

### Assignment - 3

#### IoT-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()
```