ASSIGNMENT-3
PYTHON PROGRAMMING

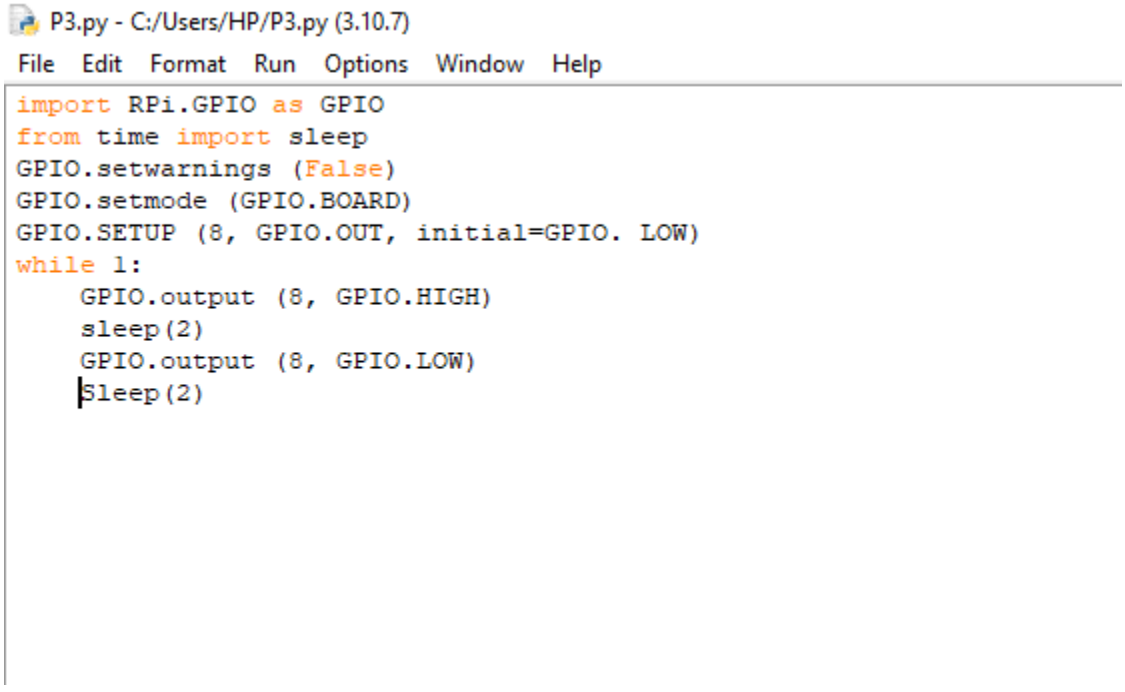
Date	30 September 2022
Student Name	Nivetha.R
Student Roll Number	211419106188
Maximum Marks	2 Marks

Question 1:

Write a python code for blinking LED.

Solution:

```
import RPi.GPIO as GPIO
from time import sleep
GPIO.setwarnings (False)
GPIO.setmode (GPIO.BOARD)
GPIO.SETUP (8, GPIO.OUT, initial=GPIO. LOW)
while 1:
        GPIO.output (8, GPIO.HIGH)
        sleep(2)
        GPIO.output (8, GPIO.LOW)
        Sleep(2)
```



Question 2:

Write a python code for traffic light.

Solution:

```
import RPi.GPIO as GPIO
import time
try:
  def lightTraffic (led1, led2, led3, delay ):
   GPIO.output (led1, 1)
   time.sleep(delay)
   GPIO.output (led1, 0)
   GPIO.output(led2, 1)
   time.sleep(delay)
   GPIO.output (led2, 0)
   GPIO.output (led3, 1)
   time.sleep(delay)
   GPIO.output (led3, 0)
   GPIO.setmode (GPIO.BCM)
   button = 19
   GPIO.setup(button, GPIO.IN, pull_up_down=GPIO.PUD_UP)
   ledGreen = 16
   ledYellow = 12
   ledRed = 23
   GPIO.setup(ledGreen, GPIO.OUT)
   GPIO.setup(ledYellow, GPIO.OUT)
   GPIO.setup(ledRed, GPIO.OUT)
   while True:
       input_state= GPIO.input (button)
       if input_state== False:
           print('Button Pressed')
           lightTraffic(ledGreen, ledYellow, ledRed, 1)
       else:
          GPIO.output (ledGreen, 0)
          GPIO.output (ledYellow, 0)
          GPIO.output (ledRed, 0)
except KeyboardInterrupt:
    print("You've exited the program")
finally:
   GPIO.cleanup()
```

P4.py - C:/Users/HP/P4.py (3.10.7)

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```
import RPi.GPIO as GPIO
import time
try:
  def lightTraffic (led1, led2, led3, delay ):
   GPIO.output (led1, 1)
   time.sleep(delay)
   GPIO.output (led1, 0)
   GPIO.output(led2, 1)
   time.sleep(delay)
   GPIO.output (led2, 0)
   GPIO.output (led3, 1)
   time.sleep(delay)
   GPIO.output (led3, 0)
   GPIO.setmode (GPIO.BCM)
   button = 19
   GPIO.setup(button, GPIO.IN, pull_up_down=GPIO.PUD_UP)
   ledGreen = 16
   ledYellow = 12
   ledRed = 23
   GPIO.setup(ledGreen, GPIO.OUT)
   GPIO.setup(ledYellow, GPIO.OUT)
   GPIO.setup(ledRed, GPIO.OUT)
   while True:
        input_state= GPIO.input (button)
        if input_state== False:
             print('Button Pressed')
             lightTraffic(ledGreen, ledYellow, ledRed, 1)
        else:
            GPIO.output (ledGreen, 0)
            GPIO.output (ledYellow, 0)
            GPIO.output (ledRed, 0)
except KeyboardInterrupt:
    print("You've exited the program")
finally:
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