**Arduino e visual basic**

**Codice VB per far accendere o spegne due led**

Imports System.IO

Imports System.IO.Ports

Imports System.Threading

Public Class Form1

 Shared \_continue As Boolean

 Shared \_serialPort As SerialPort

 Private Sub Form1\_Load(sender As Object, e As EventArgs) Handles MyBase.Load

 SerialPort1.Close()

Attenzione alla scelta della porta com. Inserire prima la seriale per vedere su quale porta il pc sta comunicando. Dopo ciò si può correggere il codice in vb mettendo la porta opportuna

 SerialPort1.PortName = "com7"

 SerialPort1.BaudRate = 9600

 SerialPort1.DataBits = 8

 SerialPort1.Parity = Parity.None

 SerialPort1.StopBits = StopBits.One

 SerialPort1.Handshake = Handshake.None

 SerialPort1.Encoding = System.Text.Encoding.Default

 End Sub

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 SerialPort1.Open()

 SerialPort1.Write("0")

 SerialPort1.Close()

 End Sub

 Private Sub Button2\_Click(sender As Object, e As EventArgs) Handles Button2.Click

 SerialPort1.Open()

 SerialPort1.Write("1")

 SerialPort1.Close()

 End Sub

 Private Sub Button3\_Click(sender As Object, e As EventArgs) Handles Button3.Click

 SerialPort1.Open()

 SerialPort1.Write("2")

 SerialPort1.Close()

 End Sub

 Private Sub Button4\_Click(sender As Object, e As EventArgs) Handles Button4.Click

 SerialPort1.Open()

 SerialPort1.Write("3")

 SerialPort1.Close()

 End Sub

 Private Sub Button5\_Click(sender As Object, e As EventArgs) Handles Button5.Click

 SerialPort1.Open()

 SerialPort1.Write("4")

 SerialPort1.Close()

 End Sub

End Class



Attenzione ad inserire SerialPort1

**Codice Arduino**

void setup()

{

 pinMode(4,OUTPUT);

pinMode(5,OUTPUT);

 Serial.begin(9600);

}

void loop()

{

 int comando;

 if (Serial.available()){

 delay(100);

 while(Serial.available()>0){

 comando=Serial.read();

 if(comando=='0')

 digitalWrite(4,LOW);

 if(comando=='1')

 digitalWrite(4,HIGH);

 if(comando=='2')

 digitalWrite(5,LOW);

 if(comando=='3')

 digitalWrite(5,HIGH);

 if (comando=='4'){digitalWrite(4,LOW);

 digitalWrite(5,LOW);

}

 }

 }

 }

Imports Microsoft.Office.Interop.Excel

Public Class Form1

 Dim ora(24) As String

 Dim temperatura(24) As Decimal

 Private Sub Form1\_Load(sender As Object, e As EventArgs) Handles Me.Load

 SerialPort1.Close()

 SerialPort1.PortName = "COM3"

 SerialPort1.Open()

 DataGridView1.ColumnCount = 1

 DataGridView2.ColumnCount = 1

 End Sub

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 SerialPort1.WriteLine("A")

 Dim i As Integer

 i = 0

 Do While i <= 23

 ora(i) = i + 1

 DataGridView1.Rows.Add(ora(i))

 i = i + 1

 Loop

 Dim j As Integer

 j = 0

 Do While j <= 23

 temperatura(j) = SerialPort1.ReadLine

 DataGridView2.Rows.Add(temperatura(j))

 j = j + 1

 Loop

 Button2.Visible = True

 End Sub

 Private Sub Button2\_Click(sender As Object, e As EventArgs) Handles Button2.Click

 Dim programma As Application

 Dim cartella As Workbook

 Dim foglio As Worksheet

 Dim percorso As String

 percorso = ("E:\VisualBasic\ArduinoExcel\Cartel3.xlsm")

 programma = CreateObject("excel.application")

 cartella = programma.Workbooks.Open(percorso)

 programma.Visible = True

 foglio = cartella.ActiveSheet

 Dim rig As Integer

 rig = 0

 Do While rig <= 23

 foglio.Cells(1, 1) = "Ora"

 foglio.Cells(1, 2) = "Temperatura"

 foglio.Cells(rig + 2, 1) = ora(rig)

 foglio.Cells(rig + 2, 2) = temperatura(rig)

 rig = rig + 1

 Loop

 End Sub

End Class

**III Progetto**



Imports System

Imports System.IO.Ports

Imports System.Threading

Public Class Form1

 'DECLARE A COMM PORT

 Dim WithEvents ADRport As SerialPort = New \_

System.IO.Ports.SerialPort("COM19")

 ' , \_9600, \_Parity.None, \_8, \_StopBits.One)

 Private Sub Form1\_FormClosed(ByVal sender As Object, ByVal e As System.Windows.Forms.FormClosedEventArgs) Handles Me.FormClosed

