Website Blocker

These guidelines show how implement Website Blocker feature in your applications using tools and components provided by VB.NET platform.

Time needed to accomplish this task: 20 - 30 minutes

GUI

- Create a new VB.NET project "Windows Form Application", change the project name and path according to your preferences.

- Create a new windows form (if it is not created by default), name it "frmWSblock", and change its caption/text to "Website Blocker"

- In "frmWSblock" form, create 1 textbox, 1 label, and 2 buttons and change their properties as follows:

Old Name	New Name	Caption/Text	Other Properties
TextBox1	txtURL		
Label1	lblURL	URL:	
Button1	btnBlock	Block	
Button2	btnUnblock	Unblock	

- By doing so, you should have something looks like the following picture:
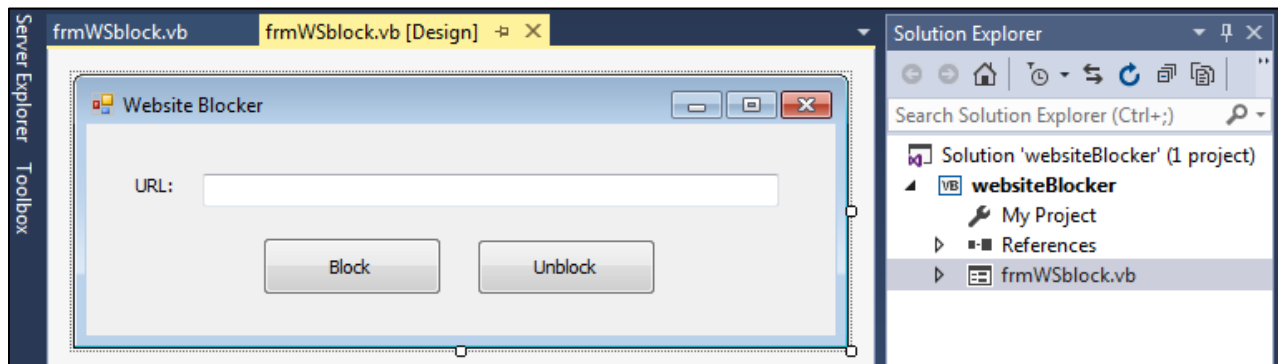
Now… Let's do some coding…

Coding

- At the beginning, let's declare the following two variables/objects which will be used across functions in the project. Write the following lines at the beginning of your code:

```
Dim path As String
Dim sw As StreamWriter
```

Blocking a Website:

The Hosts file in Windows 10 / 8 / 7, is basically a plain text file used to map host names to IP addresses. This Hosts file is located in the Windows folder "C:\Windows\System32\drivers\etc".

Blocking a website can be done by simple modification to the "host" file in Windows system. To do so, write the following code in the "btnBlock_Click" event sub.

```
path = "c:\Windows\System32\drivers\etc\hosts"
sw = New StreamWriter(path, True)

Dim sitetoblock As String = (Environment.NewLine & "127.0.0.1 " & txtURL.Text)
sw.Write(sitetoblock)
sw.Close()
MessageBox.Show("Site Blocked")
```

Unblocking a Website:

To unblock a specific website, the "host" file should be searched for that website and the entry of that website in "host" file should be removed. This is done by writing the following code in the "btnUnblock_Click" event sub.

```
Dim lines() As String = File.ReadAllLines("c:\Windows\System32\drivers\etc\hosts")
Dim TheFileLines As New List(Of String)

TheFileLines.AddRange(System.IO.File.ReadAllLines("c:\Windows\System32\drivers\etc\hosts"))
'for each line
Dim int As Integer
For i As Integer = 0 To lines.Length - 1
    'if the line contains the search term, after the first column
    If lines(i).Length > 20 AndAlso lines(i).IndexOf(txtURL.Text, 3) > 0 Then
        int = i
    End If
Next
If int >= TheFileLines.Count Then Exit Sub
TheFileLines.RemoveAt(int)
System.IO.File.WriteAllLines("c:\Windows\System32\drivers\etc\hosts", TheFileLines.ToArray)
MsgBox("Website Unblock")
```

