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'Steinsortierung mit Kran aus Baukasten 8094
'Version 2.0
'Datum: 01.11.2008
'Änderungsdatum: 04.01.2009
'www.freggelweb.de
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Public Class Form1
    'Befehle für das Interface K8055 deklarieren
    Private Declare Function OpenDevice Lib "k8055d.dll" (ByVal CardAddress As
Long) As Long
    Private Declare Sub CloseDevice Lib "k8055d.dll" ()
    Private Declare Function ReadAnalogChannel Lib "k8055d.dll" (ByVal Channel
As Long) As Long
    Private Declare Sub ReadAllAnalog Lib "k8055d.dll" (ByVal Data1 As Long,
ByVal Data2 As Long)
    Private Declare Sub OutputAnalogChannel Lib "k8055d.dll" (ByVal Channel As
Long, ByVal Data As Long)
    Private Declare Sub OutputAllAnalog Lib "k8055d.dll" (ByVal Data1 As Long,
ByVal Data2 As Long)
    Private Declare Sub ClearAnalogChannel Lib "k8055d.dll" (ByVal Channel As
Long)
    Private Declare Sub SetAllAnalog Lib "k8055d.dll" ()
    Private Declare Sub ClearAllAnalog Lib "k8055d.dll" ()
    Private Declare Sub SetAnalogChannel Lib "k8055d.dll" (ByVal Channel As
Long)
    Private Declare Sub WriteAllDigital Lib "k8055d.dll" (ByVal Data As Long)
    Private Declare Sub ClearDigitalChannel Lib "k8055d.dll" (ByVal Channel As
Long)
    Private Declare Sub ClearAllDigital Lib "k8055d.dll" ()
    Private Declare Sub SetDigitalChannel Lib "k8055d.dll" (ByVal Channel As
Long)
    Private Declare Sub SetAllDigital Lib "k8055d.dll" ()
    Private Declare Function ReadDigitalChannel Lib "k8055d.dll" (ByVal
Channel As Long) As Boolean
    Private Declare Function ReadAllDigital Lib "k8055d.dll" () As Long
    Private Declare Function ReadCounter Lib "k8055d.dll" (ByVal CounterNr As
Long) As Long
    Private Declare Sub ResetCounter Lib "k8055d.dll" (ByVal CounterNr As
Long)
    Private Declare Sub SetCounterDebounceTime Lib "k8055d.dll" (ByVal
CounterNr As Long, ByVal DebounceTime As Long)
    Private Sub cmdStart_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles cmdStart.Click
        'Karte 1
        Dim Eingang1_1 As Integer 'Taster Ausrichtung Start (Drehung)
        Dim Eingang2_1 As Integer 'Taster Ausrichtung Start (hoch/ runter)
        Dim Eingang3_1 As Integer 'Lichtschranke
        Dim Eingang4_1 As Integer 'Optischer Sensor (Kran hoch)
        Dim Eingang5_1 As Integer '"Farberkennung"
        'Karte 2
        Dim Eingang1_2 As Integer 'Taster T.B. Mitte bei "Farberkennung"
        Dim Eingang2_2 As Integer 'Taster T.B. Mitte Mitte
        Dim Eingang3_2 As Integer 'Taster T.B. Mitte bei Signallampe

        Dim t1 As Integer = 0 'Zeit
        Dim i5 As Integer = 0 '"Farberkennung"

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'**** Erste Stein sortieren ANFANG ****

OpenDevice(2) '### Karte 2 ###

'--- Steintransport ANFANG ---
SetDigitalChannel(8) 'Signallampe Förderband an

Eingang1_2 = ReadDigitalChannel(1) 'vor
Do While Eingang1_2 = 0
    SetDigitalChannel(1)
    Eingang1_2 = ReadDigitalChannel(1)
Loop
ClearDigitalChannel(1)
For t1 = 0 To 200 'zurück
    SetDigitalChannel(2)
Next
t1 = 0
ClearDigitalChannel(2)
'--- Steintransport ENDE ---
ClearDigitalChannel(8) 'Signallampe Förderband aus

CloseDevice()
OpenDevice(1) '### Karte 1 ###

SetDigitalChannel(5) 'Signallampe Kran an
'--- "Farberkennung" ANFANG ---'
Eingang5_1 = ReadDigitalChannel(5)
If Eingang5_1 <> 0 Then
    i5 = 2 'schwarz
Else
    i5 = 1 'gelb
End If
'--- "Farberkennung" ENDE ---'

