



Array Properties

Upper Bound:

The value of `arrayName.GetUpperBound(0)` is the upper bound of `arrayName()`.

Then What is the Lower Bound ?

Ans: 0



Example

```
Dim teamName() As String = { "Packers", _  
    "Packers", "Jets", "Chiefs" }
```

```
txtBox.Text = CStr(teamName.GetUpperBound(0))
```

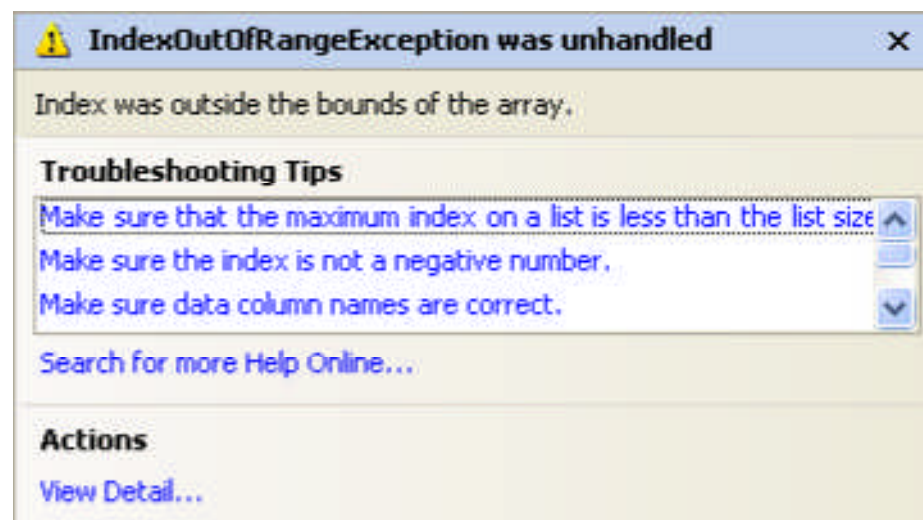
Output: 3



Out of Bounds Error

The following code references an array element that doesn't exist. This will cause an error.

```
Dim trees() As String = {"Sequoia", _  
                          "Redwood", "Spruce"}  
txtBox.Text = trees(5)
```





Lab sheet 7.2: Using an Array as a Frequency Table

Count Characters

Sentence:

A	2
D	1
E	3
H	1
L	6
N	1
S	2
T	2
W	2



Lab sheet 7.2 : Code

```
Private Sub btnAnalyze_Click(...) Handles btnAnalyze.Click
    'Count occurrences of the various letters in a sentence
    Dim sentence, letter As String
    Dim index, charCount(25) As Integer
    'Examine and tally each letter of the sentence
    sentence = (txtSentence.Text).ToUpper
    For letterNum As Integer = 1 To sentence.Length
        letter = sentence.Substring(letterNum - 1, 1)
        If (letter >= "A") And (letter <= "Z") Then
            index = Asc(letter) - 65 'The ANSI value of "A" is 65
            charCount(index) += 1
        End If
    Next
```



Example 4: Code Continued

```
'List the tally for each letter of alphabet
lstCount.Items.Clear()
For i As Integer = 0 To 25
    letter = Chr(index + 65)
    If charCount(index) > 0 Then
        lstCount.Items.Add(letter & " " & _
                                charCount(i))
    End If
Next
End Sub
```



Lab sheet 7.2: Output

Count Characters

Sentence: All's well that ends well.

Analyze Sentence

A	2
D	1
E	3
H	1
L	6
N	1
S	2
T	2
W	2



Copying Arrays

If *arrayOne()* and *arrayTwo()* have been declared with the same data type, then the statement

`arrayOne = arrayTwo`

makes *arrayOne()* an exact duplicate of *arrayTwo()*. It will have the same size and contain the same information.