

ASSIGNMENT-3

Python Program

Assignment Date	03 October 2022
Student Name	SARASWATHI S
Student Roll Number	812019106027
Maximum Marks	2 Marks

Question-1

Write python code for blinking LED and Traffic lights for Raspberry pi. Only python code is enough, no need to execute in raspberry pi.

Code:

#Blinking LED

```
import RPi.GPIO as GPIO
import time
GPIO.setmode(GPIO.BCM)
GPIO.setwarnings(False)
GPIO.setup(18,GPIO.OUT)
print("LED on")
GPIO.output(18,GPIO.HIGH)
time.sleep(1)
print("LED off")
GPIO.output(18,GPIO.LOW)
```

#Traffic Light

```
from gpiozero import Button, TrafficLights, Buzzer
```

```
from time import sleep
```

```
buzzer = Buzzer(15)
```

```
button = Button(21)
```

```
lights = TrafficLights(25, 8, 7)
```

```
#Button                21
```

```
#Red LED                25
```

```
#Yellow LED            08
```

```
#Green LED             07
```

```
#Buzzer                15
```

```
while True:
```

```
    button.wait_for_press()
```

```
    buzzer.on()
```

```
    light.green.on()
```

```
    sleep(1)
```

```
    lights.amber.on()
```

```
    sleep(1)
```

```
    lights.red.on()
```

```
    sleep(1)
```

```
    lights.off()
```

```
    buzzer.off()
```

In Compiler:

```
#Blinking LED

import RPi.GPIO as GPIO
import time
GPIO.setmode(GPIO.BCM)
GPIO.setwarnings(False)
GPIO.setup(18,GPIO.OUT)
print("LED on")
GPIO.output(18,GPIO.HIGH)
time.sleep(1)
print("LED off")
GPIO.output(18,GPIO.LOW)

#Traffic Light
from gpiozero import Button, TrafficLights, Buzzer
from time import sleep
buzzer = Buzzer(15)
button = Button(21)
lights = TrafficLights(25, 8, 7)

#Button                21
#Red LED                25
#Yellow LED            08
#Green LED             07
#Buzzer                15
while True:
    button.wait_for_press()
    buzzer.on()
    light.green.on()
    sleep(1)
    lights.amber.on()
    sleep(1)
    lights.red.on()
    sleep(1)
    lights.off()
    buzzer.off()
```