'--- Ausrichtung Kran ANFANG ---
'rechts
For y = 1 To 350
    SetDigitalChannel(2)
Next
ClearDigitalChannel(2)

'runter
For y = 1 To 200
    SetDigitalChannel(4)
Next
ClearDigitalChannel(4)

'Drehrichtung
Eingang1_1 = ReadDigitalChannel(1)
If Eingang1_1 = 0 Then
    Do While Eingang1_1 = 0
        SetDigitalChannel(2)
        Eingang1_1 = ReadDigitalChannel(1)
    Loop
    ClearDigitalChannel(2)
End If

'y Richtung

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Eingang2_1 = ReadDigitalChannel(2)
If Eingang2_1 = 0 Then
    Do While Eingang2_1 = 0
        SetDigitalChannel(3)
        Eingang2_1 = ReadDigitalChannel(2)
    Loop
    ClearDigitalChannel(3)
End If

'Dreht zu den Steinen
Eingang3_1 = ReadDigitalChannel(3)
Do While Eingang3_1 <> 0
    SetDigitalChannel(1)
    Eingang3_1 = ReadDigitalChannel(3)
Loop
ClearDigitalChannel(1)
'--- Ausrichtung Kran ENDE ---

'--- Greift einen Stein ANFANG ---
For t1 = 0 To 750
    SetDigitalChannel(4)
Next
t1 = 0
ClearDigitalChannel(4)

For t1 = 0 To 750
    SetDigitalChannel(3)
Next
t1 = 0
ClearDigitalChannel(3)
'--- Greift einen Stein ENDE ---

'--- Dreht zur jeweiligem Transportband ANFANG ---
If i5 = 2 Then 'schwarz
    For t1 = 0 To 410
        SetDigitalChannel(1)
    Next
ElseIf i5 = 1 Then 'gelb
    For t1 = 0 To 430
        SetDigitalChannel(2)
    Next
End If
t1 = 0
ClearDigitalChannel(1)
ClearDigitalChannel(2)
'--- Dreht zur jeweiligem Transportband ENDE ---

'--- Stein auf Transportband ANFANG ---
For t1 = 0 To 750 'runter
    SetDigitalChannel(4)
Next
t1 = 0
ClearDigitalChannel(4)

For t1 = 0 To 750 'hoch
    SetDigitalChannel(3)
Next
t1 = 0

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ClearDigitalChannel(3)
'--- Stein auf Transportband ENDE ---
ClearDigitalChannel(5) 'Signallampe Kran aus

CloseDevice()
OpenDevice(2) '### Karte 2 ###

SetDigitalChannel(8) 'Signallampe Förderband an
'--- Transportbänder AN ---
For t1 = 0 To 1450
    SetDigitalChannel(6)
Next
ClearDigitalChannel(6)
For t1 = 0 To 150
    SetDigitalChannel(4)
Next
ClearDigitalChannel(4)
'--- Transportbänder AUS ---
ClearDigitalChannel(8) 'Signallampe Förderband aus

CloseDevice()
OpenDevice(1) '### Karte 1 ###

SetDigitalChannel(5) 'Signallampe Kran an
'--- Fahrt zu Steinen ANFANG ---
If i5 = 1 Then 'gelb
    Eingang3_1 = ReadDigitalChannel(3)
    Do While Eingang3_1 <> 0
        SetDigitalChannel(1)
        Eingang3_1 = ReadDigitalChannel(3)
    Loop
    ClearDigitalChannel(1)
    For t1 = 0 To 40
        SetDigitalChannel(1)
    Next
    t1 = 0
    ClearDigitalChannel(1)
ElseIf i5 = 2 Then 'schwarz
    Eingang3_1 = ReadDigitalChannel(3)
    Do While Eingang3_1 <> 0
        SetDigitalChannel(2)
        Eingang3_1 = ReadDigitalChannel(3)
    Loop
    ClearDigitalChannel(2)
    For t1 = 0 To 50
        SetDigitalChannel(1)
    Next
    t1 = 0
    ClearDigitalChannel(1)
End If
'--- Fahrt zu Steinen ENDE ---
'**** Erste Stein sortieren ENDE ****
ClearDigitalChannel(5) 'Signallampe Kran aus

CloseDevice()
OpenDevice(2) '### Karte 2 ###

'*** Weitere Steine sortieren ANFANG ***

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Eingang2_2 = ReadDigitalChannel(2)
Do While Eingang2_2 = 0
    '--- Steintransport ANFANG ---
    SetDigitalChannel(8) 'Signallampe Förderband an

