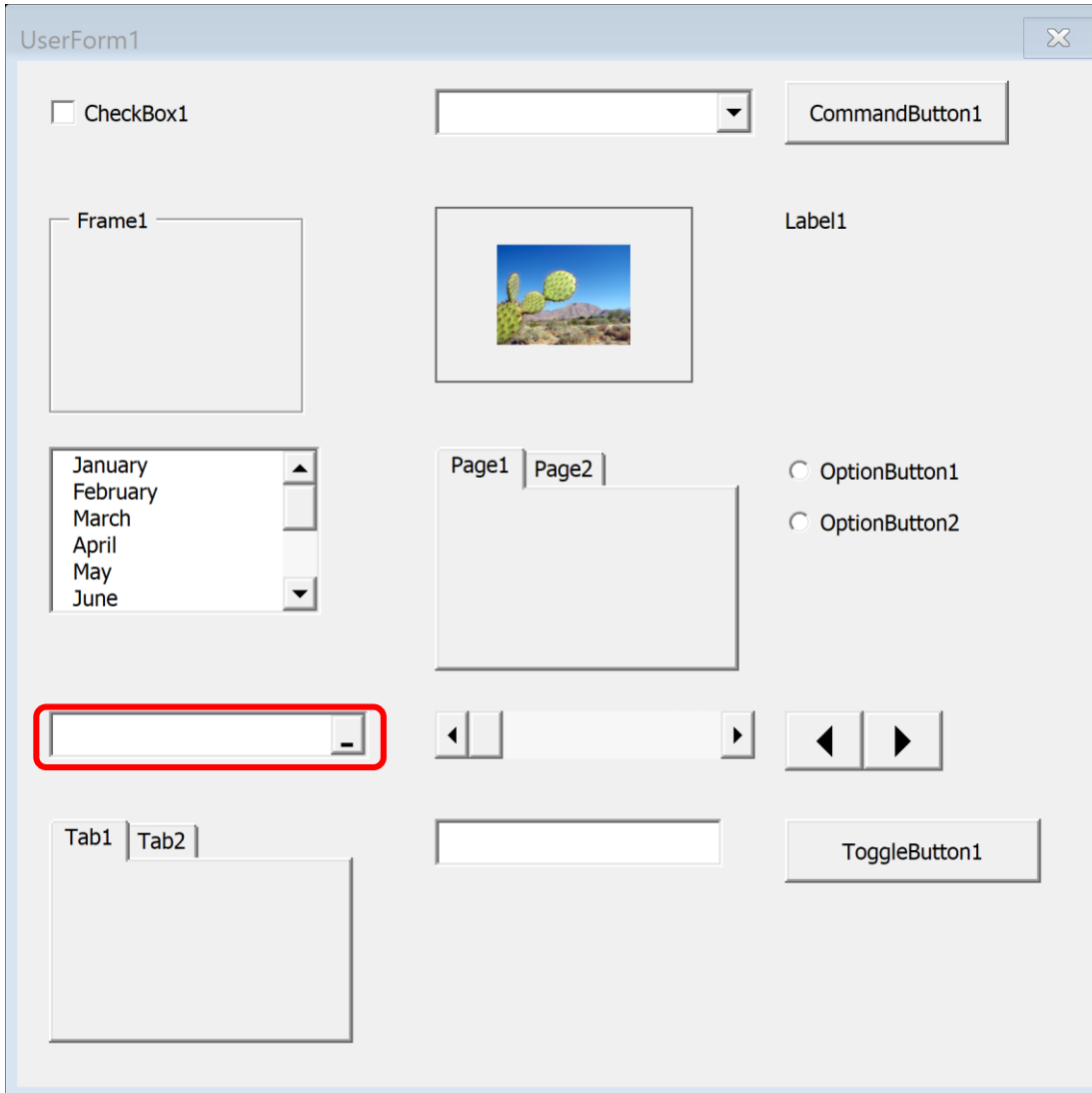
A SpinButton is often used with a TextBox control or Label control, which displays the current value of the SpinButton. A SpinButton can be oriented horizontally or vertically.



