

ASSIGNMENT-III

AIM:

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

SOFTWARE USED:

Python IDLE 3.10.7 (64 bit)

PROGRAM:

```
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 OUTPUT:

The screenshot displays a Python IDE with two panes. The left pane shows the source code for a simulation, and the right pane shows the output of the program.

Source Code (Left Pane):

```

source_3.py - C:\Users\Admin\Desktop\source_3.py (3.10.7)
File Edit Format Run Options Window Help

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 Output (Right Pane):

```

Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\Admin\Desktop\source_3.py
Red 1 sec
Red 2 sec
Red 3 sec
Red 4 sec
Red 5 sec
Red 6 sec
Red 7 sec
Red 8 sec
Red 9 sec
Red 10 sec
Red 11 sec
Red 12 sec
Red 13 sec
Red 14 sec
Red 15 sec
#####
Yellow 1 sec
Yellow 2 sec
Yellow 3 sec
#####
Green 1 sec
Green 2 sec
Green 3 sec
Green 4 sec
Green 5 sec
Green 6 sec
Green 7 sec
Green 8 sec
Green 9 sec
Green 10 sec
Green 11 sec
Green 12 sec
Green 13 sec
Green 14 sec
Green 15 sec
#####
Red 1 sec
Red 2 sec
Red 3 sec

```

WORKING:

- 1) Red Light glows for 15 seconds.**
- 2) After timeout, Yellow Light glows after an interval (sleep) of 2 seconds.**
- 3) Yellow Light glows for 3 seconds.**
- 4) After timeout, the device goes to sleep mode for 2 seconds.**
- 5) After sleep mode, Green Light glows for 15 seconds.**
- 6) This process is repeated and goes for infinite cycles.**

RESULT:

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