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1 ' Programme de fonctionnement d'une horloge ARDUINO
2 ' avec un écran LCD de 4 lignes de 20 caractères
3 #Region Project Attributes
4     #AutoFlushLogs: True
5     #CheckArrayBounds: True
6     #StackBufferSize: 300
7 #End Region
8
9 Sub Process_Globals
10     Public Serial1 As Serial
11     Private h=0 As UInt ' heure, minute et seconde fixées à 0 par défaut
12     Private m=0 As UInt
13     Private s=0 As UInt
14     Private PinBtnChoix As Pin
15     Private PinBtnEnter As Pin
16     Private LCD As LiquidCrystal_I2C
17     Private h=0 As UInt
18     Private m=0 As UInt
19     Private s=0 As UInt
20     Private i=0 As UInt
21     Private j=0 As UInt
22     Private mois=0 As UInt
23     Private Mode=1 As UInt
24     Private AN="2021" As String
25 End Sub
26
27
28
29 Private Sub AppStart
30     Serial1.Initialize(115200)
31     Log("AppStart")
32     LCD.Initialize(0x27, 20, 4) ' Initialisation de l'écran LCD avec 4 lignes de 20
caractères
33     PinBtnChoix.Initialize(PinBtnChoix.A0, PinBtnChoix.MODE_INPUT_PULLUP)
34     PinBtnChoix.AddListener("PinBtnChoix_StateChanged")
35     PinBtnEnter.Initialize(PinBtnEnter.A1, PinBtnEnter.MODE_INPUT_PULLUP)
36     PinBtnEnter.AddListener("pinBtnEnter_StateChanged")
37     LCD.Backlight = True
38     LCD.Clear
39     LCD.SetCursor(0,0)
40     LCD.Write("Choisissez le jour")
41     LCD.SetCursor(0,2)
42     LCD.Write("Utilisez le bouton")
43     LCD.SetCursor(0,3)
44     LCD.Write("droit pour choisir")
45 End Sub
46
47
48
49 Private Sub pinBtnChoix_StateChanged(State1 As Boolean) 'Réglage des heures
50     Log("État: ", State1) 'Log la valeur de State1
51     If State1 = False Then
52         Select Mode
53             Case 1
54                 LCD.SetCursor(0,2)
55                 LCD.Write("Et le bouton gauche")
56                 LCD.SetCursor(0,3)
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57         LCD.Write("pour valider ")
58         LCD.SetCursor(0,1)
59         LCD.Write("Jour: LUNDI")
60         i=i+1
61         LCD.SetCursor(0,1)
62         If i=1 Then LCD.Write("LUNDI ")
63         If i=2 Then LCD.Write("MARDI ")
64         If i=3 Then LCD.Write("MERCUR ")
65         If i=4 Then LCD.Write("JEUDI ")
66         If i=5 Then LCD.Write("VENDR ")
67         If i=6 Then LCD.Write("SAMEDI ")
68         If i=7 Then LCD.Write("DIMANCHE ")
69         If i=8 Then i=0
70     Case 2
71         LCD.SetCursor(6,1)
72         j=j+1
73         If j=32 Then j=1
74         LCD.Write(NumberFormat(j,2,0))
75     Case 3
76         LCD.SetCursor(9,1)
77         mois=mois+1
78         If mois=1 Then LCD.Write("JANVIER")
79         If mois=2 Then LCD.Write("FEBVRIER")
80         If mois=3 Then LCD.Write("MARS ")
81         If mois=4 Then LCD.Write("AVRIL ")
82         If mois=5 Then LCD.Write("MAI ")
83         If mois=6 Then LCD.Write("JUIN ")
84         If mois=7 Then LCD.Write("JUILLET")
85         If mois=8 Then LCD.Write("AOÛT ")
86         If mois=9 Then LCD.Write("SEPTEMBRE")
87         If mois=10 Then LCD.Write("OCTOBRE")
88         If mois=11 Then LCD.Write("NOVEMBRE")
89         If mois=12 Then LCD.Write("DECEMBRE")
90         If mois=13 Then mois=0
91         LCD.SetCursor(16,1)
92         LCD.Write(AN)
93     Case 4
94         LCD.SetCursor(0,3)
95         LCD.Write(" ")
96         LCD.SetCursor(8,3)
97         LCD.Write(NumberFormat(h,2,0))
98         h=h+1
99         If h=25 Then
100             h=0
101             LCD.SetCursor(8,3)
102             LCD.Write(NumberFormat(h,2,0))
103         End If
104     Case 5
105         LCD.SetCursor(8,3)
106         LCD.Write(NumberFormat(h,2,0))
107         LCD.Write(":")
108         LCD.Write(NumberFormat(m,2,0))
109         m=m+1
110         If m=60 Then
111             m=0
112             LCD.SetCursor(8,2)
113             LCD.Write(NumberFormat(h,2,0))
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```
114         LCD.Write(":")
115         LCD.Write(NumberFormat(m, 2, 0))
116     End If
117 End Select
118
119 End If
120 End Sub
121
122 Private Sub pinBtnEnter_StateChanged(State2 As Boolean) 'Validation des choix
123     Log("État: ", State2) 'Log la valeur de State2
124     If State2 = False Then
125         Mode=Mode+1
126         Select Mode
127             Case 2
128                 LCD.SetCursor(0,2)
129                 LCD.Write("                ")
130                 LCD.SetCursor(0,3)
131                 LCD.Write("                ")
132                 LCD.SetCursor(0,0)
133                 LCD.Write("Fixez la date    ")
134             Case 3
135                 LCD.SetCursor(0,0)
136                 LCD.Write("Fixez le mois   ")
137             Case 4
138                 LCD.SetCursor(0,2)
139                 LCD.Write("Fixez l'heure:  ")
140
141             Case 5
142                 LCD.SetCursor(0,2)
143                 LCD.Write("Fixez la minute: ")
144             Case 6
145                 LCD.SetCursor(0,0)
146                 LCD.Write(" Calendrier Arduino ")
147                 LCD.SetCursor(0,2)
148                 LCD.Write("* Horloge Arduino *")
149                 CallSubPlus("Affichage",0,0)
150         End Select
151     End If
152 End Sub
153
154 Private Sub Affichage
155     LCD.setCursor(0,3)
156     LCD.Write("                ")
157     LCD.SetCursor(6,3)
158     s = s + 1
159     If s = 60 Then
160         s = 0
161         m = m + 1
162     End If
163     If m = 60 Then
164         m = 0
165         h = h + 1
166     End If
167     If h = 24 Then h = 0
168     LCD.Write(NumberFormat(h, 2, 0))
169     LCD.Write(":")
170     LCD.Write(NumberFormat(m, 2, 0))
```

```
171     LCD.Write(":")
172     LCD.Write(NumberFormat(s, 2, 0))
173     Delay(1000)
174     CallSubPlus("Affichage",0,0)
175
176
177 End Sub
178
```