

COMPUTATIONAL METHODS

Visual Basic Programming – Demonstration Program 5

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' Arrays - demonstrate the use of some arrays and array functions
',
' The program analyses a text string into a list of words
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Public Class Form1
    ' global variable containing separators for words
    Dim separators(8) As Char

    ' use the Form load event to initialise the separators arrays
    Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
        separators(0) = " "
        separators(1) = vbTab        ' i.e. TAB
        separators(2) = vbCr        ' i.e. CARRIAGE RETURN
        separators(3) = vbLf        ' i.e. LINE FEED
        separators(4) = """"
        separators(5) = "."
        separators(6) = ","
        separators(7) = "-"
    End Sub

    ' respond to Analyse button
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        ' get uppercase version of string
        Dim intext As String = TextBox1.Text.ToUpper()
        ' array to hold words
        Dim inwords() As String
        ' split text into words using separators
        inwords = intext.Split(separators,
StringSplitOptions.RemoveEmptyEntries)
        ' sort the list of words
        Array.Sort(inwords)
        ' clear the list box
        ListBox1.Items.Clear()
        ' add the array of string to list box
        ListBox1.Items.AddRange(inwords)
    End Sub

    ' respond to Synthesise button
    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        ' string to hold result
        Dim intext As String
        ' array of strings to hold contents of list box
        Dim inwords(ListBox1.Items.Count) As String
        ' copy the list box items into the array
        ListBox1.Items.CopyTo(inwords, 0)
        ' join the array elements together into a single string
        intext = String.Join(" ", inwords)
        ' put the string into the text box
        TextBox1.Text = intext
    End Sub
End Class
```

