ASSIGNMENT-3

Assignment Date	22 September,2022
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Maximum Marks	2 Marks

PYTHON CODE FOR BLINKING LED AND TRAFFIC LIGHTS FOR RASPBERRY PI

For LED:

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

For Traffic Lights:

```
import Rpi.GPIO as GPIO
```

```
import time
import signal
import sys


#Setup
GPIO.setmode(GPIO.BCM)
GPIO.setup(9,GPIO.OUT)
GPIO.setup(10,GPIO.OUT)
GPIO.setup(11,GPIO.OUT)

#Turn off all lights when user ends demo
def allLightsOff(signal,framer):
    GPIO.output(9,False)
    GPIO.output(10,False)
    GPIO.output(11,False)
   GPIO.cleanup()
   sys.exit(0)
signal.signal(signal.SIGINT,allLightsOff)

#Loop forever
while True:
#Red
GPIO.output(9,True)
Time.sleep(3)
```

```
#Red and amber
GPIO.output(10,True)
Time.sleep(1)


#Green
GPIO.output(9,False)
GPIO.output(10,False)
GPIO.output(11,True)
Time.sleep(5)
#Amber
GPIO.output(11,False)
GPIO.output(10,True)
Time.sleep(2)
#Amber off(red comes on at top of loop)
GPIO.output(10,False)
```