Escuela Técnica Superior de Ingeniería del Diseño

Estación meteorológica local mediante microcontrolador y PC

ANEXO

Código de Visual Basic

Realizado por: Juan Domingo Jiménez Jerez

Dirigido por: Eduardo García Breijo

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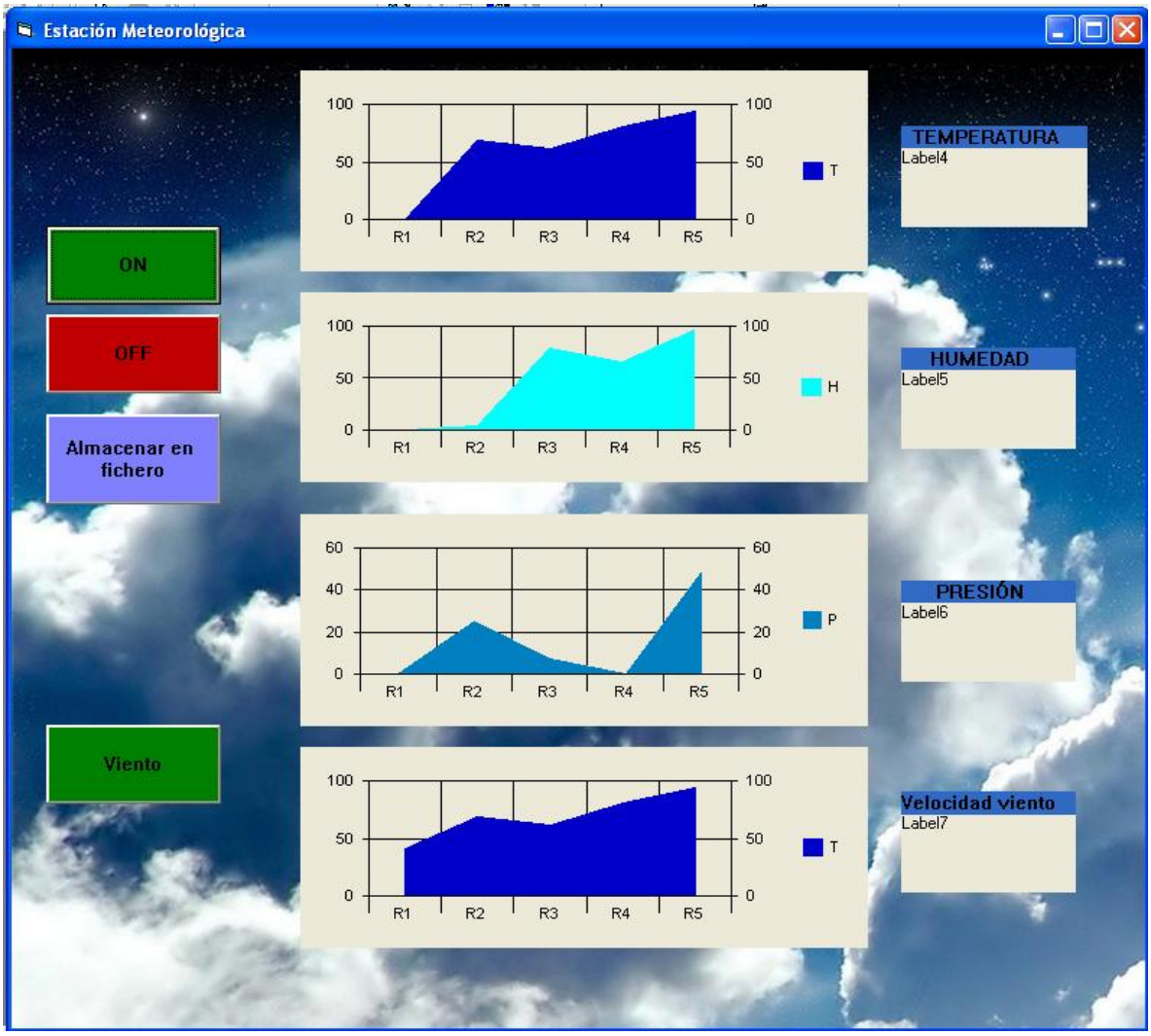


```
Option Explicit
Const STX = &H30
Const STX2 = &H31
Const STX3 = &H32
Dim c0 As Single
Dim p As Single
Dim pbar As Single
Dim H As Single
Dim T1 As Single
Dim T2 As Single
Dim T As Single
Dim V As Single
Dim a As Single
Dim b As Single
Dim c As Single
Dim i As Single
```

```
Dim Flag As Single



Private Sub Command1_Click()
Flag = 0
   MSComm1.Output = Chr(STX)
   Timer1.Enabled = True
   Timer2.Enabled = False

End Sub

Private Sub Command2_Click()
Timer1.Enabled = False
Timer2.Enabled = False
End Sub

Private Sub Command3_Click()
Timer1.Enabled = False
MSComm1.Output = Chr(STX2)
Flag = 1
'Timer2.Enabled = True
End Sub

Private Sub Command4_Click()
Flag = 2
Timer1.Enabled = False
Timer2.Enabled = True
MSComm1.Output = Chr(STX3)
End Sub

Private Sub Form_Load()
Timer1.Enabled = False
Timer1.Interval = 1000

Timer2.Enabled = False
Timer2.Interval = 1000

   b = 0
   a = 1
   i = 0
   c = 0
   Form1.MSChart1.Data = 0
   Form1.MSChart2.Data = 0
   Form1.MSChart3.Data = 0
MSComm1.CommPort = 1
MSComm1.Settings = "9600,N,8,1"
MSComm1.PortOpen = True
MSComm1.RThreshold = 1
MSComm1.InputLen = 0
```

```
MSComm1.InputMode = comInputModeBinary



End Sub

Private Sub MSComm1_OnComm()

Dim datain As Variant
Dim dato_array() As Byte

    If MSComm1.CommEvent = comEvReceive Then


        datain = MSComm1.Input
        dato_array = datain

        i = 0


          If Flag = 1 Or Flag = 0 Then          '************ON O ALMACENAR EN FICHERO********

             'temperatura ******************
             i = 0
c0 = dato_array(i)
c0 = c0 * 256
i = i + 1
c0 = c0 + dato_array(i)
c0 = c0 * 0.0048828125
i = i + 1
T1 = dato_array(i)
T1 = T1 * 256
i = i + 1
T1 = T1 + dato_array(i)
