

## Assignment -3

### Hazardous Area Monitoring for Industrial Plant powered by IoT

**Assignment Date : 29th September 2022**

**Project I'd: PNT2022TMID03488**

#### **Aim:**

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

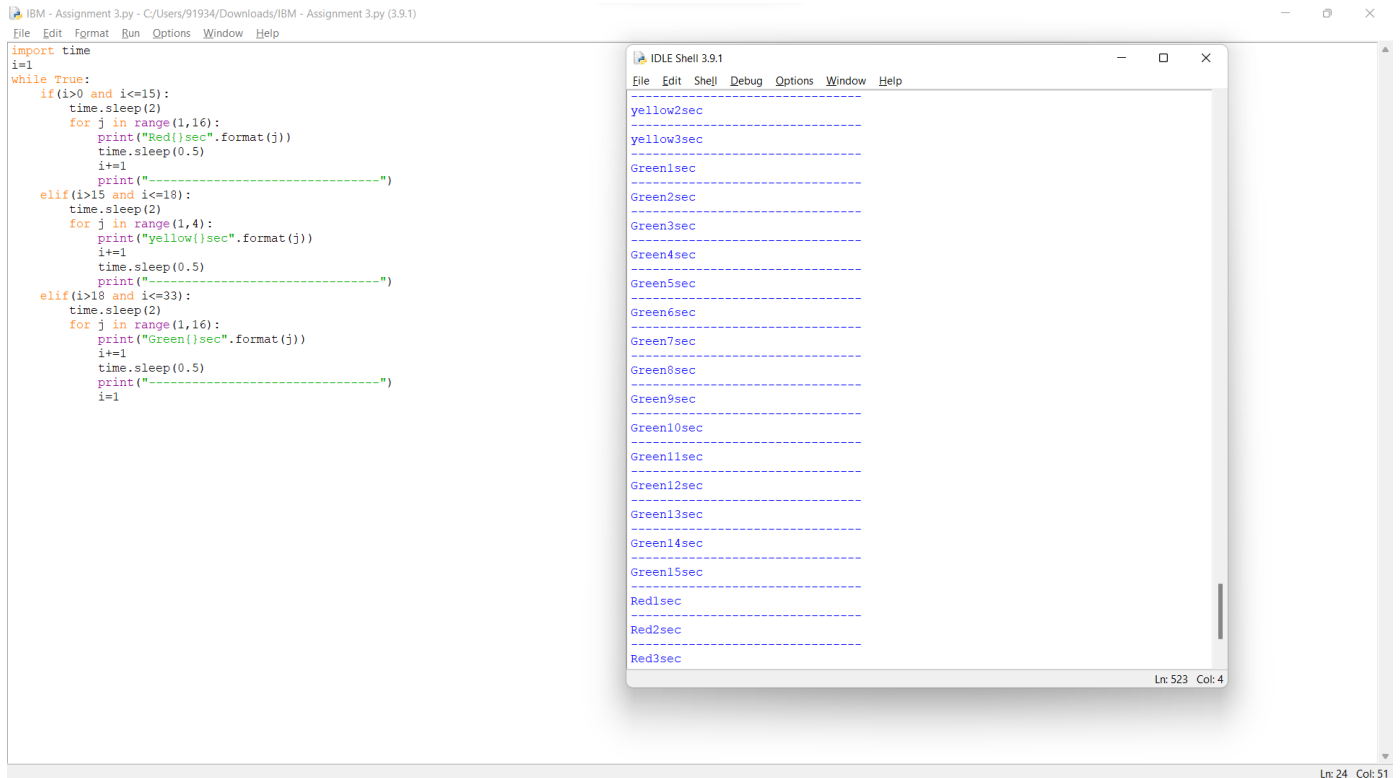
#### **Software used:**

Python IDLE 3.10.7 (64 bit)

#### **Python Code:**

```
import time
i=1
while True:
    if(i>0 and i<=15):
        time.sleep(2)
        for j in range(1,16):
            print("Red{}sec".format(j))
            time.sleep(0.5)
            i+=1
        print("----- ")
    elif(i>15 and i<=18):
        time.sleep(2)
        for j in range(1,4):
            print("yellow{}sec".format(j))
            i+=1
            time.sleep(0.5)
        print("----- ")
    elif(i>18 and i<=33):
        time.sleep(2)
        for j in range(1,16):
            print("Green{}sec".format(j))
            i+=1
            time.sleep(0.5)
        print("----- ")
    i=1
```

## Simulation:



The screenshot displays a Python IDE window titled "IBM - Assignment 3.py - C:/Users/91934/Downloads/IBM - Assignment 3.py (3.9.1)". The code is a traffic light simulation using a while loop and conditional statements to control the duration of red, yellow, and green lights. The code is as follows:

```
import time
i=1
while True:
    if(i>0 and i<=15):
        time.sleep(2)
        for j in range(1,16):
            print("Red{}sec".format(j))
            time.sleep(0.5)
            i+=1
        print("-----")
    elif(i>15 and i<=18):
        time.sleep(2)
        for j in range(1,4):
            print("yellow{}sec".format(j))
            i+=1
            time.sleep(0.5)
        print("-----")
    elif(i>18 and i<=33):
        time.sleep(2)
        for j in range(1,16):
            print("Green{}sec".format(j))
            i+=1
            time.sleep(0.5)
        print("-----")
        i=1
```

An "IDLE Shell 3.9.1" window is open, showing the output of the simulation. The output consists of a sequence of colored text followed by a 2-second delay (indicated by dashed lines) and then the next color. The sequence is: yellow2sec, yellow3sec, Green1sec, Green2sec, Green3sec, Green4sec, Green5sec, Green6sec, Green7sec, Green8sec, Green9sec, Green10sec, Green11sec, Green12sec, Green13sec, Green14sec, Green15sec, Red1sec, Red2sec, and Red3sec. The status bar at the bottom of the shell window shows "Ln: 523 Col: 4".

## Result:

Thus, I have successfully compiled a python code for blinking LED and Traffic Lights for Raspberry Pi.