

ASSIGNMENT- 3

Write a python code for blinking LED and Traffic lights for Raspberry Pi.

Blinking LED

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

Traffic light

```
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 have exited the program"
finally:
    GPIO.cleanup()
```