Assignment -3

Python Programming

Assignment Date	02 October 2022
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Maximum Marks	2 Marks

Question:

Write python code for blinking LED and Traffic lights for Raspberry pi.

Traffic Light:

```
import RPi.GPIO as 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, 0)
        GPIO.output(led3, 1)
        time.sleep(delay)
        GPIO.output(led3, 0)
    GPIO.setmode(GPIO.BCM)
    button = 19
    GPIO.setup(button, GPIO.IN, pull_up_down=GPIO.PUD_UP)
    ledGreen = 16
    ledYellow = 12
    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()
```

Blinking LED:

```
import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library
from time import sleep # Import the sleep function from the time module

GPIO.setwarnings(False) # Ignore warning for now
GPIO.setmode(GPIO.BOARD) # Use physical pin numbering
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and set initial value to low (off)

while True: # Run forever
  GPIO.output(8, GPIO.HIGH) # Turn on
  sleep(1) # Sleep for 1 second
  GPIO.output(8, GPIO.LOW) # Turn off
  sleep(1) # Sleep for 1 second
```