

Assignment -3
Python Programming

Assignment Date	01 October 2022
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Student Roll Number	210819106042
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. Note: you are allowed to use web search and complete the assignment.

Solution:

```
from gpiozero import Button
```

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

```
while True:
```

```
    print(button.is_pressed)
```

```
while True:
```

```
    if button.is_pressed:
```

```
        print("Hello")
```

```
    else:
```

```
        print("Goodbye")
```

```
while True:
```

```
    button.wait_for_press()
```

```
    print("Pressed")
```

```
    button.wait_for_release()
```

```
    print("Released")
```

```
from gpiozero import Button, LED
```

```
led = LED(25)
```

```
while True:
```

```
    button.wait_for_press()
```

```
    led.on()
```

```
    button.wait_for_release()
```

```
    led.off()
```

```
while True:
```

```
    led.on()
```

```
    button.wait_for_press()
```

```
    led.off()
```

```
    button.wait_for_release()
```

```
while True:
```

```
    led.blink()
```

```
    button.wait_for_press()
```

```
    led.off()
```

```
    button.wait_for_release()
```

```
from gpiozero import Button,
```

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

```
7) while True:
```

```
    button.wait_for_press()
```

```
    lights.on()
```

```
    button.wait_for_release()
```

```
    lights.off()
```

```
while True:
```

```
    lights.blink()
```

```
    button.wait_for_press()
```

```
    lights.off()
```

```
button.wait_for_release()
```

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

```
buzzer = Buzzer(15) while True:
```

```
lights.on()
```

```
buzzer.off()
```

```
button.wait_for_press()
```

```
lights.off()
```

```
buzzer.on()
```

```
button.wait_for_release()
```

```
while True:
```

```
lights.blink()
```

```
buzzer.beep()
```

```
button.wait_for_press()
```

```
lights.off()
```

```
buzzer.off()
```

```
button.wait_for_release()
```

```
from time import sleep
```

```
while True:
```

```
lights.green.on()
```

```
sleep(1)
```

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

```
sleep(1)
```

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

```
sleep(1)
```

```
lights.off()
```

```
while True:
```

```
button.wait_for_press()
```

```
lights.green.on()
```

```
sleep(1)
```

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

```
sleep(1)
```

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

```
sleep(1)
```

```
lights.off()
```