Note: Normally, any file under System32, or even Windows, would require the application to be run as an administrator in order to write. In case you have an error when you run your program, please do the following:
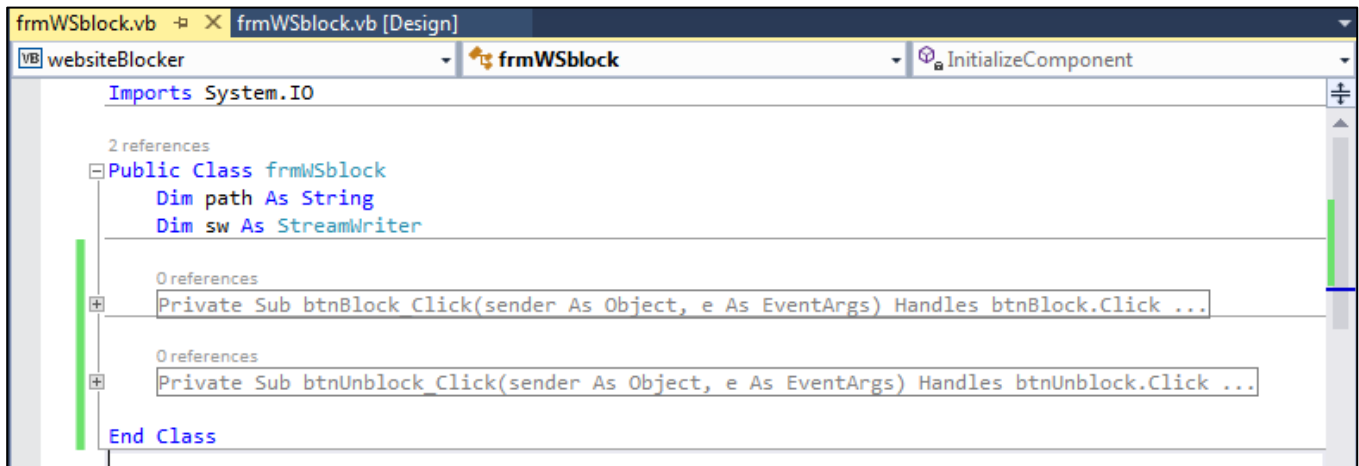
Edit the manifest file to require elevated privileges. In the solution explorer right click on your project and select properties. On the Application tab click on the "View Windows Settings" button. Look for the line that reads:

```
<requestedExecutionLevel level="asInvoker" uiAccess="false" />
```

Change the level value from " asInvoker" to "requireAdministrator". Rebuild your project.

Final Product:

At the end of this session you should have the following codes:

```
frmWSblock.vb  ↗ ✕  frmWSblock.vb [Design]
VB websiteBlocker              ▾  ⁂ frmWSblock              ▾  ⁂ InitializeComponent              ▾

        Imports System.IO

    2 references
  ⊟Public Class frmWSblock
        Dim path As String
        Dim sw As StreamWriter

        0 references
  ⊞     Private Sub btnBlock_Click(sender As Object, e As EventArgs) Handles btnBlock.Click ...

        0 references
  ⊞     Private Sub btnUnblock_Click(sender As Object, e As EventArgs) Handles btnUnblock.Click ...

    End Class
```

The "btnBlock _Click" sub should look like this:

```vb
Private Sub btnBlock_Click(sender As Object, e As EventArgs) Handles btnBlock.Click
    path = "c:\Windows\System32\drivers\etc\hosts"
    sw = New StreamWriter(path, True)

    Dim sitetoblock As String = (Environment.NewLine & "127.0.0.1 " & txtURL.Text)
    sw.Write(sitetoblock)
    sw.Close()
    MessageBox.Show("Site Blocked")
End Sub
```

The "btnUnblock_Click" sub should look like this:

```vb
Private Sub btnUnblock_Click(sender As Object, e As EventArgs) Handles btnUnblock.Click

    Dim lines() As String = File.ReadAllLines("c:\Windows\System32\drivers\etc\hosts")
    Dim TheFileLines As New List(Of String)
    TheFileLines.AddRange(System.IO.File.ReadAllLines("c:\Windows\System32\drivers\etc\hosts"))

    'for each line
    Dim int As Integer
    For i As Integer = 0 To lines.Length - 1

        'if the line contains the search term, after the first column
        If lines(i).Length > 20 AndAlso lines(i).IndexOf(txtURL.Text, 3) > 0 Then
            int = i
        End If
    Next

    If int >= TheFileLines.Count Then Exit Sub
    TheFileLines.RemoveAt(int)
    System.IO.File.WriteAllLines("c:\Windows\System32\drivers\etc\hosts", TheFileLines.ToArray)
    MsgBox("Website Unblock")

End Sub
```