

Assignment - 3

IoT-Based Industry - Real-Time River Water Quality Monitoring
and Control System

Python Programming

Assignment Date	18 October 2022
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Maximum Marks	2 Marks

Problem statement:

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:

Python code:

```
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()

```