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1 # 展示品用プログラム
2 # 自身で用意したサーバかtwitterにデータ送信
3
4 # -----import設定-----
5 import mysql.connector #SQLサーバ接続用
6 import datetime
7 import grovepi #grove pi の出力定義
8 from time import sleep #時間定義 (1秒ずつ)
9 from twython import Twython #Twitterへの書き込み
10 from grove_rgb_lcd import * #grove pi lcd使用定義
11
12
13 # -----入出力設定-----
14 light_sensor1 = 2
15 light_sensor2 = 1
16 light_sensor3 = 0
17 button1 = 5
18 button2 = 6
19
20 grovepi.pinMode(light_sensor1,"INPUT")
21 grovepi.pinMode(light_sensor2,"INPUT")
22 grovepi.pinMode(light_sensor3,"INPUT")
23 grovepi.pinMode(button1,"INPUT")
24 grovepi.pinMode(button2,"INPUT")
25
26 # -----twitter設定-----
27 CONSUMER_KEY = 'your get key'
28 CONSUMER_SECRET = 'your get key'
29 ACCESS_KEY = 'your get key'
30 ACCESS_SECRET = 'your get key'
31 api = Twython(CONSUMER_KEY,CONSUMER_SECRET,ACCESS_KEY,ACCESS_SECRET)
32
33 # ----LCD初期表示-----
34 setText("LED Check\nStart")
35 setRGB(255,255,255)
36 sleep(3)
37
38 # -----状態取得-----
39 while True:
40     try:
41         sensor_value1 = grovepi.analogRead(light_sensor1)
42         sensor_value2 = grovepi.analogRead(light_sensor2)
43         sensor_value3 = grovepi.analogRead(light_sensor3)
44
45         if sensor_value1 < 700:
46             Green = "OFF"
47         else:
48             Green = "ON"
49             setText("Green")
50             setRGB(0,255,0)
51
52         if sensor_value2 < 700:
53             Yellow = "OFF"
54         else:
55             Yellow = "ON"
56             setText("Yellow")
57             setRGB(255,255,0)
58
59         if sensor_value3 < 700:
60             Red = "OFF"
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61         else:
62             Red = "ON"
63             setText("Red")
64             setRGB(255,0,0)
65
66         sleep(.5)
67
68         if Red == "OFF" and Green == "OFF" and Yellow == "OFF":
69             setText("STOP")
70             setRGB(255,255,255)
71
72         #twitter書き込み
73         button_status1 = grovepi.digitalRead(button1)
74         if button_status1:
75             dt_now = datetime.datetime.now().isoformat(' ', 'seconds')#ボタンが押され
76             した時間
77             out_str = dt_now + "      Green = " + Green + "      Yellow = " + Yellow + "
78             Red = " + Red
79             #print ("twitter: " + out_str)
80             api.update_status(status = out_str)
81             setText("Send to Twitter\nPlease wait...")
82             sleep(3)
83
84         #サーバ書き込み
85         button_status2 = grovepi.digitalRead(button2)
86         if button_status2:
87             dt_now = datetime.datetime.now().isoformat(' ', 'seconds')#ボタンが押され
88             した時間
89             setText("Send to Server\nPlease wait...")
90             db=mysql.connector.connect(host="192.168.200.15", user="userpython1",
91             password="password", database="lamp_status")
92             cursor=db.cursor()
93             add_user = ("insert into lamp_status "
94             "(time, Green, Yellow, Red) "
95             "values (%s, %s, %s, %s)")
96             data_user1 = (dt_now, Green, Yellow, Red)
97             cursor.execute(add_user, data_user1)# レコード追加
98             db.commit()# コミット
99             query = ("select * from lamp_status")# クエリ選択
100             cursor.execute(query) # レコード取得
101             #ターミナル表示
102             for (time, Green, Yellow, Red) in cursor:
103                 print("time:{}, Green:{}, Yellow:{},Red:{}".format(time, Green,
104                 Yellow, Red))
105             cursor.close() #データ破棄
106             db.close() #切断
107             sleep(3)
108
109         except IOError:
110             print ("Error")
111             setText("Error")

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