

LAB08 - LAB09

CODIGO EN RASPBERRY (PYTHON)

```
import RPi.GPIO as GPIO
import time
import datetime
import json
import urllib.request

#GPIO CONFIGURATION
#Sensores
sensor = 5
#Luces
display_A = 20
display_B = 21
display_C = 17
display_D = 27
display_E = 22
display_F = 23
display_G = 24
display_H = 25

#GPIO
GPIO.setwarnings(False)
GPIO.setmode(GPIO.BCM)
GPIO.setup(display_A, GPIO.OUT)
GPIO.setup(display_B, GPIO.OUT)
GPIO.setup(display_C, GPIO.OUT)
GPIO.setup(display_D, GPIO.OUT)
GPIO.setup(display_E, GPIO.OUT)
GPIO.setup(display_F, GPIO.OUT)
GPIO.setup(display_G, GPIO.OUT)
GPIO.setup(display_H, GPIO.OUT)
GPIO.setup(sensor, GPIO.IN)

interruption = True
url = "http://jose167-001-site1.dtempurl.com/"

print("LAB08/LAB09 - Jose Giron")

while True:
    if GPIO.input(sensor) and not(interruption):
        interruption = True

        #time
        now = datetime.datetime.now()
        date = now.strftime("%Y-%m-%d %H:%M:%S")
```

```

interruption = True

#time
now = datetime.datetime.now()
date = now.strftime("%Y-%m-%d %H:%M:%S")

# download raw json object
data = urllib.request.urlopen(url).read().decode()

# parse json object
obj = json.loads(data)

# output some object attributes
for value in obj:
    print("Interrupcion en: " + date)
    print(value["value"])
    #Output values
    #A
    segment_A = True if (value["value"][0]) == "1" else False
    GPIO.output(display_A, segment_A)
    #B
    segment_B = True if (value["value"][1]) == "1" else False
    GPIO.output(display_B, segment_B)
    #C
    segment_C = True if (value["value"][2]) == "1" else False
    GPIO.output(display_C, segment_C)
    #D
    segment_D = True if (value["value"][3]) == "1" else False
    GPIO.output(display_D, segment_D)
    #E
    segment_E = True if (value["value"][4]) == "1" else False
    GPIO.output(display_E, segment_E)
    #F
    segment_F = True if (value["value"][5]) == "1" else False
    GPIO.output(display_F, segment_F)
    #G
    segment_G = True if (value["value"][6]) == "1" else False
    GPIO.output(display_G, segment_G)
    #H
    segment_H = True if (value["value"][7]) == "1" else False
    GPIO.output(display_H, segment_H)

elif not(GPIO.input(sensor)) and interruption:
    print("No value")
    interruption = False

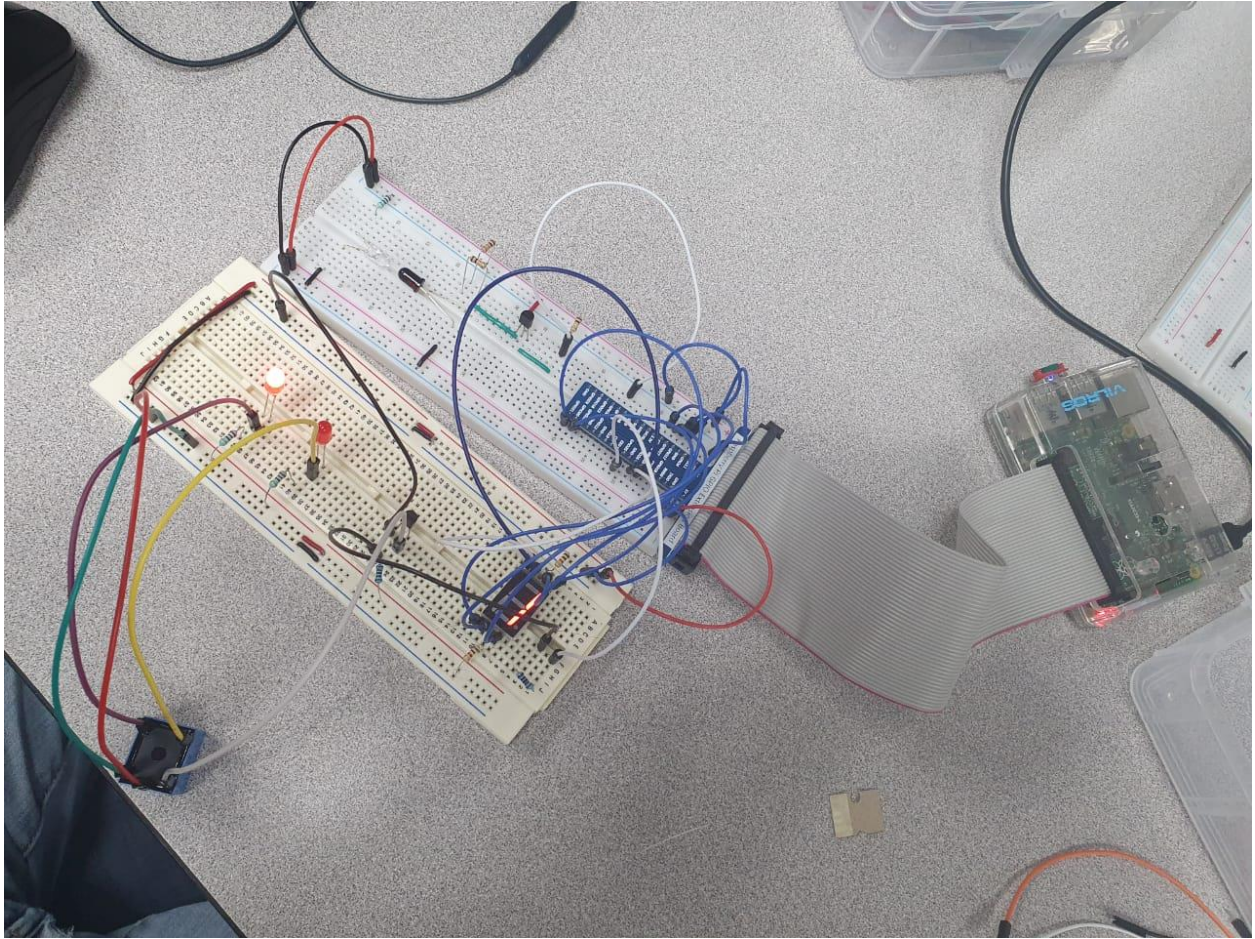
```

CODIGO SERVICIO (C#)

```
public class RaspberryController : ControllerBase
{
    private static readonly string[] Summaries = new[]
    {
        "11111100", "01100001"
    };

    [HttpGet]
    public IEnumerable<Raspberry> Get()
    {
        var rng = new Random();
        return Enumerable.Range(1, 1).Select(index => new Raspberry
        {
            Value = Summaries[rng.Next(Summaries.Length)]
        })
        .ToArray();
    }
}
```

CIRCUITO



FUNCIONAMIENTO

Valores recibidos:

```
Interrupcion en: 2021-04-21 19:27:03
11111100
No value
Interrupcion en: 2021-04-21 19:27:04
11111100
No value
Interrupcion en: 2021-04-21 19:27:06
11111100
No value
Interrupcion en: 2021-04-21 19:27:07
11111100
No value
Interrupcion en: 2021-04-21 19:27:09
01100001
No value
Interrupcion en: 2021-04-21 19:28:39
01100001
No value
Interrupcion en: 2021-04-21 19:39:22
11111100
No value
```

Circuito (Relay en 1):