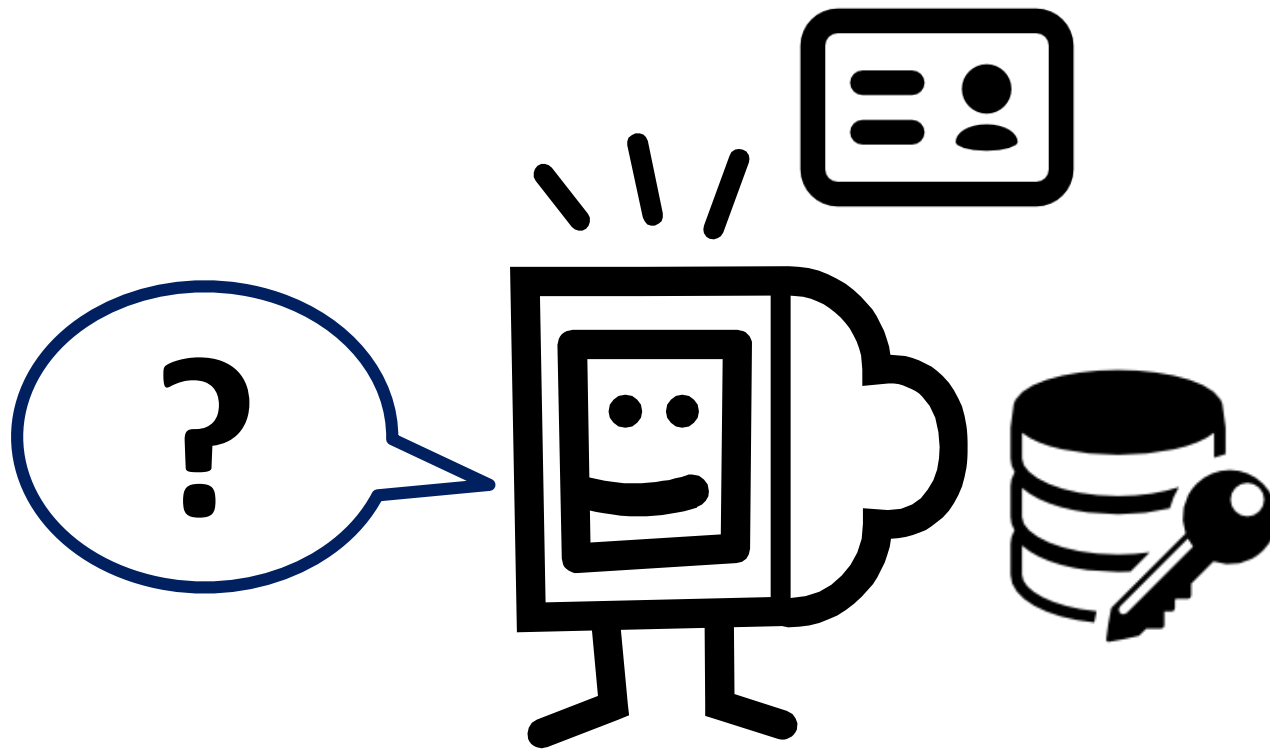
You can use an **Image** control to display a graphic image, which can come from a file or can be pasted from the Clipboard. You may want to use an Image control to display your company's logo in a dialog box. The graphics image is stored in the workbook. That way, if you distribute your workbook to someone else, you don't have to include a copy of the graphics file.







The **RefEdit** control is used when you need to let the user select a range in a worksheet. This control accepts a typed range address or a range address generated by pointing to the range in a worksheet.



To be continued...next year 😊

Thank you

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<http://www.labri.fr/perso/hocquard/Teaching.html>

