

ASSIGNMENT 3

LED blinking and Traffic lights using raspberry pi

Assignment Date	14 November 2022
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Maximum Marks	2 Marks

Question:

Write a python code for blinking LED and Traffic lights for raspberry pi.

Code:

#Assignment 3

#LED Blinking

```
import RPi.GPIO as GPIO
import time
GPIO.setmode(GPIO.BCM)
Count = 0
Status_Check_Freq = 1
Green_LED = 4
GPIO.setup(Green_LED,GPIO.OUT)
```

```
while True:
    if Count == 0:
        GPIO.setup(Green_LED,Flase)
        Count = 1
    else:
        GPIO.output(Green_LED,True)
        Count = 0

time.sleep(Status_Check_Freq)
GPIO.cleanup()
```

#Traffic lights

```
import RPi.GPIO
import time

try:
    def lightTraffic(led1,led2,led3,delay):
        GPIO.output(led1,1)
        time.sleep(delay)
```

```
GPIO.output(led1,0)
GPIO.output(led2,1)
time.sleep(delay)
GPIO.output(led2,1)
GPIO.output(led3,1)
time.sleep(delay)
GPIO.output(led3,0)

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

ledred = 13
ledblue = 14
ledgreen = 20

GPIO.setup(ledred,GPIO.OUT)
GPIO.setup(ledblue,GPIO.OUT)
GPIO.setup(ledgreen,GPIO.OUT)

while True:
    input_state = GPIO.input(button)
    if input_sate == False:
        print("Button Pressed")
        lightTraffic(ledred,ledblue,ledgreen,1)
    else:
```

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

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

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

```
except KeyboardInterrupt:
```

```
    print("You have exited the program")
```

```
finally:
```

```
    GPIO.cleanup()
```