ASSIGNMENT-3

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(Autonomous)

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CLASS: 4 YEAR ECE

SUBJECT: IBM

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CODE

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)
```