T1 = T1 * 0.0048828125
T = c0 - T1
T = T / 0.01


            '
                '***************HUMEDAD*************
             i = i + 1
             c0 = dato_array(i)
              c0 = c0 * 256


              i = i + 1
             c0 = c0 + dato_array(i)
             c0 = 5 * c0 / 1024

             H = (c0 - 1.0812) / 0.0194
```

```
                '*********************PRESIÓN**********
        i = i + 1
c0 = dato_array(i)
c0 = c0 * 256
        i = i + 1
c0 = c0 + dato_array(i)
c0 = c0 * 0.0048828125
p = (((c0 - 0.0675) / 5) + 0.095) / 0.009
pbar = p * 10


            'GRAFICAS

             a = c + 1              'se usa c para no confundir 'a' con la gráfica de la velocidad
            With MSChart1
               .RowCount = a
               .Row = a
               .Data = T
            End With

            With MSChart2
               .RowCount = a
               .Row = a
               .Data = H
            End With

            With MSChart3
               .RowCount = a
               .Row = a
               .Data = pbar
            End With
                c = a

        'TEXTO

        Label4.Caption = T
        Label5.Caption = H
        Label6.Caption = pbar

        End If


         If Flag = 1 Then     '****ALMACENAR EN FICHERO**********

            Open "datos.txt" For Append As 1
             Write #1, T, H, pbar
            Close #1
```

```
        End If


    If Flag = 2 Then     '**********VELOCIDAD DEL VIENTO**********

        i = 0
        c0 = dato_array(i)
        c0 = c0 * 256

        i = i + 1
        c0 = c0 + dato_array(i)
        c0 = c0 * 0.0048828125

        c0 = (c0 * 0.22)

          V = c0

        Label7.Caption = V
              a = b + 1
        With MSChart4
              .RowCount = a
              .Row = a
              .Data = V
           End With

              b = a
        End If

        End If


End Sub



Private Sub Timer1_Timer()

MSComm1.Output = Chr(STX)

End Sub

Private Sub Timer2_Timer()
MSComm1.Output = Chr(STX3)
End Sub
```