Button control speed

Learning goals

In this lesson, we mainly learn how to control motor speed by micro:bit button.

Code

```
from microbit import *

import microbit
import superbit

display.show(Image.HAPPY)
a = 0

def limit_change():
    global a
    if microbit.button_a.is_pressed():
        a = a + 50
        if a > 255:
            a = 255
    if microbit.button_b.is_pressed():
        a = a - 50
        if a < 0:
            a = 0
    return

while True:
    limit_change()
    superbit.motor_control(superbit.M1, a, 0)
    sleep(500)

```

About wiring

We need to connect two building block motors to the **M1** interfaces of the Super:bit expansion board.

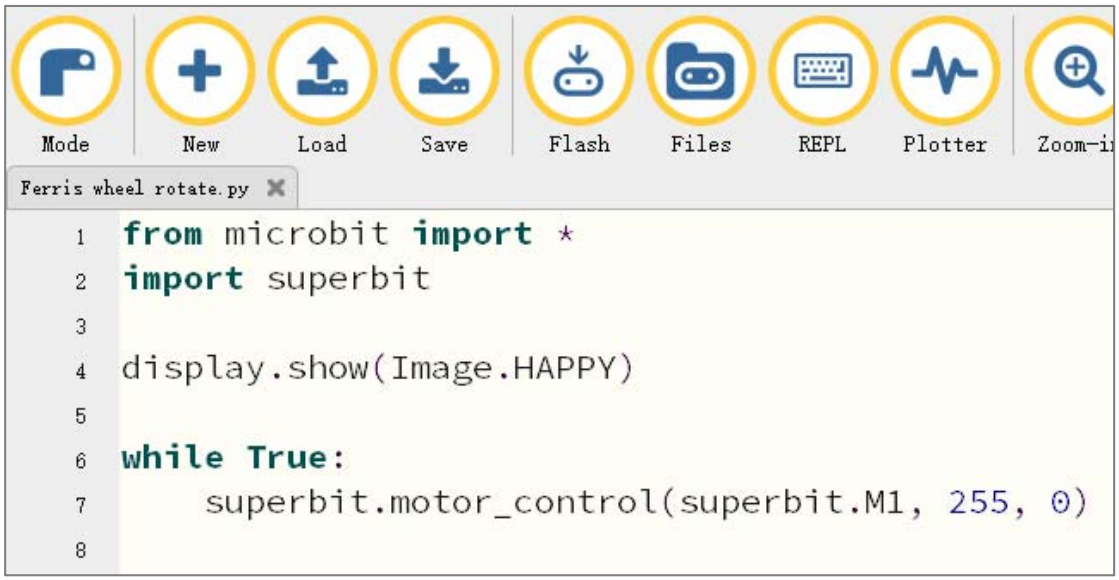
The black wiring of the motor is near the battery side.

Programming and downloading:

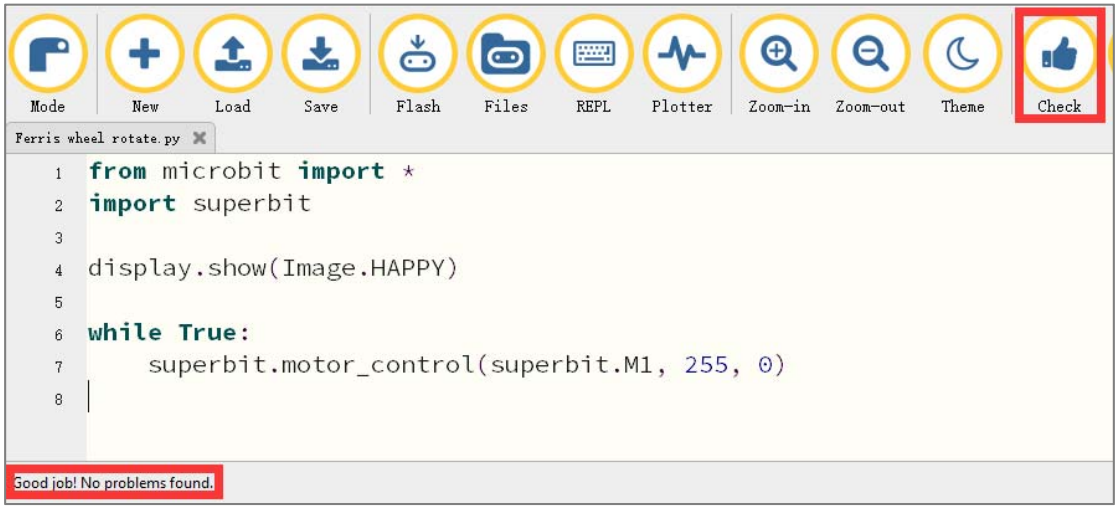
1.You should open the Mu software, and enter the code in the edit window, ,

as shown below.

