

# **IOT BASED SMART FARMING - ASSIGNMENT 3**

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## **BACHELOR OF ENGINEERING IN COMPUTER SCIENCE AND ENGINEERING**

Write python code for blinking LED and Traffic lights for Raspberry pi(Only Python code)

### **BLINKING LED:**

```
import RPi.GPIO as GPIO

import time

GPIO.setmode(GPIO.BCM)

GPIO.setwarnings(False)

GPIO.setup(18,GPIO.OUT)

print "LED on"

GPIO.output(18,GPIO.HIGH)

time.sleep(1)

print "LED off"

GPIO.output(18,GPIO.LOW)
```

### **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, 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)