

ASSIGNMENT

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Project name : IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE

1. PYTHON CODE FOR TRAFFIC LIGHTS FOR RASPBERRY PI

```
import time

import RPi.GPIO as GPIO

GPIO.setmode(GPIO.BOARD)

GPIO.setup(11, GPIO.OUT)

GPIO.setup(12, GPIO.OUT)

GPIO.setup(13, GPIO.OUT)


while True:

    GPIO.output(11,True) ## Turn on redLed

    time.sleep(1)      ## Wait for one second

    GPIO.output(11,False) ## Turn off redLed

    time.sleep(1)      ## Wait for one second

    GPIO.output(12,True) ## Turn on yellowLed

    time.sleep(1)      ## Wait for one second

    GPIO.output(12,False) ## Turn off yellowLed

    time.sleep(1)      ## Wait for one second

    GPIO.output(13,True) ## Turn on greenLed

    time.sleep(1)      ## Wait for one second

    GPIO.output(13,False) ## Turn off greenLed

    time.sleep(1)      ## Wait for one second
```

2.PYTHON CODE FOR BLINKING LED

```
from gpiozero import Button, TrafficLights, Buzzer
```

```
from time import sleep
```

```
buzzer = Buzzer(15)
```

```
button = Button(21)
```

```
lights = TrafficLights(25, 8, 7)
```

```
while True:
```

```
    button.wait_for_press()
```

```
    buzzer.on()
```

```
    light.green.on()
```

```
    sleep(1)
```

```
    lights.amber.on()
```

```
    sleep(1)
```

```
    lights.red.on()
```

```
    sleep(1)
```

```
    lights.off()
```

```
    buzzer.off()
```