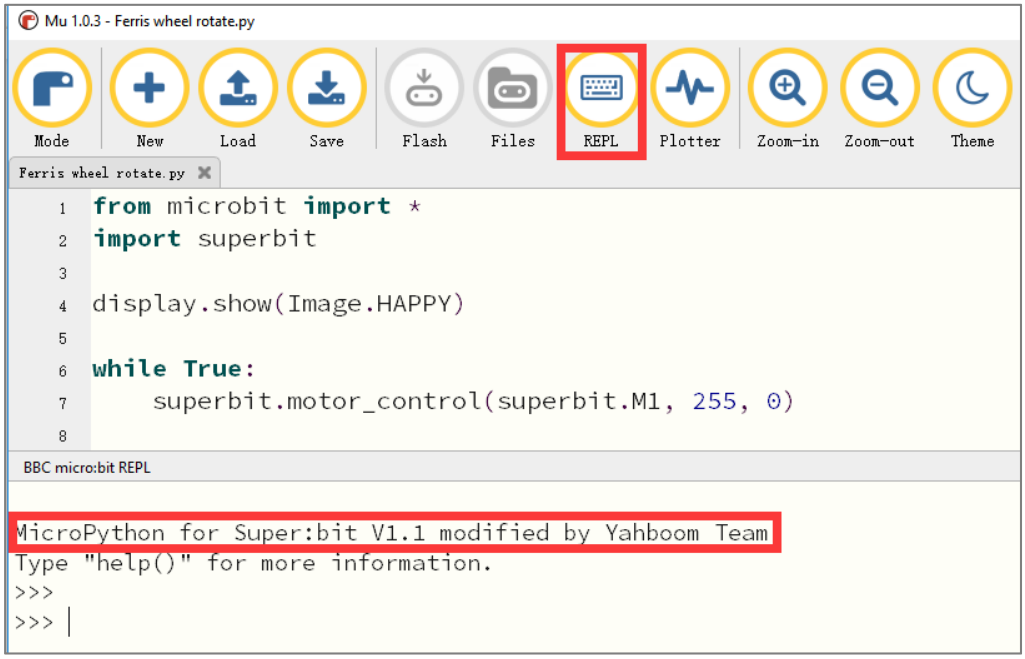
Note! All English and symbols should be entered in English, and the last line must be a space.



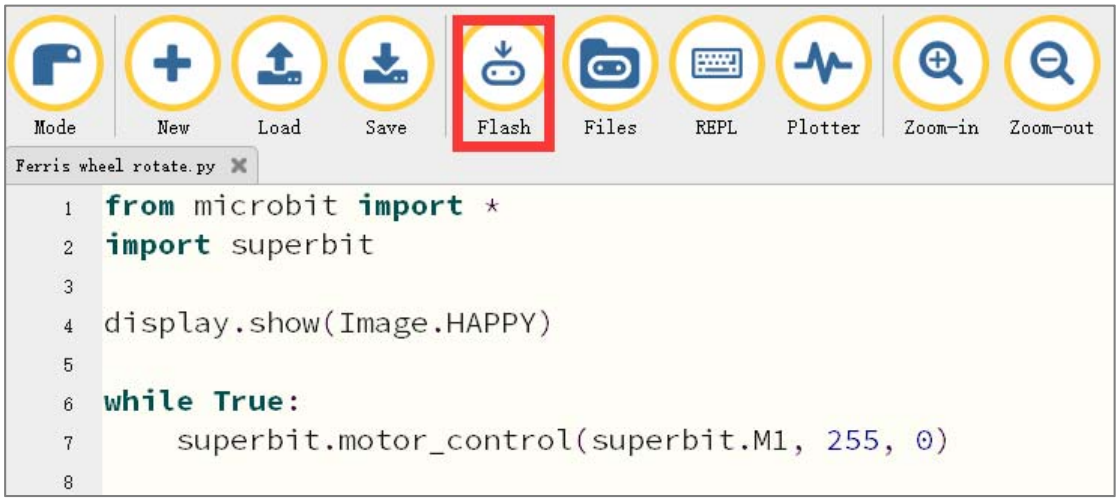
2.You can click the **"Check"** button to check if our code has an error. If a line appears with a cursor or an underscore, the program indicating this line is wrong.



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.



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



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, open the power switch, the building block motor stops; press the micro:bit A button to increase the speed, the maximum speed is 250; press the micro:bit B button to decrease the speed, the lowest speed is 0.
If you need to start over, press the reset button on the back of the micro:bit board.