

Assignment - 3
Python Programming

Assignment Date	8 September 2022
Student Name	Mr. Aravind T
Student Roll Number	718019L104
Maximum Marks	2 Marks

Question-1:

Blinking of 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)
```