Lab 2

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Introduction to Python programming on the Raspberry Pi

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1 Activity 1

As the activity says, having the GrovePi folder on the Desktop means the installation was successful. We could see the evidence in figure 1
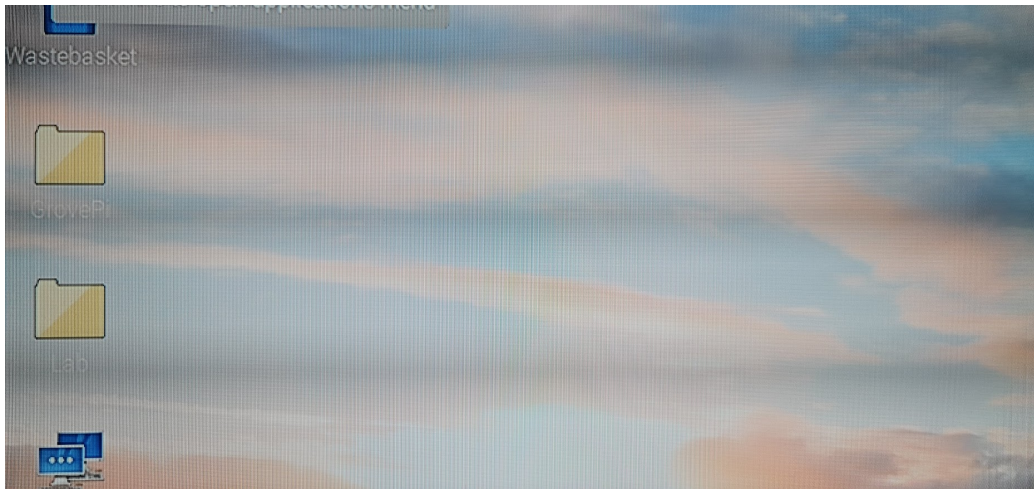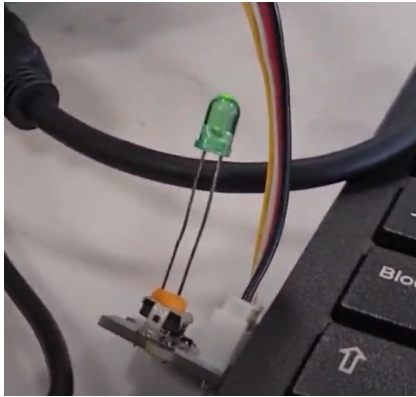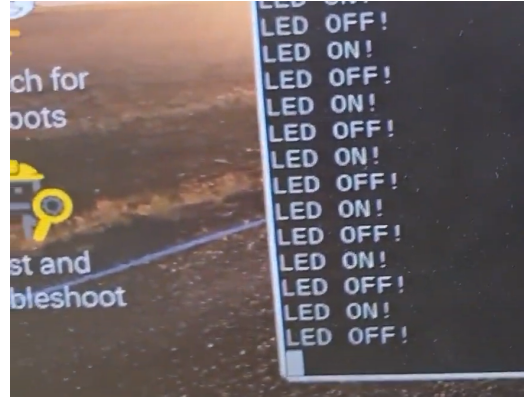

Figure 1: Installation successful and folder on Desktop

2 Activity 2

The evidence is shown on Figure 2. The led is turning on and off as the example program executes on the Raspberry Pi.

(a) Led blinking

(b) Console

Figure 2: Grove Led Blink Example

3 Activity 3

Pictures from the running code () are shown in Figure 3. A copy of the code is hosted on `https://github.com/javiermomc/Sistemas_Embebidos`

(a) No button pressed

(b) Button pressed

Figure 3: LCD Activity

```python
# Author: Javier Mondragon
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import time
import grovepi
from grovepi import *
import math
from grove_rgb_lcd import *

button = 4                      #Port for Button
sensor = 0
pinMode(button,"INPUT")

setText("Presiona□el\nboton")
setRGB(255,0,0)

while True:
        time.sleep(0.01)
        try:
                button_status= grovepi.digitalRead(button)          #Read
                if not button_status:    #If the Button is in HIGH posi
                        setText_norefresh("Presiona□el□□□□\nboton□□□□
                        setRGB(255,0,0)
                else:               #If Button is in Off position, print "
                        temp = grovepi.temp(sensor,'1.1')
                        setText_norefresh("Temp□=□{}□C".format(str(tem
                        setRGB(0,255,0)
        except KeyboardInterrupt:       # Stop the buzzer before stopp
                break
        except IOError:
                print ("Error")
                break
        except:
                print("Error")
```

4   Conclusions

The Grove Pi makes it easy to program and connect certain devices with python. Learning how to code and demonstrate the possibilities of the raspberry pi, this add-on is perfect. The Grove Pi has to be more tested to see if has more possibilities to explode and reach its limits. There was some installation issues coming from Dexter Industries that could be fixed finding the error on internet forums but the support from the company was not great.

5   Bibliography

- https://github.com/matias-vazquez/SistemasEmbebidos