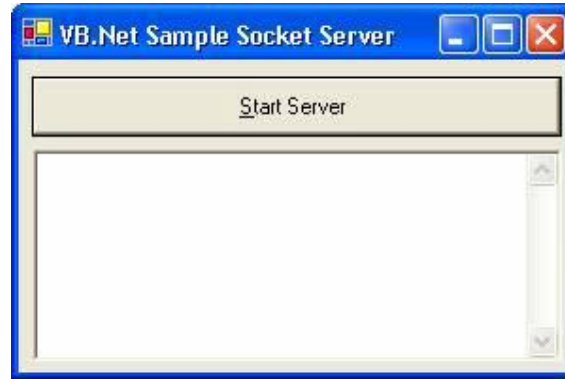


استخدام VB.NET Socket

تشكل هذه المقالة مثلاً أو مدخلاً بسيطاً إلى برمجة VB.Net socket ، سنستخدم فيه البروتوكول TCP/IP ، وهو مخصص للدخول إلى الشبكة ويمكن تطويره كما تريد .

لقد حل مكان ال winsok الذي كان مستخدماً في برمجة MS Visual Basic 6.0 socket الكائن Socket من فضاء الأسماء System.Net.Sockets وهو مختلف نوعاً ما عن الكائن القديم مثلاً لا توجد للكائن System.Net.Sockets.Socket أحداث ولكن يمكننا تغطية هذا النقص عن طريق ال thread .
والآن لنبدأ مثالنا الذي سنستخدم فيه طبعاً System.Net.Sockets.Socket لبناء multithreaded TCP/IP server .

