

ASSIGNMENT – 3

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)
#assign number for the GPIO using Board
cnt = 0
MAIL_CHECK_FREQ = 1
# change LED status every 1 seconds
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()

```