

Assignment – 3

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 shows a PyCharm IDE window with a Python script and an IDLE Shell window displaying the output. The script is a simulation of traffic light cycles. The output shows the sequence of light states and durations.

```

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

```

```

yellow3sec
#####
Green1sec
Green2sec
#####
Green3sec
Green4sec
#####
Green5sec
Green6sec
Green7sec
Green8sec
Green9sec
Green10sec
Green11sec
Green12sec
Green13sec
Green14sec
Green15sec
#####
Red1sec
Red2sec
Red3sec
Red4sec
#####

```

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 device goes for 2 seconds sleep mode
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.