سنفتح مشروعاً جديداً ونضيف إليه زراً نسميه startStop ومربع نص TextBox1



ونضيف إلى البرنامج الشيفرة التالية :

```
Imports System.Text
Imports System.Net.Sockets
Imports System.Threading
Public Class Form1
    Inherits System.Windows.Forms.Form
    Private connCount As Long = 8090
    Private sckListener As New TcpListener(connCount)
    Private currSocket As Socket, procThread As Thread
    Private accptThread As Thread
    Private Listening As Boolean = False
    Private Read() As [Byte] = New Byte(1023) {}
    Private dataBuffer As [Byte]() = Nothing
    Private ASCII As Encoding = Encoding.ASCII
    #Region " Windows Form Designer generated code "
    Public Sub New()
        MyBase.New()
        'This call is required by the Windows Form Designer.
        InitializeComponent()
        'Add any initialization after the InitializeComponent() call
    End Sub
    'Form overrides dispose to clean up the component list.
    Protected Overrides Sub Dispose(ByVal disposing As Boolean)
        If disposing Then
            If Not (components Is Nothing) Then
                components.Dispose()
            End If
        End If
        MyBase.Dispose(disposing)
    End Sub
    'Required by the Windows Form Designer
    Private components As System.ComponentModel.IContainer
    'NOTE: The following procedure is required by the Windows Form Designer
```

```

'It can be modified using the Windows Form Designer.
'Do not modify it using the code editor.
Friend WithEvents startStop As System.Windows.Forms.Button
<System.Diagnostics.DebuggerStepThrough()> Private Sub InitializeComponent()
    Me.startStop = New System.Windows.Forms.Button()
    Me.TextBox1 = New System.Windows.Forms.TextBox()
    Me.SuspendLayout()
    '
    'startStop
    '
    Me.startStop.Location = New System.Drawing.Point(7, 9)
    Me.startStop.Name = "startStop"
    Me.startStop.Size = New System.Drawing.Size(281, 32)
    Me.startStop.TabIndex = 0
    Me.startStop.Text = "&Start Server"
    '
    'TextBox1
    '
    Me.TextBox1.Location = New System.Drawing.Point(8, 48)
    Me.TextBox1.Multiline = True
    Me.TextBox1.Name = "TextBox1"
    Me.TextBox1.ScrollBars = System.Windows.Forms.ScrollBars.Vertical
    Me.TextBox1.Size = New System.Drawing.Size(280, 112)
    Me.TextBox1.TabIndex = 2
    Me.TextBox1.Text = ""
    '
    'Form1
    '
    Me.AutoScaleBaseSize = New System.Drawing.Size(5, 13)
    Me.ClientSize = New System.Drawing.Size(292, 166)
    Me.Controls.AddRange(New System.Windows.Forms.Control() {Me.TextBox1,
Me.startStop})
    Me.Name = "Form1"
    Me.Text = "VB.Net Sample Socket Server"
    Me.ResumeLayout(False)
End Sub
#End Region
Private Sub startStop_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles startStop.Click
    If Not Listening Then
        sckListener.Start()
        startStop.Text = "&Stop Server"
        accptThread = New Thread(AddressOf ConnectionRequest)
        accptThread.Start()
        Listening = True
    Else
        sckListener.Stop()
        startStop.Text = "&Start Server"
        Listening = False
        accptThread.Suspend()
        accptThread = Nothing
    End If
End Sub
Private Function GetData(ByVal ByteArray() As Byte, ByRef currSocket As
Socket, ByRef clientData As String) As Integer
    Dim totalBytes As Integer = currSocket.Receive(ByteArray, 1024, 0)
    Dim TempData As String = Encoding.ASCII.GetString(ByteArray)
    clientData = CStr(TempData)
    Return totalBytes
End Function
Private Sub SendData(ByVal currSocket As Socket, ByVal Data2Send As String)
    dataBuffer = New [Byte](Data2Send.Length + 1) {}
    Dim dataLength As Integer = ASCII.GetBytes(Data2Send, 0,
Data2Send.Length, dataBuffer, 0)

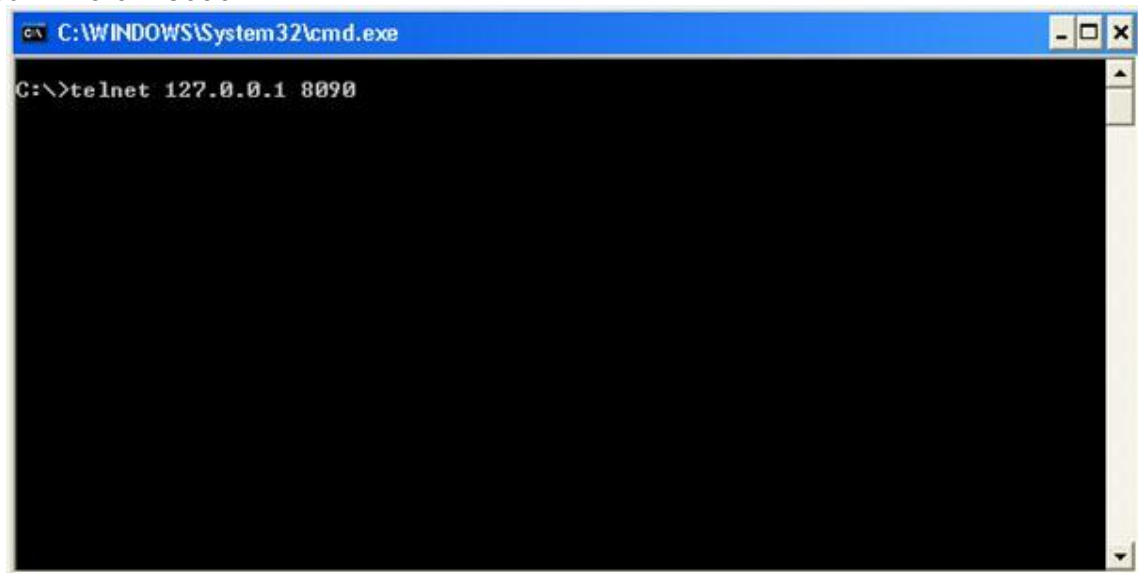
```

```

currSocket.Send(dataBuffer, dataLength, 0)
End Sub
Sub threadJump()
    Dim recData As String
    Dim recBytes As Integer
    While (currSocket.Connected)
        recBytes = GetData(Read, currSocket, recData)
        If recBytes = 0 Then Return
        Application.DoEvents()
        DataArrival(recData)
    End While
    Return
End Sub
Private Sub DataArrival(ByVal strData As String)
    TextBox1.Text = TextBox1.Text & strData
End Sub
Private Sub ConnectionRequest()
    While (Listening = True)
        currSocket = sckListener.AcceptSocket()
        procThread = New Thread(New ThreadStart(AddressOf threadJump))
        procThread.Start()
        Application.DoEvents()
    End While
End Sub
Friend WithEvents TextBox1 As System.Windows.Forms.TextBox
End Class

```

الآن نشغل البرنامج عن طريق Start Server ونشغل telnet client من موجه الأوامر بالعبرة :
telnet 127.0.0.1 8090



الرقم 127.0.0.1 يمثل loopback Address لجهازنا والرقم 8090 يمثل رقم المنفذ الذي سيستقبل الأوامر الواردة من البرنامج . الآن كل حرف يكتب في موجه الأوامر يظهر على ال textbox .
هنا ينهي هذا المثال لمزيد من الإستفسارات يمكن مراسلة كاتب المقال على العنوان -omerduzyol@infinity-
soft.com (ليس بالعربية طبعاً)