

ASSIGNMENT-3 PYTHON PROGRAMMING

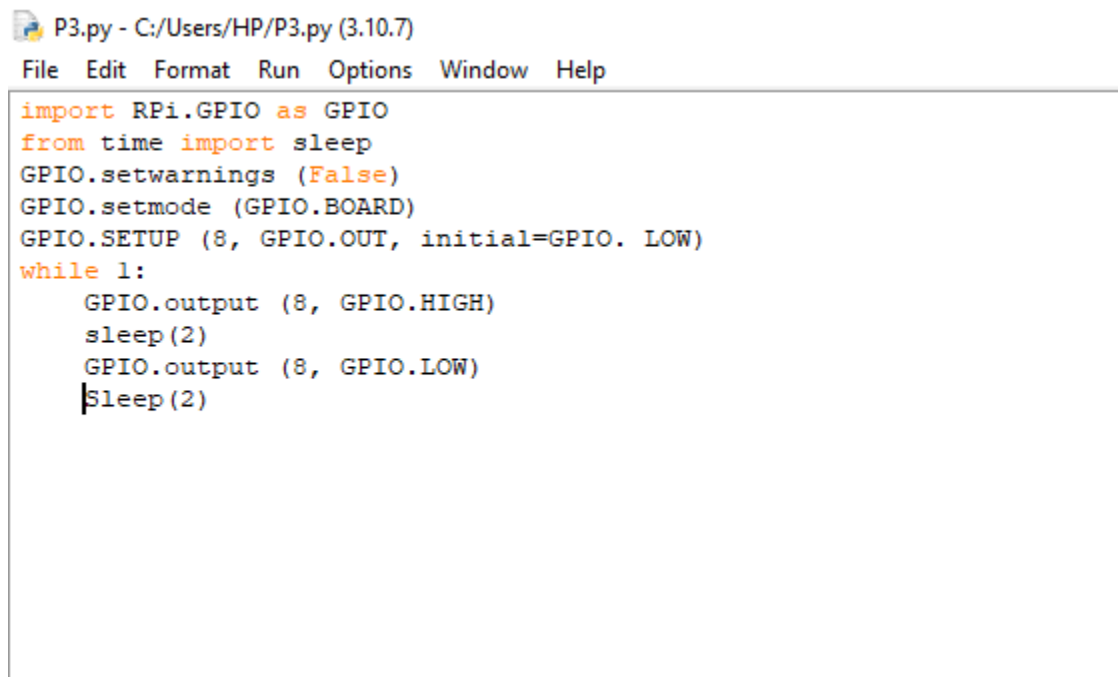
Date	30 September 2022
Student Name	Nivetha.R
Student Roll Number	211419106188
Maximum Marks	2 Marks

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)
```



The screenshot shows a Python IDE window titled "P3.py - C:/Users/HP/P3.py (3.10.7)". The menu bar includes "File", "Edit", "Format", "Run", "Options", "Window", and "Help". The code editor contains the following Python code:

```
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)

File Edit Format Run Options Window Help

```
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()
```