TEAM ID - PNT2022TMID02992

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

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