

TEAM ID	PNT2022TMID36755
Project name	IoT based smart crop protection system

Assignment -3

Question:

Write a python code for blinking LED and Traffic lights for Raspberry Pi.

PROGRAM:

```
import RPi.GPIO as GPIO
import time
import os
import signal
import sys

if('TRAFFIC_LIGHT_COUNTRY' in os.environ) and (os.environ['TRAFFIC_LIGHT_
C O UNTRY'] in ['UK', 'USA']):
    pattern = os.environ['TRAFFIC_LIGHT_COUNTRY'].lower()
    else:
    print('TRAFFIC_LIGHT_COUNTRY should be set to UK or USA')
    sys.exit(1)

# 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 for UK only if (pattern
== 'uk'):
    GPIO.output(10, True) time.sleep(1)
```

```
# Green
GPIO.output(9, False)
GPIO.output(10, False)
GPIO.output(11, True) time.sleep(5)
```

```
# Amber, longer in US than UK
GPIO.output(11, False)
GPIO.output(10, True) if (pattern
== 'uk'):
    time.sleep(2)
else:
    time.sleep(3)
```

```
# Amber off (red comes on at top of loop)
GPIO.output(10, False)
```