

IBM

SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

ASSIGNMENT- 3

Write python code for blinking LED and Traffic lights for Raspberry pi.

Only python code is enough, no need to execute in raspberry pi.

Python code:

```
import RP1.GPIO as GP10
```

```
import time
```

```
GPIO. setmode(GPIO.BOARD)
```

```
GPIO.setup(7, GPIO.OUT) #Green LED
```

```
GPIO.setup(11, GPIO.OUT)#Yellow LED
```

```
GPIO.setup(13, GPIO.OUT) #Red LED
```

```
GPIO.setup(15, GP10.IN, pull_up_down=GPIO.PUD_UP)#Button
```

```
def turn_on(pin, seconds):
```

```
    GPIO.output (pin,GPIO.HIGH)
```

```
    time.sleep(seconds)
def turn_off (pin, seconds):
    GPIO.output (pin, GPIO.LOW)
    time.sleep(seconds)
try:
    while True:
        button_state=GPIO.input (15)
        if button_state== True:
            turn_on(13,2)
            tum_off(13,.1)
            turn_on(7,4)
            turn_off(7,.11)
            turn_on(11,1)
            turn_off(11,1)
        else:
            if button_state== False:
                GPIO.output (7,GPIO.LOW)
                GPIO.output(11,GPIO.LOW)
                GP10.output (13,GPIO.LOW)
                time.sleep(.1)
except KeyboardInterrupt:
    GPIO.cleanup()
    print("Traffic Light Sequence Done")
```