w02057's CrackMe#2 by w02057

Site : http://www.crackmes.de/users/w02057/crackme2_by_w02057/

Solution by costy

When you load the crackme you can notice that the clue button is disabled.

Inside Reflector you can see

```
Private Sub clue_textbox_Click(ByVal sender As Object, ByVal e As EventArgs)
    Interaction.MsgBox(Me.clue_textbox.Text, MsgBoxStyle.Information, "Clue")
End Sub
```

So it should be interesting to see the text inside clue_textbox.

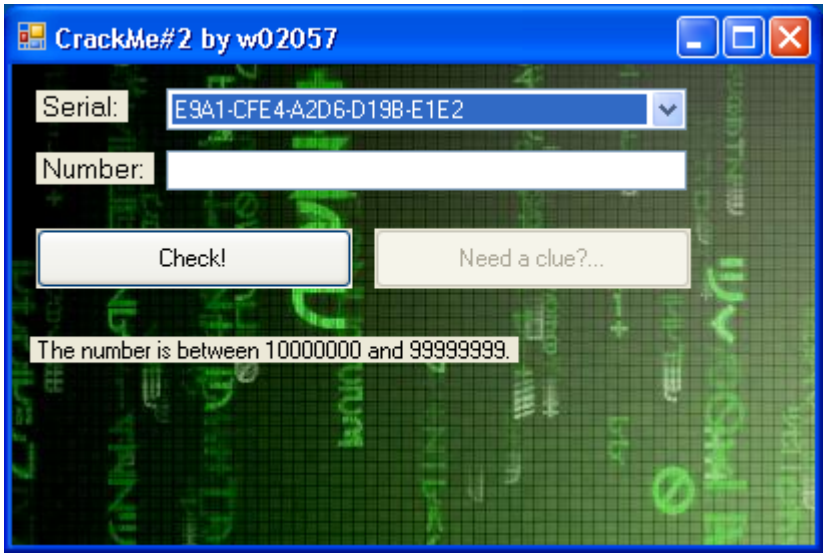
Let's see this text.

In the InitializeComponent you can see:

```
    point = New Point(9, &H88)
    Me.clue_textbox.Location = point
    Me.clue_textbox.Name = "clue_textbox"
    size = New Size(&HF4, 13)
    Me.clue_textbox.Size = size
    Me.clue_textbox.TabIndex = 6
    Me.clue_textbox.Text = "The number is between 10000000 and 99999999."
```

"The number is between 10000000 and 99999999." is a great help. Without it solving the crackme is impossible. (Too much time for bruteforcing).

The “point“ indicates when the text appears. You can see the text enlarging the window.



Ok. Lets see how the check works.

```
Private Sub check_button_Click(ByVal sender As Object, ByVal e As EventArgs)
    If Not Versioned.IsNumeric(Me.number_textbox.Text) Then
        Interaction.MsgBox("Please enter a valid number.", MsgBoxStyle.Critical, "Error")
    Else
        Dim str As String = "abcdefghijklmnopqrstuvwxyz"
        Dim sString As String = Conversions.ToString(CDbl(
(Conversions.ToDouble(Me.number_textbox.Text) + 57842967)))
        sString = String.Concat(New String() { Strings.Mid(str, 1, 1),
Strings.UCase(Strings.Mid(str, &H1A, 1)), Strings.UCase(Strings.Mid(str, 11, 1)),
 sString, Conversions.ToString(2), Strings.UCase(Strings.Mid(str, 14, 1)),
 Strings.Mid(str, &H12, 1) })
        If (Strings.UCase(Strings.Mid(Conversions.ToString(Me.sha1(sString)), 1, 20)
.Insert(4, "-").Insert(9, "-").Insert(14, "-").Insert(&H13, "-")) =
Me.serial_combobox.Text) Then
            Interaction.MsgBox("Bravo, you've cracked me! :)", MsgBoxStyle.Exclamation, "M
        Else
            Interaction.MsgBox("Serial and number do not match.", MsgBoxStyle.Exclamation,
        End If
    End If
End Sub
```

The text you type should be a number. Infact the secret help suggests to type a number between 10000000 and 99999999.

If you type a number, the crackme create 2 strings : str is a costant "abcdefghijklmnopqrstuvwxyz".

```
In a first time Sstring is equal to (number_you_type+57842967).
Then the program append to the end of this string some letters from str.
Each mid instruction gets a letter from str . The second parameter of mid is the
position of the letter. The third parameter is the lenght (it take only a
character).
Then the crackme generate a value from the string using the sha function.
```

It insert 4 “-”in this string in the position 4,9,14,19.

It compares this value with the string in the combobox. If they are equal you win.

In order to solve the crackme I coded a bruteforcer.

It works in a simply way.

Instead of taking the name from a textbox, it has a loop and try every number from 10000000 and 99999999. Then it compares the number generate with sha with each number in the combobox.

I added the source to the zip file.

Anyway the valid couple are:

60135393 E9A1-CFE4-A2D6-D19B-E1E2

76032106 F68A-8002-D1FD-1BF6-E6C4

59568847 6F96-AFB3-2A2D-F692-1A27

34134732 5FE6-10E5-FF3F-01AE-232E

10820813 E04B-D618-90EF-373B-307D

22107279 6C22-0B1F-7C4A-6ADE-2796

62582653 EC39-552C-9E43-8A3C-5BA2

79363160 6C8A-82EC-5EE9-1B1D-4C26