

Assignment -3
Python Programming

Assignment Date	03 October 2022
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Maximum Marks	2 Marks

Question-1:

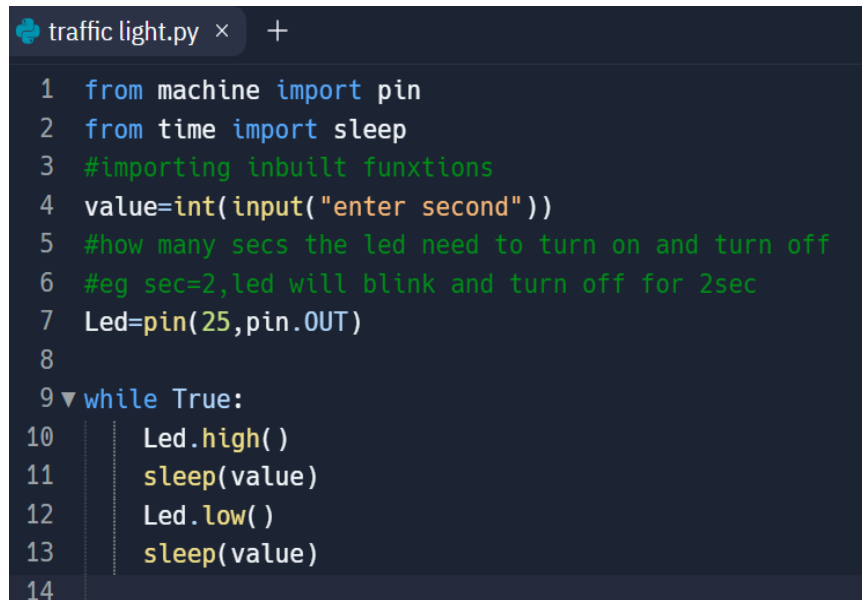
Write Python code for Blinking LED and Traffic Lights for Raspberry Pi. Only the Python code is enough and need not to execute it in the board.

Solution:

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)
```

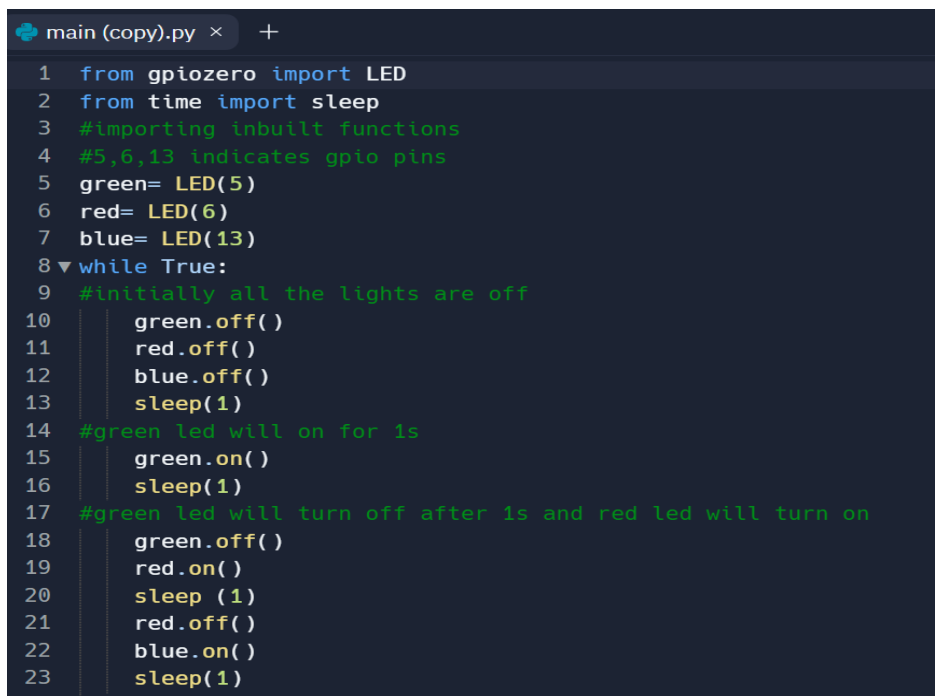
```
while True:
    Led.high()
    sleep(value)
    Led.low()
    sleep(value)
```

A screenshot of a code editor window titled 'traffic light.py'. The code is written in Python and 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 starts with all LEDs off and a 1-second sleep. Then, the green LED turns on for 1 second. Next, the green LED turns off, the red LED turns on, and there is a 1-second sleep. Finally, the red LED turns off, the blue LED turns on, and there is a 1-second sleep. The code is line-numbered from 1 to 23.

```
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)
```