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)
#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(led Yellow,0)
        GPIO.output(ledRed, 0)

except KeyboardInterrupt:
    print
    "You've exited the program"
finally:
     GPIO.cleanup()
```