

ASSIGNMENT ~3

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DOMAIN: IOT

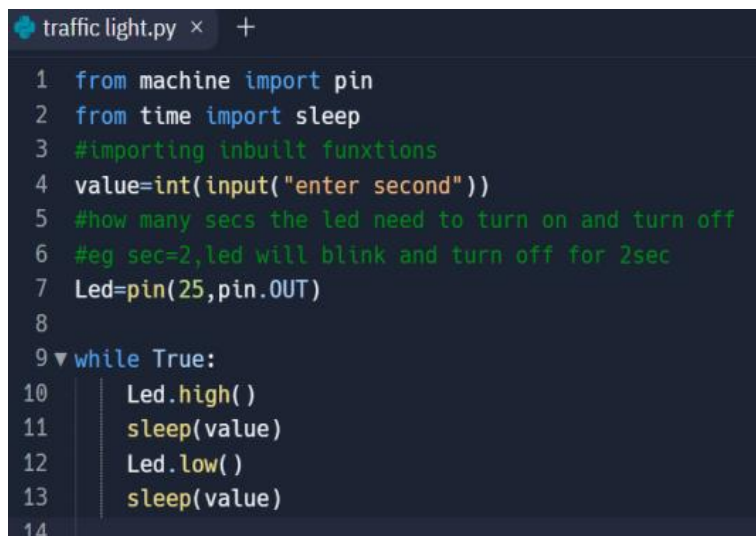
TOPIC:

Write Python code for Blinking LED and Traffic Lights for Raspberry Pi. Only the Python code is enough and need not to execute it in the board.

CODE:

CODE FOR BLINKING OF LED :

```
from machine import pin
from time import sleep
#importing inbuilt funxtions
value=int(input("enter second"))
#how many secs the led need to turn on and turn off
#eg sec=2,led will blink and turn off for 2sec
Led=pin(25,pin.OUT)
while True:
    Led.high()
    sleep(value)
    Led.low()
    sleep(value)
```



The screenshot shows a code editor window titled 'traffic light.py'. The code is as follows:

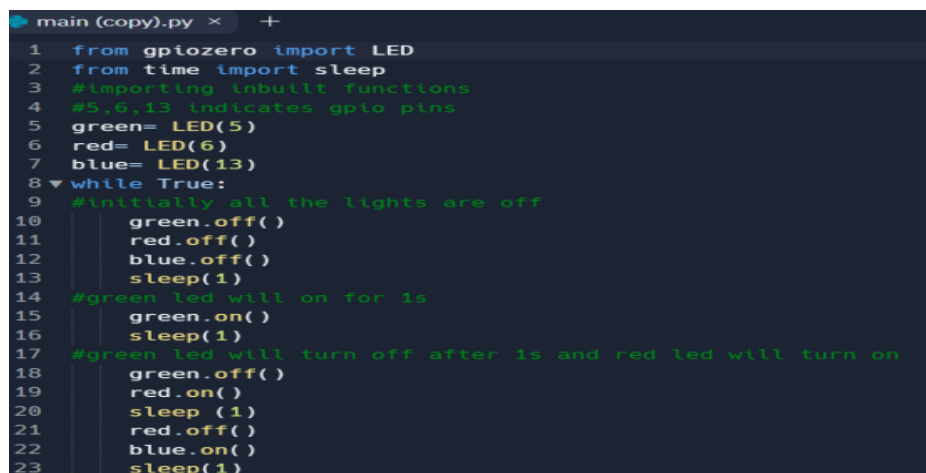
```
1 from machine import pin
2 from time import sleep
3 #importing inbuilt funxtions
4 value=int(input("enter second"))
5 #how many secs the led need to turn on and turn off
6 #eg sec=2,led will blink and turn off for 2sec
7 Led=pin(25,pin.OUT)
8
9 while True:
10     Led.high()
11     sleep(value)
12     Led.low()
13     sleep(value)
14
```

TRAFFIC LIGHT CODE:

```
from gpiozero import LED
from time import sleep

#importing inbuilt functions
#5,6,13 indicates gpio pins
green= LED(5)
red= LED(6)
blue= LED(13)

while True:
    #initially all the lights are off
    green.off()
    red.off()
    blue.off()
    sleep(1)
    #green led will on for 1s
    green.on()
    sleep(1)
    #green led will turn off after 1s and red led will turn on
    green.off()
    red.on()
    sleep (1)
    red.off()
    blue.on()
    sleep(1)
```

A screenshot of a code editor window titled 'main (copy).py'. The code is written in Python and implements a traffic light sequence. It imports LED from gpiozero and sleep from time. It initializes three LED objects: green (pin 5), red (pin 6), and blue (pin 13). A while True loop controls the sequence: first, all lights are turned off and a 1-second delay occurs; then, the green light is turned on for 1 second; then, the green light is turned off, the red light is turned on for 1 second, and the red light is turned off; finally, the blue light is turned on for 1 second. The sequence then repeats.

```
main (copy).py × +
1  from gpiozero import LED
2  from time import sleep
3  #importing inbuilt functions
4  #5,6,13 indicates gpio pins
5  green= LED(5)
6  red= LED(6)
7  blue= LED(13)
8  while True:
9      #initially all the lights are off
10     green.off()
11     red.off()
12     blue.off()
13     sleep(1)
14     #green led will on for 1s
15     green.on()
16     sleep(1)
17     #green led will turn off after 1s and red led will turn on
18     green.off()
19     red.on()
20     sleep (1)
21     red.off()
22     blue.on()
23     sleep(1)
```