

IBM ASSIGNMENT – 3

Python Programming

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

1.CODE FOR BLINKING LED:

```
import RPi.GPIO as GPIO
import time
#assign numbering for the GPIO using BCM
GPIO.setmode(GPIO.BCM)
#assign number for the GPIO using Board
#GPIO.setmode(GPIO.BOARD)
cnt = 0
MAIL_CHECK_FREQ = 1 # change LED status every 1 seconds
RED_LED = 4
GPIO.setup(RED_LED, GPIO.OUT)
while True:
```

```
ifcnt == 0 :  
    GPIO.output(RED_LED, False)  
    cnt = 1  
  
else:  
    GPIO.output(RED_LED, True)  
    cnt = 0  
  
time.sleep(MAIL_CHECK_FREQ)  
GPIO.cleanup()
```

2.CODE FOR TRAFFIC LIGHTS:

```
from gpio zero import Button, Traffic Lights, Buzzer  
from time import sleep  
buzzer = Buzzer(15)  
button = Button(21)  
lights = Traffic Lights(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()
```