

## ASSIGNMENT-3

### Python Programming

STUDENT NAME : A.STANLY MATHEW RAJ

#### 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()
```