Assignment - 3

lo T-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()
```