**Tutorial # 4**

**Question#1:** Trace the following code

**(a)**

Input 1 Input 2

 

Dim word As String = TextBox1.Text

Dim firstLetter, secondLetter As String

Dim flag As Boolean = True

For i As Integer = 0 To word.Length - 2

firstLetter = word.Substring(i, 1)

secondLetter = word.Substring(i + 1, 1)

If firstLetter = secondLetter Then

txtOutput.Text = "Equal letters, first = second letter = " & firstLetter

Exit For

End If

If i = word.Length - 2 Then

txtOutput.Text = "This word has no repeated letters" End If

Next

Trace of Input 1

|  |  |  |  |
| --- | --- | --- | --- |
| i | firstLetter | secondLetter | txtOutput.Text |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Trace of Input 2

|  |  |  |  |
| --- | --- | --- | --- |
| i | firstLetter | secondLetter | txtOutput.Text |
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|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**(b)**



Dim highestIndex As Integer = lstBox.Items.Count - 1

Dim Name As String

Dim i As Integer = 0

Do While i <= highestIndex

Name = CStr(lstBox.Items(i))

i += 1

If Name.StartsWith("New") Then

txtOutput.Text &= "Exit Do Name = " & Name & vbCrLf

Exit Do

Else

txtOutput.Text &= "Continue Do Name = " & Name & vbCrLf

Continue Do

End If

Loop

|  |  |  |  |
| --- | --- | --- | --- |
| i | highestIndex | Name | txtOutput.Text |
|  |  |  |  |
|  |  |  |  |
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|  |  |  |  |



**Question#2:** What is the output of the following?

**(a)**

Dim var2 As Integer

For var1 As Integer = 0 To 2

If var1 = 1 Then

txtOutput.Text &= "Continue For" & vbCrLf

Continue For

End If

var2 = 0

Do While var2 < 3

txtOutput.Text &= "var1 = &" & var1 & " var2 = " & var2 & vbCrLf

If var2 = 2 Then

txtOutput.Text &= "Exit Do" & vbCrLf

Exit Do

End If

var2 += 1

Loop

Next

txtOutput.Text



**(b)**

Dim number, copy As String, position As Integer number = "123.4567"

copy = number

position = number.IndexOf(".")

txtLeft.Text = number.Substring(0, position)

txtRight.Text = number.Substring(position + 1, number.Length - 1)

txtLeft.Text =........................., txtRight.Text =.............................

**(c)**

Input1 Input2



Dim sentence = "THE QUICK BROWN FOX JUMPS OVER A LAZY CAT" Dim letter As String

Dim position As Integer

letter = txtLetter.Text.ToUpper position = sentence.IndexOf(letter)

txtOutput.Text = letter & " first occurs in position " & position & "."

|  |  |
| --- | --- |
| txtLetter.Text | txtOutput.Text |
| u |  |
| d |  |