

## Course6- Traffic indicator

### Learning goals:

This course will learn the traffic light experiment, making a very simple traffic light game. The RGB light module is used to simulate the traffic light.

When the RGB light is red, a still human pattern is displayed on the micro:bit LED dot matrix. After 10 seconds, the RGB light will become green, and a walking human pattern is displayed on the micro:bit LED dot matrix.

### Code:

```
from microbit import *
stop = Image("00900:09990:90909:09090:09090")
go = Image("00900:09990:90909:09090:90009")
while True:
    pin0.write_digital(1)
    pin1.write_digital(0)
    pin2.write_digital(0)
    display.show(stop)
    sleep(10000)
    pin0.write_digital(0)
    pin1.write_digital(1)
    pin2.write_digital(0)
    display.show(go)
    sleep(10000)
```

The high level lights up and the low level lights off.

### About wiring:

Expansion board	RGB light Module
P0	Red
P1	Green
P2	Blue
GND	GND

### Programming and downloading:

1. You should open the Mu software, and enter the code in the edit window, , as shown in Figure 6-1.

**Note! All English and symbols should be entered in English, and the last line must be a space.**

```

Mu 1.0.2 - 6.Traffic indicator.py
Mode New Load Save Run Debug REPL Plotter Zoom-in Zoom-out Theme Check Help Quit
6.Traffic indicator.py x
1 from microbit import *
2 stop = Image("00900:09990:90909:09090:09090")
3 go = Image("00900:09990:90909:09090:90009")
4 while True:
5     pin0.write_digital(1)
6     pin1.write_digital(0)
7     pin2.write_digital(0)
8     display.show(stop)
9     sleep(10000)
10    pin0.write_digital(0)
11    pin1.write_digital(1)
12    pin2.write_digital(0)
13    display.show(go)
14    sleep(10000)

```

Figure 6-1

2. As shown in Figure 6-2, you need to click the Check button to check if our code has an error. If a line appears with a cursor or an underscore, the program indicating this line is wrong.

```

Mu 1.0.2 - 6.Traffic indicator.py
Mode New Load Save Run Debug REPL Plotter Zoom-in Zoom-out Theme Check Help Quit
6.Traffic indicator.py x
1 from microbit import *
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8     display.show(stop)
9     sleep(10000)
10    pin0.write_digital(0)
11    pin1.write_digital(1)
12    pin2.write_digital(0)
13    display.show(go)
14    sleep(10000)

```

Figure 6-2

3. You need to connect the micro data cable to micro:bit and the computer, then click the Flash button to download the program to micro:bit as shown in Figure 7-3.

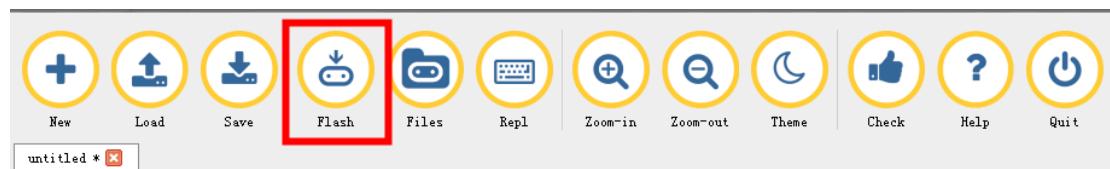


Figure 6-3

6-4.The wiring is as shown in Figure.

