FIT1013 – Digital Futures: IT for Business
Tutorial 5 – Fundamentals of Programming

Objectives:

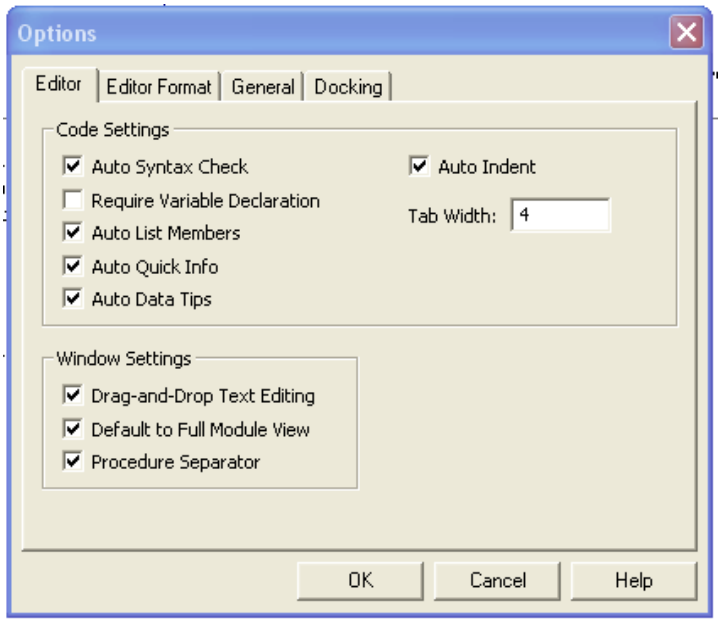
- Reserve a String variable
- Use an assignment statement to assign a value to a String variable
- Use the InputBox function to get information from the user at the keyboard
- Concatenate strings
- Using the MsgBox function
- Use the Option Explicit statement
- Create variables including object variables
- Assign data types and names for object variables
- Use the Set statement
- Code a workbook's Open Event procedure

Ensure the Developer tab is visible on the Ribbon (If not, go to **File->Options->Customize Ribbon**, and select **Developer** in the **Main Tabs** list).

Open a new workbook and save it with the filename: ***Tute5***, and select **Save as type**: ***Excel Macro-Enabled Workbook (*.xlsm)***.

Next open the **VBE** (Visual Basic editor) by selecting the Developer tab, then clicking the Visual Basic button on the Code group (or by pressing **<Alt>** and **<F11>**).

The Option Explicit statement:
The **Option Explicit** statement prevents VBA from reserving variables that you did not explicitly declare. The Option Explicit statement tells the Visual Basic Editor to display an error message if your code contains the name of an undeclared variable.
First go to **Tools->Options->Editor** tab, and select **Require Variable Declaration**. This ensures that the Option Explicit statement is included in every new form and module (see figure below).


Options
Editor
Editor Format
General
Docking
Code Settings
Auto Syntax Check
Require Variable Declaration
Auto List Members
Auto Quick Info
Auto Data Tips
Auto Indent
Tab Width:
4
Window Settings
Drag-and-Drop Text Editing
Default to Full Module View
Procedure Separator
OK
Cancel
Help

Exercise 1

For this question, you will be creating a procedure that prompts the user for her/his given and family names, then responds with a message using the input that the user has provided.

1. Insert a new code module by selecting Insert, Module from the menu. A Modules object and a module (Module1) should now be visible in the Project Explorer window:

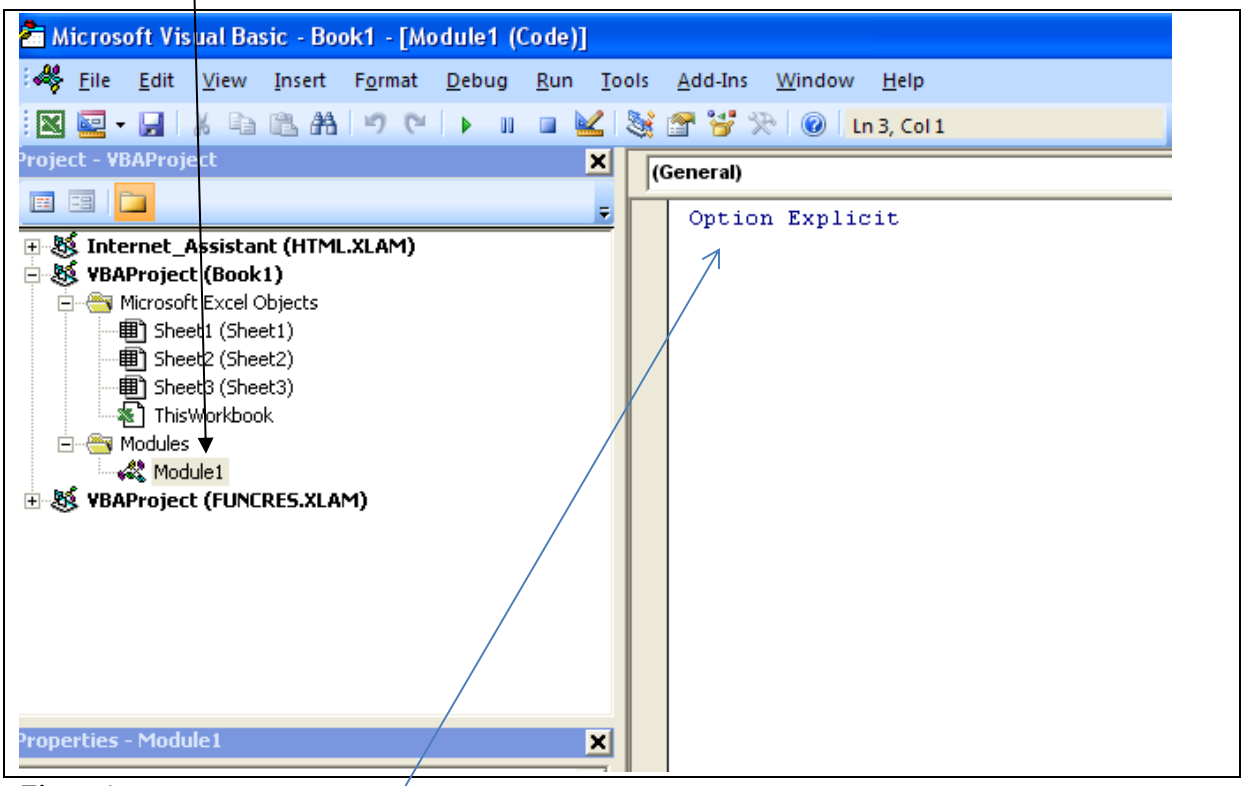
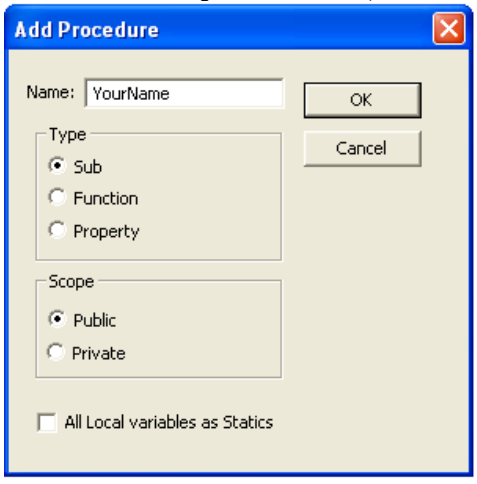


