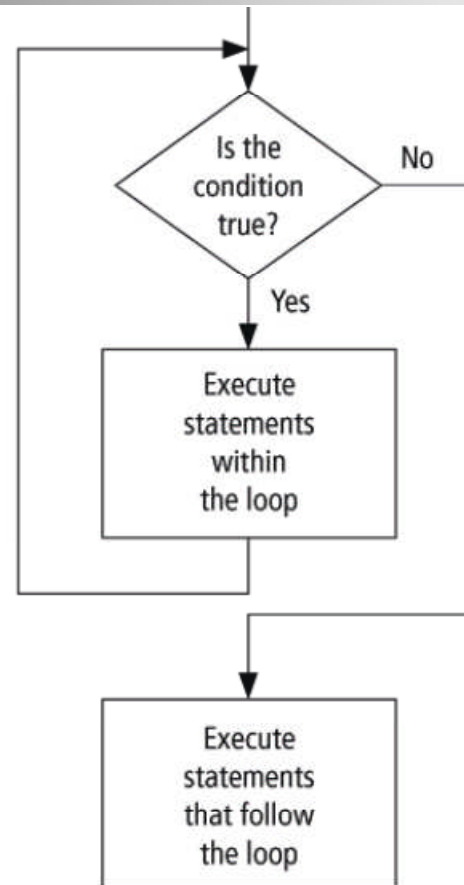# Do Loops

- A loop is one of the most important structures in programming.

- Used to repeat a sequence of statements a number of times.

- The Do loop repeats a sequence of statements either **as long as** or **until a certain condition is true**.

Pseudocode and Flow Chart for a Do Loop

Do While condition is true
    Processing step(s)
Loop

Do Loop Syntax

Do While *condition*

 statement(s)

Loop
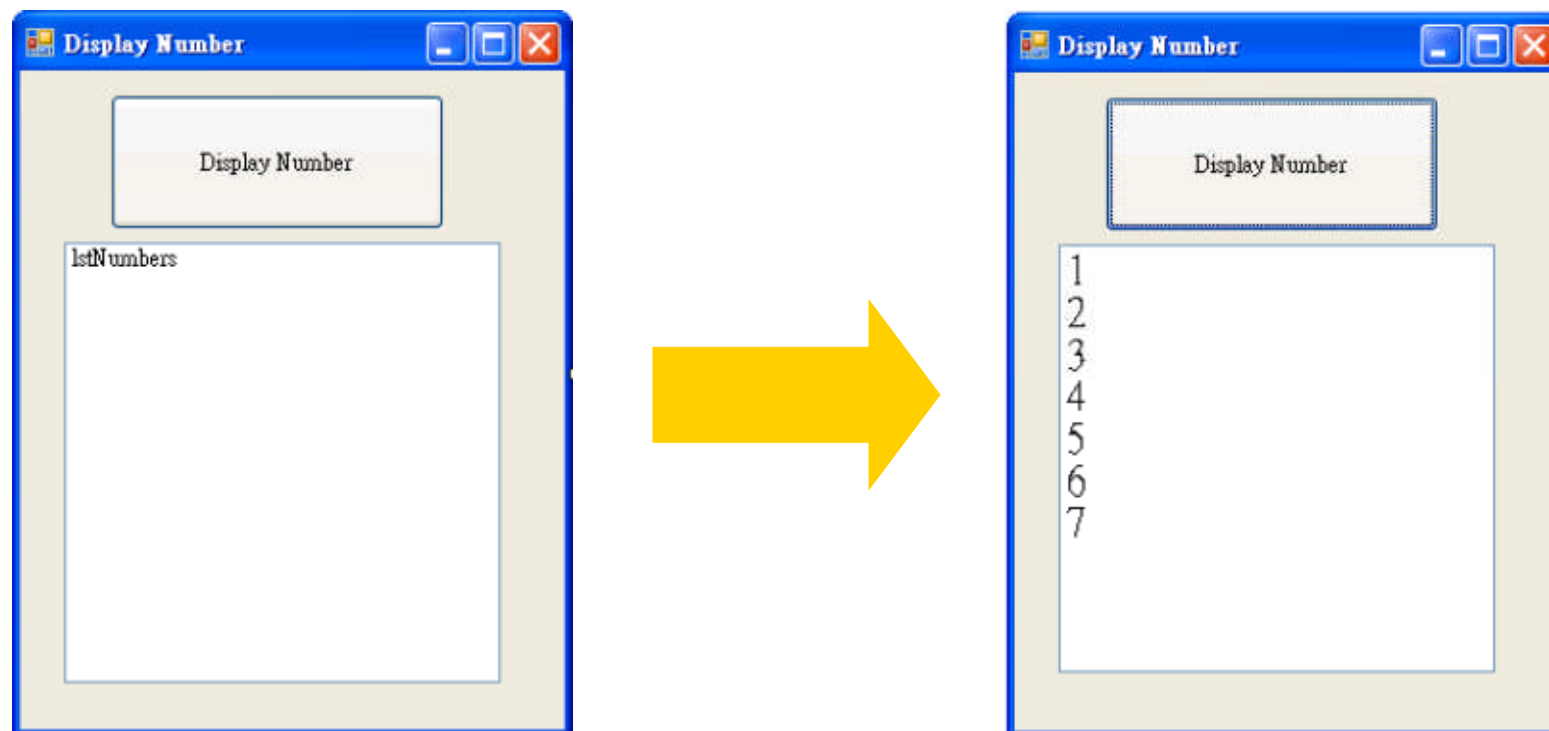
Condition is tested, If it is True, the loop is run. If it is False, the statements following the Loop statement are executed.

These statements are inside the body of the loop and are run if the condition above is True.

Code inside "Do While Loop" **may not** executed.

If the evaluated condition is False, the code inside the loop are not executed.

Lab sheet 6.1 – Fill List box with number Series

Code – Without using Loop

```vb
Private Sub btnDisplay_Click(...) Handles btnDisplay.Click
    'Display the numbers from 1 to 7
    Dim num As Integer = 1
    lstNumbers.Items.Add(num)
    num += 1 'Add 1 to the value of num
    lstNumbers.Items.Add(num)
    num += 1 'Add 1 to the value of num
    lstNumbers.Items.Add(num)
    num += 1 'Add 1 to the value of num
    lstNumbers.Items.Add(num)
    num += 1 'Add 1 to the value of num
    lstNumbers.Items.Add(num)
    num += 1 'Add 1 to the value of num
    lstNumbers.Items.Add(num)
    num += 1 'Add 1 to the value of num
    lstNumbers.Items.Add(num)
End Sub
```

Code – Do While Loop

```
Private Sub btnDisplay_Click(...) _
                    Handles btnDisplay.Click
   'Display the numbers from 1 to 7
   Dim num As Integer = 1
   Do While num <= 7
      lstNumbers.Items.Add(num)
      num += 1 'Add 1 to the value of num
   Loop
End Sub
```

★

This program segment performs the same function as example 1b, but it is much shorter than the code in example 1a.

Example: Repeat Request as Long as Response in Incorrect

```
Dim passWord As String = ""
Do While passWord <> "SHAZAM"
   passWord = InputBox("What is the password?")
   passWord = passWord.ToUpper
Loop
```

passWord is the loop control variable because the value stored in passWord is what is tested to determine if the loop should continue or stop.