

MEPP EPSC

VBA GUI Lesson

Spring 2008

User Interfaces in VBA

- ◆ We can create a variety of interfaces in Excel with VBA
- ◆ Examples include:
 - ◆ Buttons to run macros
 - ◆ Drop down menus
 - ◆ Entire forms
- ◆ We've seen the buttons and menus, so let's take a look at forms

An Example

- ◆ Consider a sheet for storing and manipulating melt temperatures of elements

Microsoft Excel - VBAinterfaces.xls

File Edit View Insert Format Tools Data Window Help Acrobat

Type a question for help

B16

	A	B	C	D	E	F	G	H
1	Element	Melting Point	Units					
2	aluminum	934	K		Sort Alphabetically			
3	chrome	2130	K					
4	copper	1357	K		Sort by Tmelt			
5	gold	1338	K					
6	iron	1808	K		Add New Element			
7	mercury	234	K					
8	nickel	1726	K					
9	titanium	1933	K					
10	tungsten	3680	K					
11								
12								
13					aluminum			
14								
15					Melting Point (K)	Melting Point (C)	Melting Point (F)	Melting Point (R)
16					934	661	1221.2	1681.2
17								
18					element index			
19					1			

Sheet1 Sheet2 Sheet3

Ready NUM

A Sample Form

- ◆ This form allows users to input a new element and melting temperature
- ◆ Once the form is open, you can either Cancel the form, or enter data and save it to the sheet
- ◆ I'll explain how to create the form

My Form

The image shows a dialog box titled "Enter New Elements" with a close button (X) in the top right corner. The dialog box has a teal background. It contains two input fields: "Enter Element Name" and "Enter Tmelt (K)". Below the input fields are two buttons: "Save to Sheet" and "Cancel".

Enter New Elements

Enter Element Name

Enter Tmelt (K)

Save to Sheet

Cancel

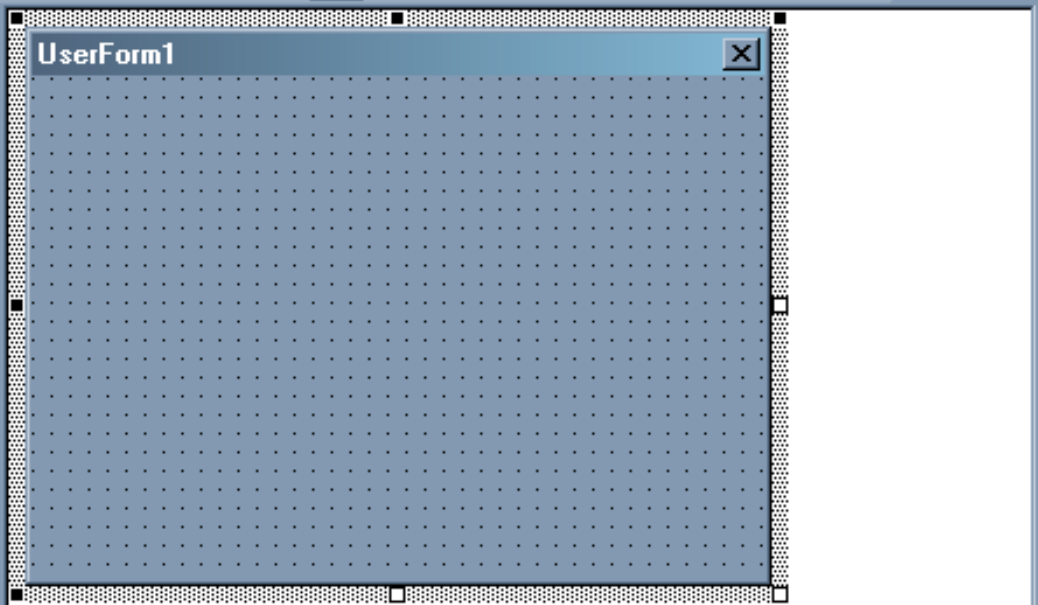
Creating the Form

- ◆ Go to the Visual Basic Editor
- ◆ Then do Insert/User Form
- ◆ This will open up a blank form

