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Public Class Form1
   Inherits System.Windows.Forms.Form
 Windows Form Designer generated code
   Dim mintScores() As Integer = {5, 13, 29, 31, 44, 53, 66, 75, 87, 99}
   Private Sub btnFill Click(ByVal sender As System.Object, ByVal e As System.EventArgs) 🖌
   Handles btnFill.Click
        Dim i As Integer = 0
        For i = 0 To mintScores.Length() - 1
                                                             ' filling array with random
           mintScores(i) = Math.Floor(Rnd() * 100) + 1 ' integers from 1 to 100
        Next
        System.Array.Sort(mintScores) ' must sort array before using binary search
   End Sub
   Private Sub btnSearch Click(ByVal sender As System.Object, ByVal e As System.
                                                                                           V
   EventArgs) Handles btnSearch.Click
        Dim intLow As Integer = 0
                                                             ' low subscript position
                                                           ' high subscript position
        Dim intHigh As Integer = mintScores.Length() - 1
        Dim intKey As Integer = Val(txtKey.Text)
                                                            ' # that is being searched
        Dim intMid As Integer = intHigh / 2
                                                            ' new guess
                                                            ' flag variable, found or not
        Dim blnFound As Boolean = False
                                                            ' BINARY SEARCH
        Do While (Not (blnFound) And intLow <= intHigh)
            If (mintScores(intMid) = intKey) Then
                                                             ' key was found
               blnFound = True
            Else
                If (mintScores(intMid) > intKey) Then
                                                         ' last guess was too high
                   intHigh = intMid - 1
                ElseIf (intKey > mintScores(intMid)) Then ' last guess was too low
                   intLow = intMid + 1
                End If
                intMid = Math.Round((intLow + intHigh) / 2) ' make a new guess
            End If
        Loop
        If (blnFound = True) Then
           lblResult.Text = "Found in position " + intMid.ToString()
        Else
            lblResult.Text = "Not Found"
        End If
   End Sub
   Private Sub btnDisplay Click (ByVal sender As System. Object, ByVal e As System.
                                                                                           K
   EventArgs) Handles btnDisplay.Click
       Dim strString As String = "" ' array elements concatenated as a string
Dim i As Integer = 0 ' loop variable
        For i = 0 To mintScores.Length() - 1 ' building string out of the array
           strString = strString + " " + mintScores(i).ToString()
        Next
        lblDisplay.Text = strString
   End Sub
End Class
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