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Assignment : 3

1. Python code for blinking LED for Raspberry pi.

```
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. Python code for traffic lights for Raspberry pi.

```
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()
```