



Lecture 18 – Visual Basic for Applications: User Forms

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Objectives

- **User Forms (custom dialog boxes)**
- **Getting information from user forms**
- **Connecting forms to procedures**
- **Arrangements for next week's test**
- **Today's practical**
 - **A User Form for Microsoft Word**



Why Use User Forms?

- **When you need more information from the user than can be obtained from one (or a series of) input boxes**
- **When you want to limit the type of data being input**
 - Input boxes allow any string to be entered
- **When you want to dynamically adjust user choices based on their inputs**
 - (Not covered in this course)



What Is a User Form?

- **A new window (dialog box) that can contain various controls**
 - Text boxes
 - Radio buttons
 - Other buttons
 - Pictures
 - etc.
- **It can be tabbed / multipaged, modified dynamically, called in response to events....**
- **It cannot have the same name as a procedure**



Designing the User Form

- 1. Slap some controls onto the form and shuffle them around until they look alright**
- 2. Make a list of required controls, group them logically and sketch a rough layout, then implement it**
- 3. Find an existing form that does something similar, copy and modify it**
- 4. (Realistically) some combination of the above**



Form Controls

- Label
 - Text box
 - Combo box
 - List box
 - Check box
 - Scroll bar
 - Spin button
 - Option button
 - Toggle button
 - Frame
 - Command button
 - Tab strip
 - Multipage
 - Image
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- **And you can create your own controls as well...**
 - (not covered in this course)



VBA Naming Conventions

- To avoid name clashes and make code more readable much VBA code adheres to the following naming conventions:

Object	Prefix	Example
User Form	frm	frmMoveWords
Button	cmd	cmdOK
Text box	txt	txtUserDescription
Check box	chk	chkPrintNow
List box	lst	lstUserNames



Properties of Controls

- **All controls have a large number of properties that control their appearance and actions, including:**
 - **General information**
 - Name, parent, value
 - **Appearance**
 - Caption, alignment, colours, borders, visibility, font
 - **Behaviour**
 - Accelerator keys, tip text, tab order
 - **Special properties depending on the specific control**
 - EnterKeyBehaviour for text boxes, MatchRequired for combo boxes, etc.



Displaying Your User Form

- To put the form into memory, ready to use:
 - `Load frmMyForm`
- To display the form to the user
 - `frmMyForm.show`
- The user closes the form
 - By the OK / close buttons, or using the window controls
- To remove the form to save memory
 - `Unload frmMyForm`
 - Don't do this until you have retrieved the user values!



Retrieving User Inputs

- Every control has a name
- Every control has properties
- The values input or selected by the user are found in the properties of each control
- They can be used just like normal variables
- E.g.
 - `MsgBox txtMyText.value`
 - `If optOptionButton = True then ...`
 - `If chkCheckBox = False then ...`
- (List boxes are more complicated, see Help)



Advanced Dialog Boxes

- **Dialog boxes (user forms) can be used in sophisticated ways:**
 - Existing application forms can be used in your code
 - Parts of the form can be hidden or displayed depending on user inputs
 - Forms can have multiple pages
 - Forms can be created completely programmatically
 - Most properties can be changed dynamically
 - Forms can be modeless (i.e. floating)
 - Events (button press, mouse clicks etc.) can be “trapped” and your own VBA called
- **(We will not cover these features in this course)**



Test Organisation

- Tests will be given next week (week 10)
- They will be at the same time as the lecture 10:00AM
- You will receive an e-mail instructing you which room to attend
 - (Probably Nike or the Sullivan Room in CS)
- You will have 30 minutes to complete the test
- **LET ME KNOW IF YOU ARE ALLOWED EXTRA TIME**
- There will be no lecture or practicals next week



The Test

- This will be a written test
- There are 12-15 questions (to be confirmed)
- The test covers material from the practicals
 - Plus a small element from the lectures
 - And may come from the previous term as well!
- The test will count for up to 5% of your total coursemark
- Don't forget your assignment is also assessed
 - Worth 40% of your coursemark
- And there will be an 1½ hour examination in the Summer Term...
 - Worth 50% of your coursemark



Today's Practical

- Writing VBA Code
 - Understanding the Word Object Model
 - Automating some Word Operations
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- **REMEMBER TO SIGN OFF ON THE REGISTRATION SHEET!**