Figure 1

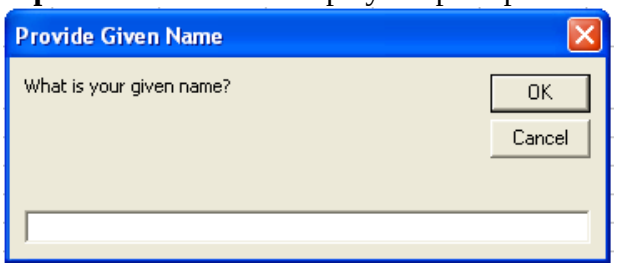
2. Move the cursor to the Code window and insert a new procedure by selecting Insert, procedure from the menu.

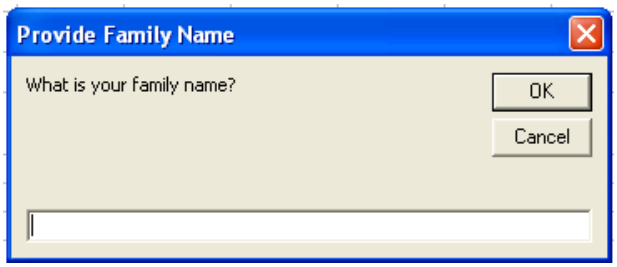
3. Enter the Name <Yourname> (no space) into the **Add Procedure** dialog box, set **Type** equal to **Sub** and Scope to Public (see below). Then click "**OK**".



4. Declare 2 string variables **strGivenName** and **strFamilyName**.

5. Prompt user for their given name and family name respectively (see below). Use the **InputBox** function to display the prompt.

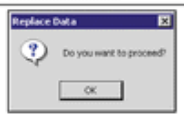




Below is the explanation for **Msgbox** statement

- The Msgbox (Message Box) displays a message to the user.
- The syntax of the MsgBox statement:
  - **MsgBox *Prompt, Buttons, Title***
  - Where ***prompt*** is the message in the dialog box, ***title*** is the text in the title bar and ***Buttons*** is the type of button that appears on the message box.

VALUES OF THE BUTTON PARAMETER

Button	Description	Example
vbOKOnly	OK button only	
vbOKCancel	OK and Cancel buttons	
vbCritical	Critical message	
vbQuestion	Warning query	
vbExclamation	Warning message	
vbInformation	Information message	

6. Using the **MsgBox** function, write the VBA code to provide the following message to the user: "Hello First Last" where **First** and **Last** represent the given and family names entered by the user. E.g.

7. Save your work.

Exercise 2 (in the same workbook as Exercise 1)

1. Insert a new procedure called **YourName2**.
2. Declare 2 string variables **strGivenName** and **strFamilyName**.
3. Declare a worksheet object variable called **wksDetails**.
4. Use the **Set** statement to point the worksheet object variable to the first worksheet in your workbook.
5. Using the object variable **wksDetails**, write the VBA code to provide the following entry in the cell A2 of the first worksheet: "Hello *First Last*" where First and Last represent the given and family names entered by the user.

	A
1	
2	hello Fred Dag

***Hint**: use wksDetails.Range() statement to refer to the cell A2.*

Exercise 3 (in the same workbook as Exercise 1)

1. Insert a new procedure called **YourAge**.
2. declare a string variable called **strAge**
3. declare a **Range** object variable called **rngAge**
4. point the **rngAge** object variable to cell A3 of the first worksheet
5. Using the **InputBox** function asks for the age in years, and then stores it in the variable **strAge**.
6. Using the **rngAge** object variable write the VBA code to perform the following tasks:
   a. in the cell A3 of the first worksheet write the text "Your approximate age in days is:"
   b. Using **strAge** and the **Val** function, in cell B3 of the first worksheet write the age in days (Hint: Using the Val function, convert the contents of the string variable strAge to a number and multiply by 365)

	A	B
1		
2	hello Fred Dag	
3	Your approximate age in days is:	7665