    Eingang1_2 = ReadDigitalChannel(1) 'vor
    Do While Eingang1_2 = 0 And Eingang2_2 = 0
        SetDigitalChannel(1)
        Eingang1_2 = ReadDigitalChannel(1)
        Eingang2_2 = ReadDigitalChannel(2)
    Loop
    ClearDigitalChannel(1)

    If Eingang2_2 = 0 Then
        For t1 = 0 To 200 'zurück
            SetDigitalChannel(2)
        Next
        t1 = 0
        ClearDigitalChannel(2)
        '--- Steintransport ENDE ---
        ClearDigitalChannel(8) 'Signallampe Förderband aus

        CloseDevice()
        OpenDevice(1) '### Karte 1 ###

        SetDigitalChannel(5) 'Signallampe Kran an
        '--- "Farberkennung" ANFANG ---'
        Eingang5_1 = ReadDigitalChannel(5)
        If Eingang5_1 <> 0 Then
            i5 = 2 'schwarz
        Else
            i5 = 1 'gelb
        End If
        '--- "Farberkennung" ENDE ---'

        '--- Greift einen Stein ANFANG ---
        For t1 = 0 To 770
            SetDigitalChannel(4)
        Next
        t1 = 0
        ClearDigitalChannel(4)

        For t1 = 0 To 770
            SetDigitalChannel(3)
        Next
        t1 = 0
        ClearDigitalChannel(3)
        '--- Greift einen Stein ENDE ---

        '--- Dreht zur jeweiligem Transportband ANFANG ---
        If i5 = 2 Then 'schwarz
            For t1 = 0 To 430
                SetDigitalChannel(1)
            Next
        ElseIf i5 = 1 Then 'gelb
            For t1 = 0 To 420
                SetDigitalChannel(2)
            Next

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End If
t1 = 0
ClearDigitalChannel(1)
ClearDigitalChannel(2)
'--- Dreht zur jeweiligem Transportband ENDE ---

'--- Stein auf Transportband ANFANG ---
For t1 = 0 To 750 'runter
    SetDigitalChannel(4)
Next
t1 = 0
ClearDigitalChannel(4)

For t1 = 0 To 750 'hoch
    SetDigitalChannel(3)
Next
t1 = 0
ClearDigitalChannel(3)
'--- Stein auf Transportband ENDE ---
ClearDigitalChannel(5) 'Signallampe Kran aus

CloseDevice()
OpenDevice(2) '### Karte 2 ###

SetDigitalChannel(8) 'Signallampe Förderband an
'--- Transportbänder AN ---
For t1 = 0 To 1450
    SetDigitalChannel(6)
Next
ClearDigitalChannel(6)
For t1 = 0 To 150
    SetDigitalChannel(4)
Next
ClearDigitalChannel(4)
'--- Transportbänder AUS ---
ClearDigitalChannel(8) 'Signallampe Förderband aus

CloseDevice()
OpenDevice(1) '### Karte 1 ###

SetDigitalChannel(5) 'Signallampe Kran an
'--- Fährt zu Steinen ANFANG ---
If i5 = 1 Then 'gelb
    Eingang3_1 = ReadDigitalChannel(3)
    Do While Eingang3_1 <> 0
        SetDigitalChannel(1)
        Eingang3_1 = ReadDigitalChannel(3)
    Loop
    ClearDigitalChannel(1)
    For t1 = 0 To 40
        SetDigitalChannel(1)
    Next
    t1 = 0
    ClearDigitalChannel(1)
ElseIf i5 = 2 Then 'schwarz
    Eingang3_1 = ReadDigitalChannel(3)
    Do While Eingang3_1 <> 0
        SetDigitalChannel(2)

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        Eingang3_1 = ReadDigitalChannel(3)
    Loop
    ClearDigitalChannel(2)
    For t1 = 0 To 50
        SetDigitalChannel(1)
    Next
    t1 = 0
    ClearDigitalChannel(1)
End If
'--- Fährt zu Steinen ENDE ---

'--- Kran in Höhe ausrichten ANFANG ---
Eingang4_1 = ReadDigitalChannel(4)
Do While Eingang4_1 = 0
    SetDigitalChannel(3)
    Eingang4_1 = ReadDigitalChannel(4)
Loop
ClearDigitalChannel(3)
'--- Kran in Höhe ausrichten ENDE ---
ClearDigitalChannel(5) 'Signallampe Kran aus

