

ASSIGNMENT-3

Python Program

Assignment Date	03 October 2022
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Student Roll Number	812019106005
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()
```