

Button control robot

Learning goals

In this lesson, we mainly learn how to control robot by button.

Code

```
1 from microbit import *
2
3 import microbit
4 import superbit
5
6 display.show(Image.HAPPY)
7 superbit.motor_control(superbit.M1, 0, 0)
8
9 while True:
10     if microbit.button_a.is_pressed():
11         superbit.motor_control(superbit.M1, 255, 0)
12     if microbit.button_b.is_pressed():
13         superbit.motor_control(superbit.M1, -255, 0)
14
```

Import microbit and superbit library.

`display.show(Image.HAPPY)` : Micro:bit dot matrix will display a smile pattern.

`superbit.motor_control(superbit.M1, 0, 0)` : Initialize the speed of the motor to 0, which means that the motor stops rotating.

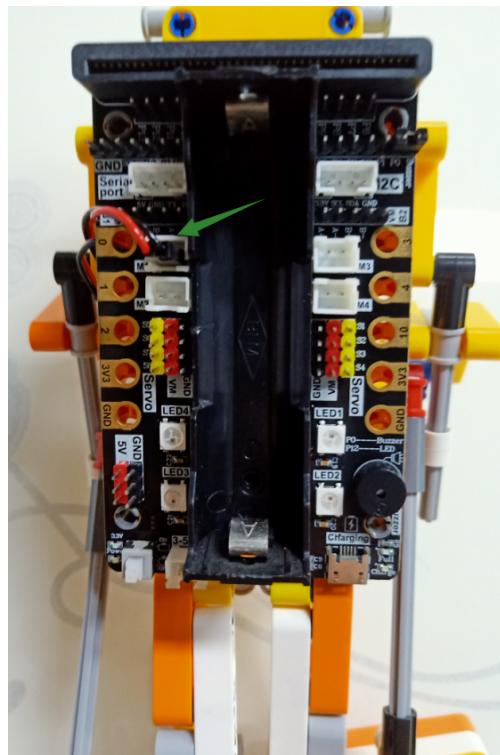
Determines whether button A and B is pressed in an loop, if button A is pressed, motor with 255 speed, if button B is pressed, motor with -255 speed.

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
from microbit import *
import superbit
display.show(Image.HAPPY)
while True:
    superbit.motor_control(superbit.M1, 255, 0)
```

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)
```

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.

```
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.

The screenshot shows the Yahboom micro:bit editor interface. At the top, there is a toolbar with several icons: Mode, New, Load, Save, Flash (which is highlighted with a red border), Files, REPL, Plotter, Zoom-in, and Zoom-out. Below the toolbar, a file tab labeled 'Ferris wheel rotate.py' is open. The code editor contains the following Python script:

```
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 the robot will stop, when we press the A button, the robot will advance, when we press the B button, the robot will back.