

## Assignment -3

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

**Assignment Date : 29th September 2022**

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#### **Aim:**

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

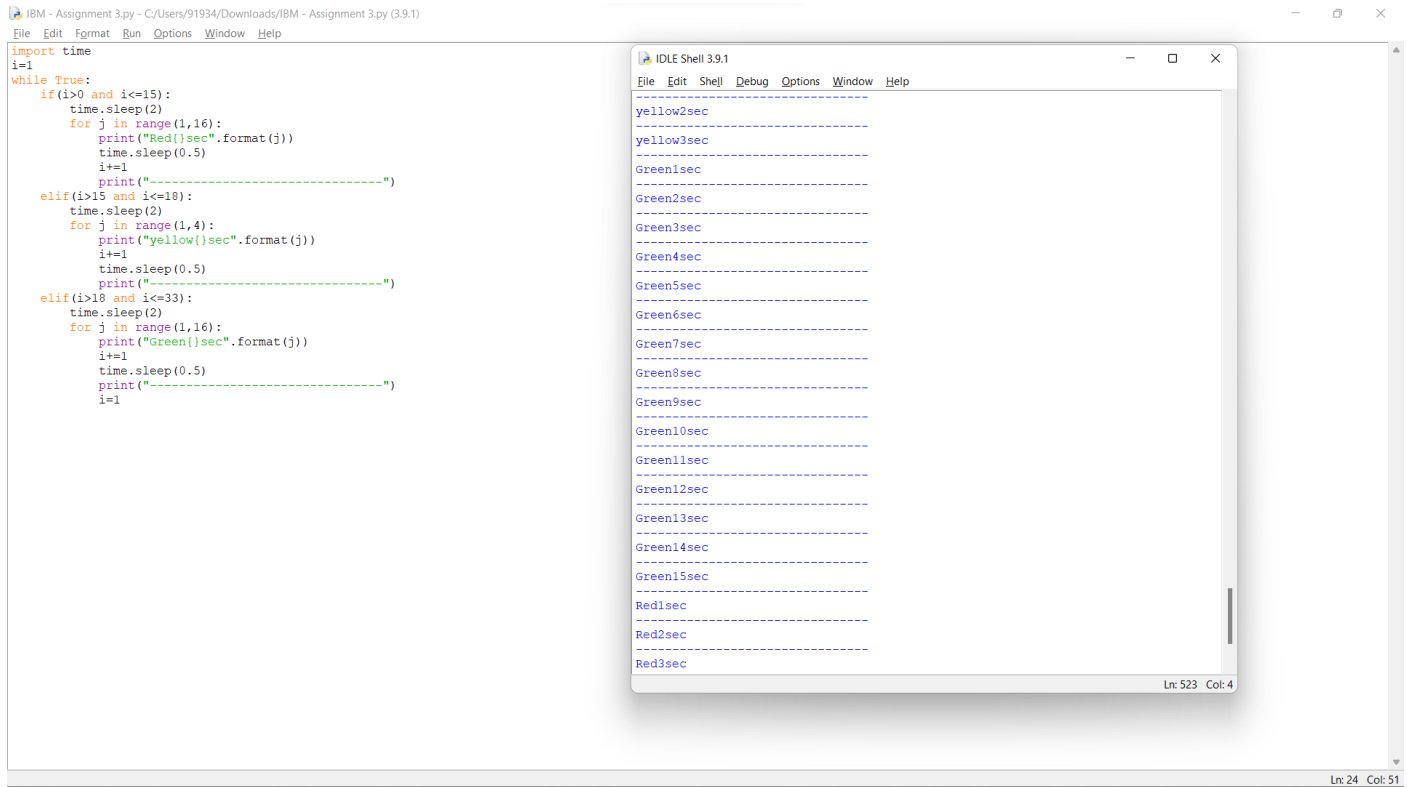
#### **Software used:**

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 with a file named 'IBM - Assignment 3.py'. The code is a simulation of traffic lights, using a while loop and conditional statements to control the sequence of lights (Red, Yellow, Green) and their durations. 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 lines representing the state of the traffic lights over time, with each line preceded by a dashed line separator. The sequence is as follows:

```
-----
yellow2sec
-----
yellow3sec
-----
Green1sec
-----
Green2sec
-----
Green3sec
-----
Green4sec
-----
Green5sec
-----
Green6sec
-----
Green7sec
-----
Green8sec
-----
Green9sec
-----
Green10sec
-----
Green11sec
-----
Green12sec
-----
Green13sec
-----
Green14sec
-----
Green15sec
-----
Red1sec
-----
Red2sec
-----
Red3sec
```

The status bar at the bottom of the IDE shows 'Ln: 24 Col: 51'.

## Result:

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