ASSIGNMENT-3 IOT

1.Python code for blinking LED for Raspberry pi.

```
import RPi.GPIO as GPIO import
time
#assign numbering for the GPIO using BCM
GPIO.setmode(GPIO.BCM)
#assingn 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.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()
```