CloseDevice()
OpenDevice(2) '### Karte 2 ###

    Eingang2_2 = ReadDigitalChannel(2)
End If
Loop
For t1 = 0 To 200 'Transportband bisschen zurück
    SetDigitalChannel(2)
Next
t1 = 0
ClearDigitalChannel(2)
'*** Weitere Steine sortieren ENDE ***
ClearDigitalChannel(8) 'Signallampe Förderband aus

CloseDevice()
OpenDevice(1) '### Karte 1 ###

SetDigitalChannel(5) 'Signallampe Kran an
'*** Letzten Stein sortieren ANFANG ***

'--- "Farberkennung" ANFANG ---'
Eingang5_1 = ReadDigitalChannel(5)
If Eingang5_1 <> 0 Then
    i5 = 2 'schwarz
Else
    i5 = 1 'gelb
End If
'--- "Farberkennung" ENDE ---'

'--- Greift einen Stein ANFANG ---
For t1 = 0 To 770
    SetDigitalChannel(4)
Next
t1 = 0
ClearDigitalChannel(4)

For t1 = 0 To 770

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        SetDigitalChannel(3)
Next
t1 = 0
ClearDigitalChannel(3)
'--- Greift einen Stein ENDE ---

'--- Dreht zur jeweiligem Transportband ANFANG ---
If i5 = 2 Then 'schwarz
    For t1 = 0 To 440
        SetDigitalChannel(1)
    Next
ElseIf i5 = 1 Then 'gelb
    For t1 = 0 To 430
        SetDigitalChannel(2)
    Next
End If
t1 = 0
ClearDigitalChannel(1)
ClearDigitalChannel(2)
'--- Dreht zur jeweiligem Transportband ENDE ---

'--- Stein auf Transportband ANFANG ---
For t1 = 0 To 750 'runter
    SetDigitalChannel(4)
Next
t1 = 0
ClearDigitalChannel(4)

For t1 = 0 To 750 'hoch
    SetDigitalChannel(3)
Next
t1 = 0
ClearDigitalChannel(3)
'--- Stein auf Transportband ENDE ---
ClearDigitalChannel(5) 'Signallampe Kran aus

CloseDevice()
OpenDevice(2) '### Karte 2 ###

SetDigitalChannel(8) 'Signallampe Förderband an
'--- Transportbänder AN ---
For t1 = 0 To 1450
    SetDigitalChannel(6)
Next
ClearDigitalChannel(6)
For t1 = 0 To 150
    SetDigitalChannel(4)
Next
ClearDigitalChannel(4)
'--- Transportbänder AUS ---
ClearDigitalChannel(8) 'Signallampe Förderband aus

CloseDevice()
OpenDevice(1) '### Karte 1 ###

SetDigitalChannel(5) 'Signallampe Kran an
'--- Fährt zu Steinen ANFANG ---
If i5 = 1 Then 'gelb

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    Eingang3_1 = ReadDigitalChannel(3)
    Do While Eingang3_1 <> 0
        SetDigitalChannel(1)
        Eingang3_1 = ReadDigitalChannel(3)
    Loop
    ClearDigitalChannel(1)
    For t1 = 0 To 40
        SetDigitalChannel(1)
    Next
    t1 = 0
    ClearDigitalChannel(1)
ElseIf i5 = 2 Then 'schwarz
    Eingang3_1 = ReadDigitalChannel(3)
    Do While Eingang3_1 <> 0
        SetDigitalChannel(2)
        Eingang3_1 = ReadDigitalChannel(3)
    Loop
    ClearDigitalChannel(2)
    For t1 = 0 To 50
        SetDigitalChannel(1)
    Next
    t1 = 0
    ClearDigitalChannel(1)
End If
'--- Fährt zu Steinen ENDE ---
'*** Letzten Stein sortieren ENDE ***
ClearDigitalChannel(5) 'Signallampe Kran aus

CloseDevice()
OpenDevice(2) '### Karte 2 ###

SetDigitalChannel(8) 'Signallampe Förderband an
'--- Steintransport zurück ANFANG ---
Eingang3_2 = ReadDigitalChannel(3)
Do While Eingang3_2 = 0
    SetDigitalChannel(2)
    Eingang3_2 = ReadDigitalChannel(3)
Loop
ClearDigitalChannel(2)
'--- Steintransport zurück ENDE ---
ClearDigitalChannel(8) 'Signallampe Förderband aus

CloseDevice()
End Sub
End Class

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