

|                  |   |  |
|------------------|---|--|
| Project Name     | - | Signs with smart connectivity for better Road safety |
| Team ID          | - | PNT2022TMID38240                                     |
| Student Roll No. | - | 412319106011   |

Question:

WritepythoncodeforblinkingLEDandTrafficlightsforRaspberrypi.

BlinkingLed:

```
importRPI.GPIOasGPIO
```

```
fromtimeimportslepp
```

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

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

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

```
whileTrue:
```

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

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

```
sleep(1)
```

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

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

```
sleep(1)
```

```
TrafficLight:
```

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

```
import time
```

```
try:
```

```
def lightTraffic(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 inputstate=False:
```

```
print('ButtonPressed')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()
```