week5

February 14, 2018

1 If Statements

- Must contain
  - Condition
  - Code block

2 Example

```
' Where is condition? code block?
' What is the execution flow?
If x = "Mohammed" Then
    MSGBox("Hello Mohammad")
End If

If x = "Ali" Then
    MSGBox("Hello Ali")
End If
```

2.1 If x = "Mohammad", Do we need to check if x = "Ali"?

3 No

3.0.1 Use Else If statement for this

4 Relating If Statements to Each Other

- We use the **Else If** statement:

```
If x = "Mohammed" Then
MSGBox("Hello Mohammad")
Else If x = "Ali" Then
MSGBox("Hello Ali")
End If
```

5 We Can Even Add More

```
If x = "Mohammed" Then
    MSGBox("Hello Mohammad")
Else If x = "Ali" Then
    MSGBox("Hello Ali")
Else If x = "Sara" Then
    MSGBox("Hello Sara")
Else If x = "Nasser" Then
    MSGBox("Hello Nasser")
End If
```

6 Else If Statements

- Must be used **WITH** if statements
- Must have a condition
- The code for the first tru condition will be executed, all others after it will be ignored
  - A condition will never be executed if any condition above it is True
- Can have as many else if statements follow if as we like

7 What if you want to perform one task if a condition is true, and another if it is false

7.0.1 Use Else statement

```
If x = "Mohammed" Then
    MSGBox("Hello Mohammad")
Else
    MSGBox("Go Away!")
End If
```

8 Can be combined with Else If also

```
If x = "Mohammed" Then
    MSGBox("Hello Mohammad")
Else If x = "Ali" Then
    MSGBox("Hello Ali")
Else
    MSGBox("Go Away!")
End If
```

9 Else Statement

- Must be used with If, must come after it
- Can be used with Else If, must come after it

- Else code block executed only if all condition before it are False
- Doesn't have a condition
  - Because it means **If no condition is true**

10 Uses For If Statements

- Decision making
- Performing different tasks based on different data or special cases
- Input validation
  - Checking if the data entered into the application is correct
- More ...

11 Input Validation

- Text input controls allow you to enter strings
- Can you enter a name when the application expects a number?
  - What happens? What is this called?
- With input validation, you:
  - Check if the data is what the application expects
  - Notify the user of the data entry mistake
  - Give the user the opportunity to fix the problem

12 Challenge

- Improve the BMI challenge exercise by adding input validation to check for and prevent the following conditions:
  - Empty values
  - Text values
  - Negative values
  - Zero values
- Show an appropriate message for each condition

13 Radio Buttons and Check Boxes

- Used to give user ability to make choices
- Radio button limits choice to single option from many
- Check box can be used for:
  - Single option between 2
  - Multiple options from many

14 Challenge

- Create currency conversion calculator
- Gets amount from user
- Converts amount to USD, KWD, SAR

15 Another Challenge

- Create a pizza creator/calculator application
- User selects the pizza size: Small (0.5 KWD), Medium (1.0 KWD), Large (1.5 KWD)
- User then selects toppings for 0.25 kwd each: Cheese, tomato, olives, pepperoni, mushrooms
- User selects quantity
- Total cost is displayed
- Do we need input validation?

16 Checking for input in a TextBox

- Define KeyUp event
- Use e.keycode to check the pressed key
- VB makes available a list of keys under Keys.

```
Private Sub textBox1_KeyUp(ByVal sender As Object, ByVal e As'..
If e.KeyCode = Keys.Enter Then
    MSGBox("Enter Key pressed!")
    '
End If
End Sub
```