

ASSIGNMENT 3

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CLASS: 4 YEAR ECE

SUBJECT: IBM

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Question-1:

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

Solution:

```
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, frame):
    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)
```