

ASSIGNMENT -3

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CODE 1:

LED BLINKING

```
import RPi.GPIO as GPIO
import time

GPIO.setmode(GPIO.BCM)

cnt = 0

MAIL_CHECK_FREQ = 1

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()
```

CODE 2:

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()
```