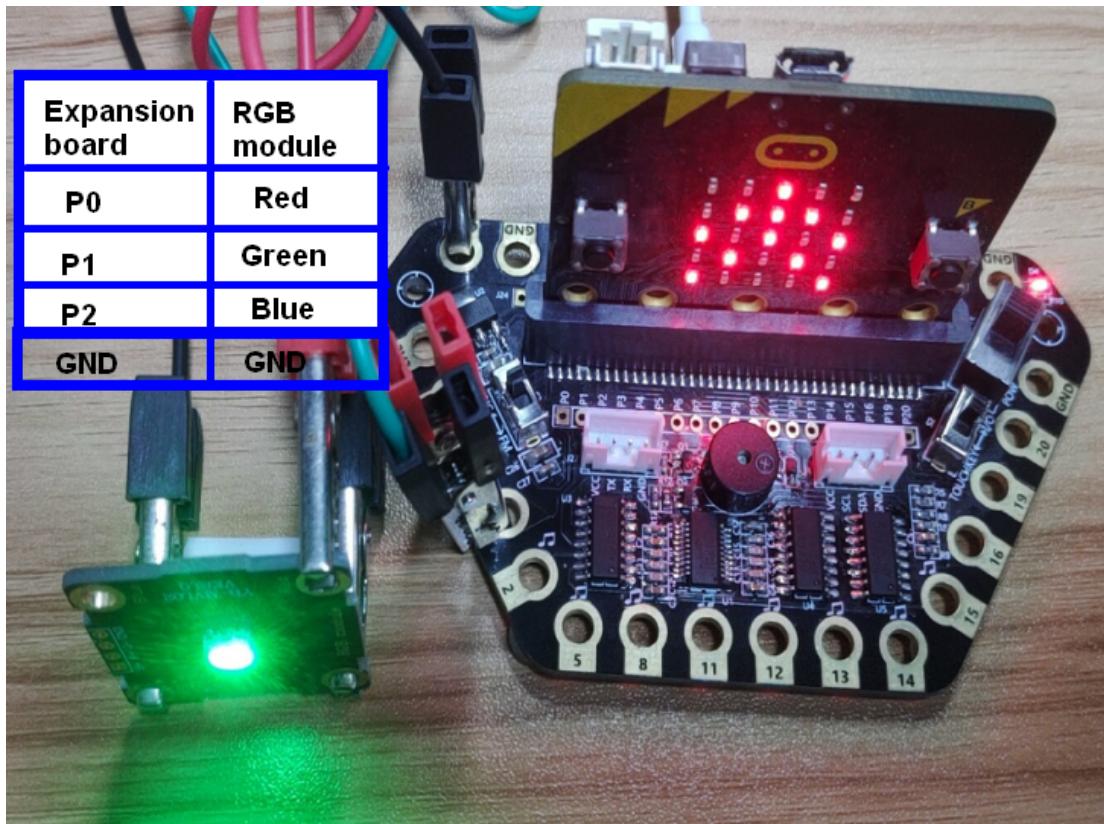


Figure 6-4

5.After downloading the program, you can see that the RGB light module is red, and a still people pattern is displayed on the dot matrix. After 10 seconds, the RGB light module is green, and a walking people pattern is displayed on the dot matrix, as shown in Figure 6- 5 and Figure 6-6.

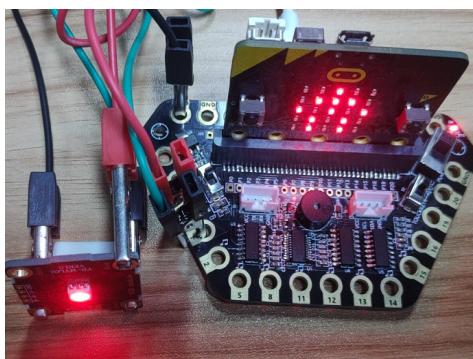


Figure 6-5

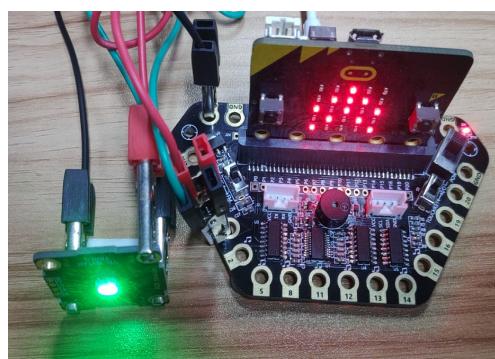


Figure 6-6