

Assignment Date	10-10-2022
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ASSIGNMENT-3

PYTHON PROGRAMMING

Question:

Write python code for blinking LED and Traffic lights for Raspberrypi.

BlinkingLed:

```
importRPI.GPIOasGPIO
```

```
fromtimeimportslepp
```

```
GPIO.setwarnings(False)
```

```
GPIO.setmode(GPIO.BOARD)
```

```
GPIO.setup(7,GPIO.OUT,initial=GPIO.LOW)
```

```
while True:
```

```
    GPIO.output(7,GPIO.LOW)
```

```
    print("LED off")
```

```
    sleep(1)
```

```
    GPIO.output(7,GPIO.HIGH)
```

```
    print("LED on")
```

```
    sleep(1)
```

```
TrafficLight:
```

```
import RPi.GPIO as GPIO
```

```
import time
```

```
try:
```

```
deflightTraffic(led1,led2,led3,delay):
```

```
GPIO.output(led1,1)Print("GREEN")time.sleep(delay)
```

```
GPIO.output(led1,0)
```

```
GPIO.output(led2,1)Print("YELLOW")
```

```
time.sleep(delay)
```

```
GPIO.output(led2,0)GPIO.output(led3,1)
```

```
Print("RED")time.sleep(delay)
```

```
OGPIO.output(led3,0)
```

```
GPIO.setmode(GPIO.BCM)button19
```

```
GPIO.setup(button,GPIO.IN,pull_up_down=GPIO.PUD_UP)
```

```
ledGreen-16
```

```
ledYellow12
```

```
ledRed-23
```

```
GPIO.setup(ledGreen,GPIO.OUT)
```

```
GPIO.setup(ledYellow,GPIO.OUT)
```

```
GPIO.setup(ledRed,GPIO.OUT)while True:
```

```
    input_state=GPIO.input(button)
```

```
    if input_state==False:
```

```
        print('Button Pressed')lightTraffic(ledGreen,ledYellow,ledRed,1)
```

```
    else:
```

```
        GPIO.output(ledGreen,0)
```

```
        GPIO.output(ledYellow,0)GPIO.output(ledRed,0)
```

```
    except KeyboardInterrupt:
```

```
        print("You've exited the program")
```

```
finally:
```

GPIO.cleanup()