

Assignment -3 Python Programming

Assignment Date	06 October 2022
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Student Roll Number	210819106012
Maximum Marks	2 Marks

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()
```