

ASSIGNMENT-3

Python Programming

Assignment Date	07 OCTOBER 2022
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Project Name	Gas Leakage Monitoring and Alerting System

Write Python code for blinking LED and Traffic lights for Raspberry Pi.

1. BLINKING LED:

```
import RPi.GPIO as GPIO
import time
GPIO.setmode(GPIO.BCM)
cnt = 0
MAIL_CHECK_FREQ = 1
RED_LED = 4
GPIO.setup(RED_LED, GPIO.OUT)
while True:
    if(cnt == 0):
        GPIO.output(RED_LED, False)
        cnt = 1
    else:
        GPIO.output(RED_LED, True)
        cnt = 0
        time.sleep(MAIL_CHECK_FREQ)
GPIO.cleanup()
```

2. TRAFFIC LIGHTS:

```
from gpiozero import Button, TrafficLights, Buzzer
from time import sleep
buzzer = Buzzer(15)
button = Button(21)
lights = TrafficLights(25, 8, 7)
while True:
    button.wait_for_press()
    buzzer.on()
    light.green.on()
    sleep(1)
```

```
lights.amber.on()  
sleep(1)  
lights.red.on()  
sleep(1)  
lights.off()  
buzzer.off()
```