Project - VBAProject

Toolbox

Controls



Properties - UserForm1

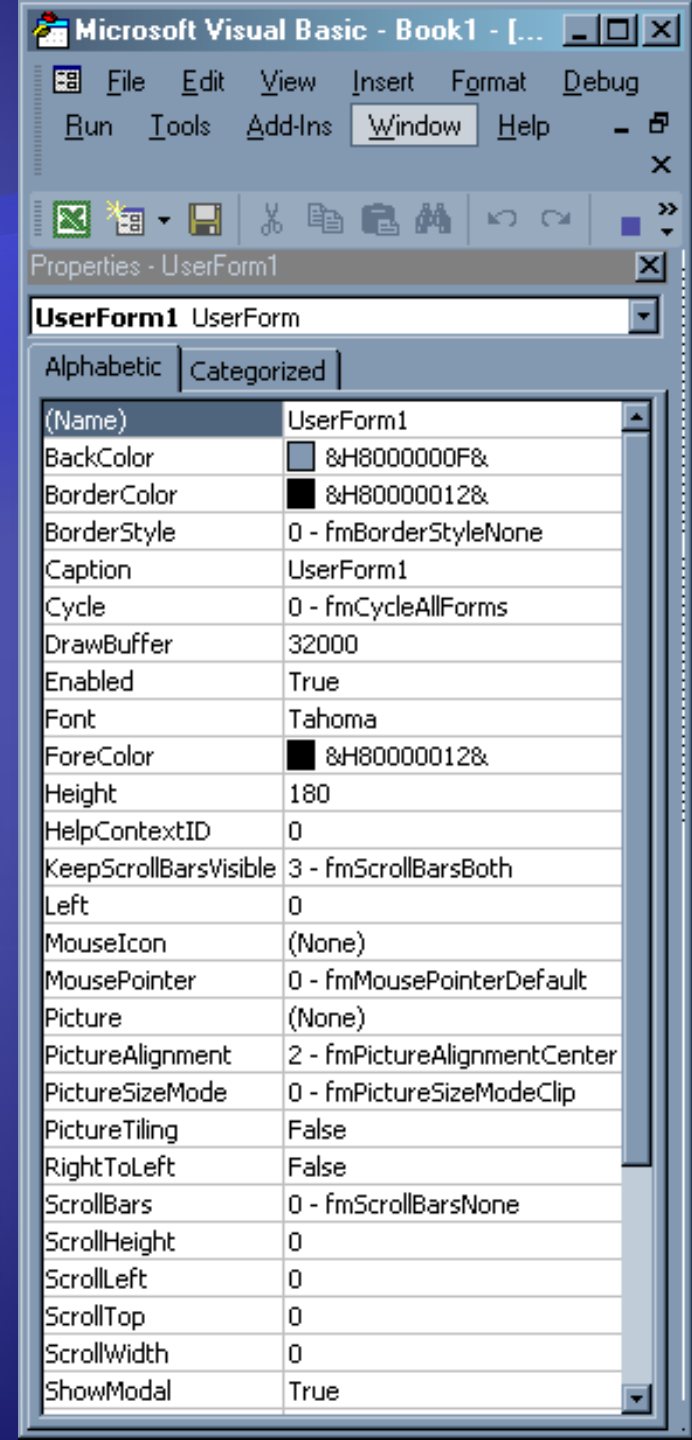
UserForm1 UserForm

Alphabetic | Categorized

(Name)	UserForm1
BackColor	&H8000000F&
BorderColor	&H80000012&
BorderStyle	0 - fmBorderStyleNone
Caption	UserForm1
Cycle	0 - fmCycleAllForms
DrawBuffer	32000
Enabled	True
Font	Tahoma
ForeColor	&H80000012&
Height	180
HelpContextID	0
KeepScrollBarsVisible	3 - fmScrollBarsBoth
Left	0
MouseIcon	(None)
MousePointer	0 - fmMousePointerDefault

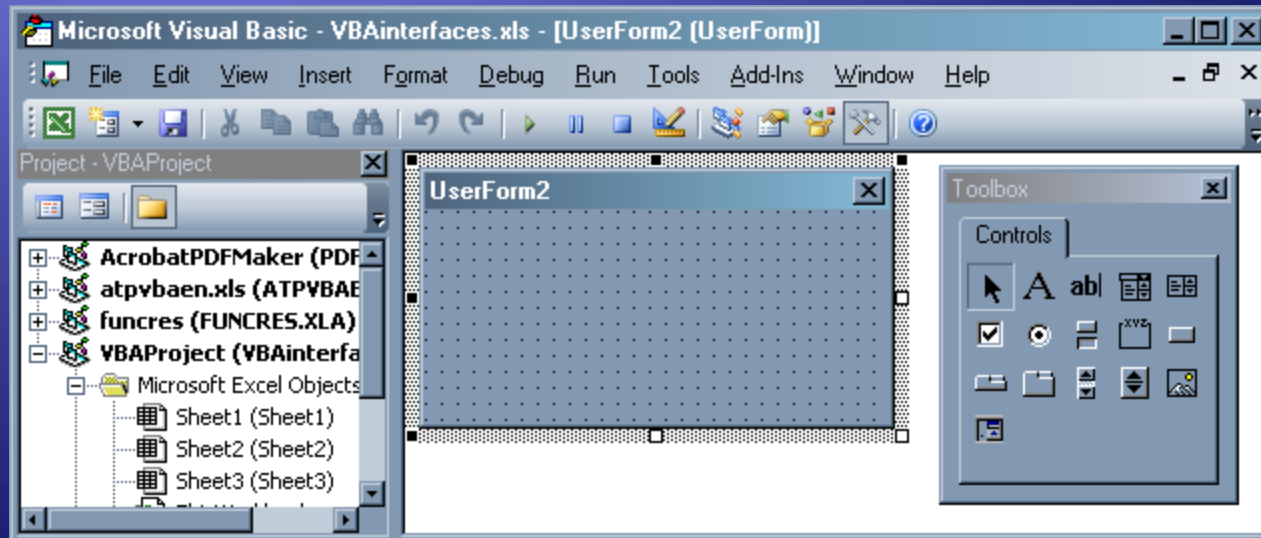
Changing Properties

- ◆ Things like background color, caption, etc. are changed in the Properties Box in the lower left
- ◆ Note the name of the form (This one is UserForm1)



Adding Control Elements

- ◆ To add Buttons and Text Boxes, go to View/Toolbox and then click on whatever element you want to add
- ◆ My form had two labels, two textboxes, and two buttons



Writing Code

- ◆ Just click on a button to edit code that will be executed when the button is clicked
- ◆ For the Cancel button, the only code is

Unload UserForm1

Code for Save Button

```
Private Sub CommandButton1_Click()  
    Columns("A").End(xlDown).Select  
    ActiveCell.Offset(1, 0).Value = TextBox1.Text  
    ActiveCell.Offset(1, 1).Value = TextBox2.Text  
    ActiveCell.Offset(1, 2).Value = "K"  
    Unload UserForm1  
End Sub
```

Opening Form

- ◆ You'll also need a button in the worksheet to open the form
- ◆ The code should be **Userform1.Show**