

Assignment - 3
Raspberry Pi Simulation

Assignment Date	26th October 2022
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Maximum Marks	2 Marks

Question:

Write python code for blinking LED and Traffic lights for Raspberry pi. Only python code is enough, no need to execute in raspberry pi.

Solution:

Traffic Lights:

```
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()

finally:
    GPIO.cleanup()

```

Blinking LED:

```

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 True:
    GPIO.output(8, GPIO.HIGH)
    sleep(1)
    GPIO.output(8, GPIO.LOW)
    sleep(1)

```