

IBM-Nallaiya Thiran Project

Assignment-3

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Question:

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

Solution:

```
import RPi.GPIO as GPIO
from time import sleep
GPIO.setwarnings(False)
GPIO.setmode(GPIO.BOARD)
```

```
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW)
```

```
while True:
```

```
    GPIO.output(8, GPIO.HIGH)
```

```
    sleep(1)
```

```
    GPIO.output(8, GPIO.LOW)
```

```
    sleep(1)
```

```
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)
```