

**Assignment -1**  
Python Programming

Assignment Date	6 october 2022
Student Name	Mr. Arputharaja.S
Student Roll Number	711619106002
Maximum Marks	2 Marks

**Question-1:**

Write python code for blinking LED and Traffic lights for Raspberry pi.

Only python code is enough, no need to execute in raspberry pi.

Note: you are allowed to use web search and complete the assignment.

Assignment to be submitted in a week

<b>Solution:</b>	
	<pre>LED Blinking  import RPi.GPIO as GPIO import time GPIO.setmode (GPIO.BOARD) GPIO.setup(11,GPIO.out) GPIO.output(11,1) time.sleep(1) GPIO.output(11,0) time.sleep(1) GPIO.output(11,1) time.sleep(1) GPIO.output(11,0) time.sleep(1) GPIO.cleanup()  Traffic light import RPi.GPIO as GPIO import time  GPIO.setmode(GPIO.BOARD)  red=7</pre>

	<pre> yellow=11 green=13  GPIO.setup(red,GPIO.OUT) GPIO.setup(yellow,GPIO.OUT) GPIO.setup(green,GPIO.OUT)  while True:     GPIO.output(red,True)     sleep(3)     GPIO.output(red,False)      GPIO.output(yellow,True)     sleep(1)     GPIO.output(yellow,False)      GPIO.output(green,True)     sleep(3)     GPIO.output(green,False)     GPIO.cleanup() </pre>

thermal.py - C:\Users\11101\AppData\Local\Programs\Python\Python110\thermal.py (1.10.7)
File Edit Format Run Options Window Help

```

import random
while(True):
    a = random.randint(10,50)
    b = random.randint(10,50)
    if (a>25 and b>70):
        print("Temperature and humidity of:",a,b,"°C","Alarm is on")
        elif(a<25 and b<70):
            print("Temperature and humidity of:", a,b,"°C","Alarm is off")
            break

```

IDLE Shell 1.10.7
File Edit Shell Debug Options Window Help

```

Python 3.10.7 (tags/v3.10.7:6cc0b10, Sep 5 2022, 14:00:30) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright()", "credits()" or "help()" for more information.
>>>
== RESTART: C:\Users\11101\AppData\Local\Programs\Python\Python110\thermal.py ==
Temperature and humidity of: 34.00 °C Alarm is on
Temperature and humidity of: 44.80 °C Alarm is on
Temperature and humidity of: 51.80 °C Alarm is on
Temperature and humidity of: 55.98 °C Alarm is on
Temperature and humidity of: 30.84 °C Alarm is on
Temperature and humidity of: 60.03 °C Alarm is on
Temperature and humidity of: 80.74 °C Alarm is on
Temperature and humidity of: 81.84 °C Alarm is on
Temperature and humidity of: 21.10 °C Alarm is off
>>>

```