ASSIGNMENT-3

PYTHON CODE FOR BLINKING LED AND TRAFFIC LIGHTS FOR RASPBERRY PI

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Maximum Marks : 2 Marks

Project Name : IoT based safety gadget for child safety monitoring notification

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:
    GPIO.output(9,True) #Red
    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)
```