

Control RGB lights

Learning goals

In this lesson, we mainly learn how to control RGB lights.

Code

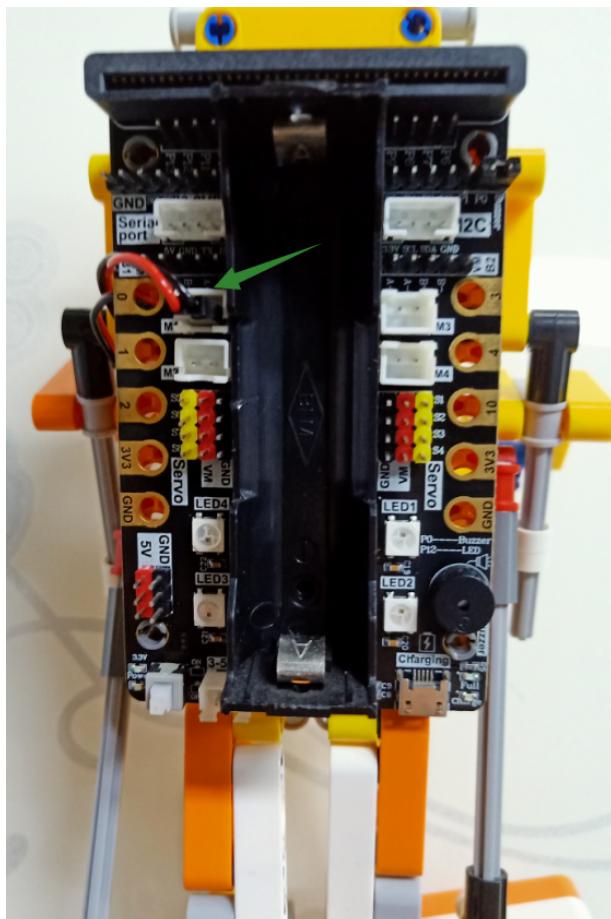
```
1 from microbit import *
2 import neopixel
3
4 np = neopixel.NeoPixel(pin12, 4)
5 display.show(Image.HAPPY)
6
7 while True:
8     np.clear()
9     np[0] = (255, 0, 0)
10    np[1] = (255, 0, 0)
11    np[2] = (255, 0, 0)
12    np[3] = (255, 0, 0)
13    np.show()
14    sleep(1000)
15
16    np.clear()
17    np[0] = (0, 255, 0)
18    np[1] = (0, 255, 0)
19    np[2] = (0, 255, 0)
20    np[3] = (0, 255, 0)
21    np.show()
22    sleep(1000)
23
24    np.clear()
25    np[0] = (0, 0, 255)
26    np[1] = (0, 0, 255)
27    np[2] = (0, 0, 255)
28    np[3] = (0, 0, 255)
29    np.show()
30    sleep(1000)
31
```

About wiring

As shown below,

Building block motor connect to M1 interface of super:bit.

The black wiring of the motor is near the battery side.



Programming and downloading

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

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

```

Ferris wheel rotate.py ✘
1 from microbit import *
2 import superbit
3
4 display.show(Image.HAPPY)
5
6 while True:
7     superbit.motor_control(superbit.M1, 255, 0)
8

```

2. You can 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.

```

Ferris wheel rotate.py ✘
1 from microbit import *
2 import superbit
3
4 display.show(Image.HAPPY)
5
6 while True:
7     superbit.motor_control(superbit.M1, 255, 0)
8

```

Good job! No problems found!

3. Click the 'REPL' button to check whether the super:bit library has been downloaded. If not, please refer to the [1.preparation before class] ---> [2.How to import Yahboom superbit library] import super:bit library tutorial.

```

Mu 1.0.3 - Ferris wheel rotate.py
Mode New Load Save Flash Files REPL Plotter Zoom-in Zoom-out Theme
Ferris wheel rotate.py ×
1 from microbit import *
2 import superbit
3
4 display.show(Image.HAPPY)
5
6 while True:
7     superbit.motor_control(superbit.M1, 255, 0)
BBC micro:bit REPL

MicroPython for Super:bit V1.1 modified by Yahboom Team
Type "help()" for more information.
>>>
>>> |

```

4. After writing the code, please click the 'Flash' button to download the program to the micro:bit board.

```

Mode New Load Save Flash Files REPL Plotter Zoom-in Zoom-out
Ferris wheel rotate.py ×
1 from microbit import *
2 import superbit
3
4 display.show(Image.HAPPY)
5
6 while True:
7     superbit.motor_control(superbit.M1, 255, 0)

```

If the program is wrong or the experimental phenomenon is wrong after downloading, please confirm whether you have downloaded the Superbit library hex file we provided to the micro:bit board.

For the specific method of adding library files, please refer to [【Preparation before class】---【How to import Yahboom superbit library】](#)

Experimental phenomena



After the program is successfully downloaded, the micro:bit dot matrix will display the smile pattern and RGB lights will switch color (red--green--blue), the time interval is 1 second.