Assignment - 3

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

Python Programming

Assignment Date	1 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()
```