 'CHECK IF PORT IS OPEN AND THEN CLOSE COMM PORT

 If ADRport.IsOpen Then

 ADRport.Close()

 End If

 End Sub

 Private Sub Form1\_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load

 'CREATE 20 COM PORTS TO BE SELECTIONS IN PULL DOWN MENU

 Dim PortCount As Integer

 For PortCount = 1 To 20

 ComboBox1.Items.Add("COM" & PortCount)

 Next

 'SET COMBO BOX TO COM 1 (DEFAULT)

 ComboBox1.SelectedIndex = 0

 End Sub

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 Try

 'SEND "RDO" + CR OUT ON RS232 Port

 ADRport.Write("RD0" + Chr(13))

 'WAIT 20MS FOR COMMAND TO BE SENT

 Thread.Sleep(20)

 'SET READ TIMOUT FOR RS232 READ TO 100MS

 ADRport.ReadTimeout = 100

 'READ DATA FROM RS232 INPUT BUFFER UP TO THE NEXT CR ( CHR(13))

 TextBox1.Text = (ADRport.ReadTo(Chr(13)))

 Catch ex As TimeoutException

 'IF THERE IS A TIMEOUT, PRINT" No Data " IN TEXTBOX1.TEXT

 TextBox1.Text = "NoData"

 'THE NEXT LINE ENABLES A SPLASH SCREEN WITH AN ERROR MESSAGE ( DELETE IF NOT DESIRED)

 MsgBox(ex.Message)

 End Try

 End Sub

 Private Sub Button2\_Click(sender As Object, e As EventArgs) Handles Button2.Click

 'SEND "SETPA0" COMMAND TO ADR112 TO SET PORT A, bit 0

 ADRport.Write("SETPA0" + Chr(13))

 End Sub

 Private Sub Button3\_Click(sender As Object, e As EventArgs) Handles Button3.Click

 'SEND "RESPA0" COMMAND TO ADR112 TO RESET PORT A, bit 0

 ADRport.Write("RESPA0" + Chr(13))

 End Sub

 Public Sub New()

 ' This call is required by the designer.

 InitializeComponent()

 ' Add any initialization after the InitializeComponent() call.

 End Sub

 Private Sub Label1\_Click(sender As Object, e As EventArgs) Handles Label1.Click

 End Sub

 Private Sub Button4\_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button4.Click

 'CHECK IF PORT IS CLOSED AND THEN OPEN COM PORT FROM COMOBOX PORT NAMES

 ADRport.PortName = ComboBox1.SelectedItem

 If Not ADRport.IsOpen Then

 ADRport.Open()

 End If

 'THIS SET IS REQUIRED BY THE ADR112 TO CONFIGURE PORTA BIT 0 AS AN OUTPUT BIT. YOUR DEVICE MAY NOT REQUIRE THIS STEP

 If ADRport.IsOpen Then

 ADRport.Write("CPA11111110" + Chr(13))

 End If

 End Sub

End Class

**IV progetto**



Public Class Form1

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 SerialPort1.PortName = TextBox1.Text

 SerialPort1.Open()

 End Sub

 Private Sub Button2\_Click(sender As Object, e As EventArgs) Handles Button2.Click

 If SerialPort1.IsOpen = True Then

 SerialPort1.Close()

 End If

 End Sub

 Private Sub Button3\_Click(sender As Object, e As EventArgs) Handles Button3.Click

 If TextBox2.Text.Length = 0 Then ' Error if there is no send data

 MessageBox.Show("String input error")

 ', MessageBoxButtons.OK, MessageBoxIcon.Error)

 Exit Sub ' Break out of processing

 End If

 Try

 SerialPort1.WriteLine(TextBox2.Text) ' Write data to the send buffer

 Catch ex As Exception ' Exception handling

 MessageBox.Show(ex.Message, "Error", MessageBoxButtons.OK, MessageBoxIcon.Error)

 End Try

 End Sub

 Private Sub Form1\_Load(sender As Object, e As EventArgs) Handles MyBase.Load

 End Sub

 'Declare a delegate

 Delegate Sub DataDelegate(ByVal sdata As String)

 'Define the method (function) that will be called by the Invoke method

 Private Sub PrintData(ByVal sdata As String)

 TextBox3.Text = sdata

 End Sub

 Private Sub SerialPort1\_DataReceived() ' : Code the processing when the data received event occurs

 Dim ReceivedData As String = " " ' Declare variable for received data

 Try

 ReceivedData = SerialPort1.ReadLine ' Receive the data

 Catch ex As Exception

 ReceivedData = ex.Message ' Exception handling

 End Try

 ' Declare delegate to method to execute by Invoke method and display received data

 Dim adre As New DataDelegate(AddressOf PrintData)

 Me.Invoke(adre, ReceivedData)

 End Sub

End Class