

ASSIGNMENT-3

Date	14-10-2022
Team ID	PNT2022TMID24432
Project Name	IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE
Maximum Marks	2 Marks

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TOPIC: Write python code for blinking LED and Traffic lights for raspberry pi

CODE:

```
/*python code for blinking LED*/
```

```
import RPi.GPIO as GPIO      # Import Raspberry Pi GPIO library
from time import sleep       # Import the sleep function from the time module
GPIO.setwarnings(False) # Ignore warning for now
GPIO.setmode(GPIO.BOARD) # Use physical pin numbering
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin
and set initial value to low
(off)
while True: # Run forever
    GPIO.output(8, GPIO.HIGH) # Turn on
    sleep(1) # Sleep for 1 second
```

```
/*PYTHON CODE FOR TRAFFIC LIGHT*/
```

```
GPIO.output(8, GPIO.LOW) # Turn off
```

```
sleep(1) # Sleep for 1 second
```

```
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)
```