

4. Code Analysis

For the program of this course, please see the **Waving wings.py** file.

```
from microbit import *  
import superbit
```

First, import the library needed for this lesson from microbit: the superbit library is dedicated to the superbit expansion board.

```
display.show(Image.HAPPY)
```

display.show(Image.HAPPY): Display a smiley face pattern on the microbit dot matrix;

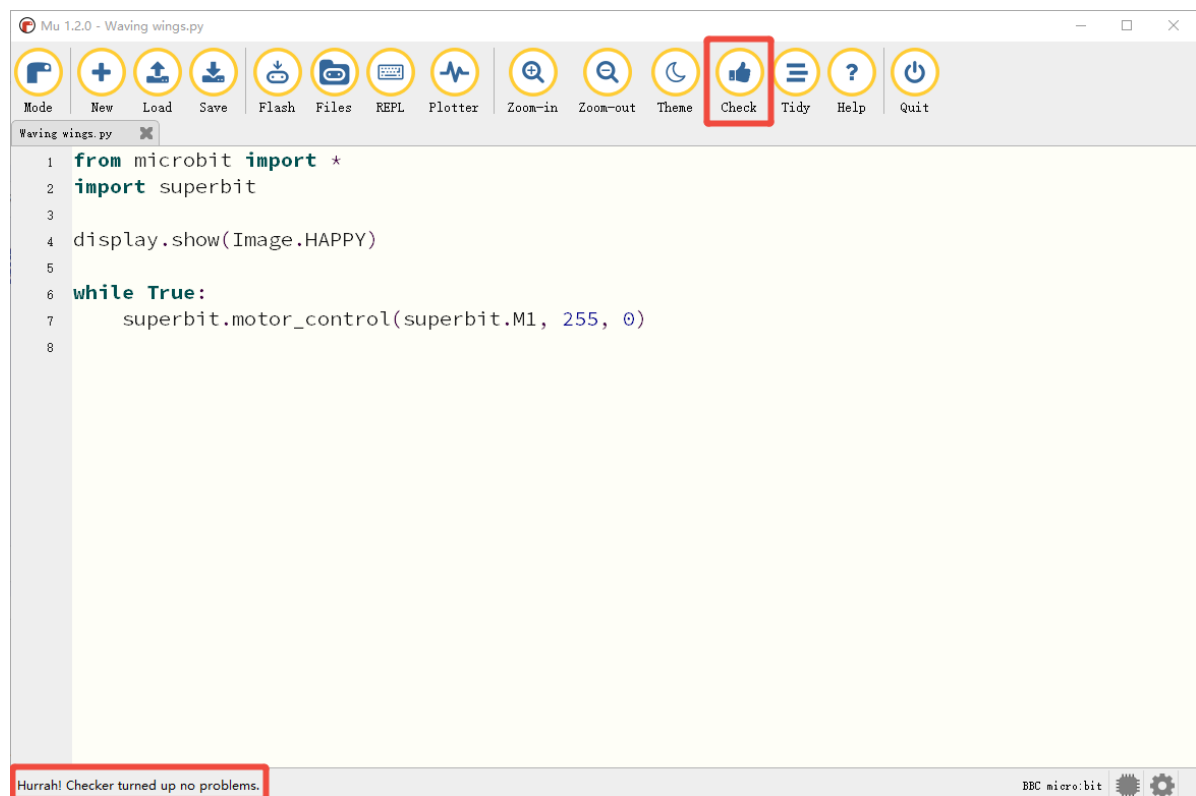
```
while True:  
    superbit.motor_control(superbit.M1, 255, 0)
```

while True: infinite loop

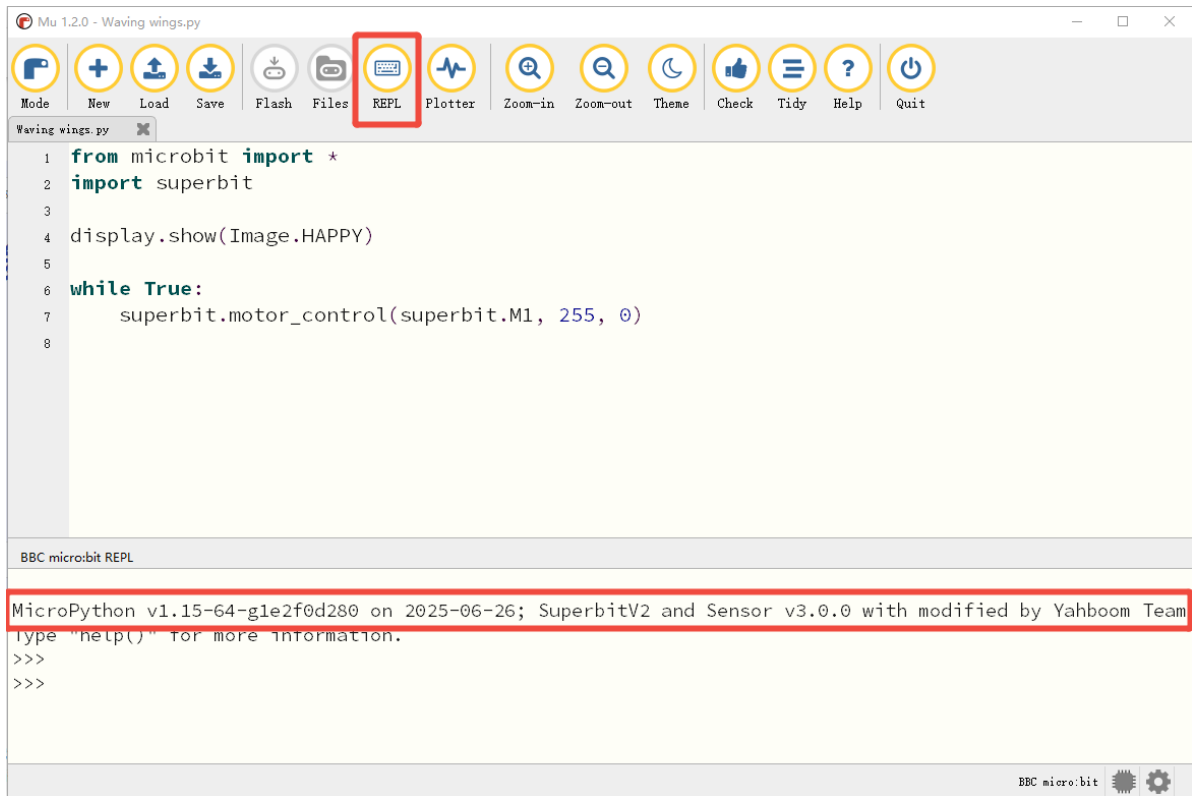
superbit.motor_control(superbit.M1, 255, 0): The motor of the M1 interface rotates forward at a speed of 255, and the dragon knight's wings flap;

5. Write and download the program

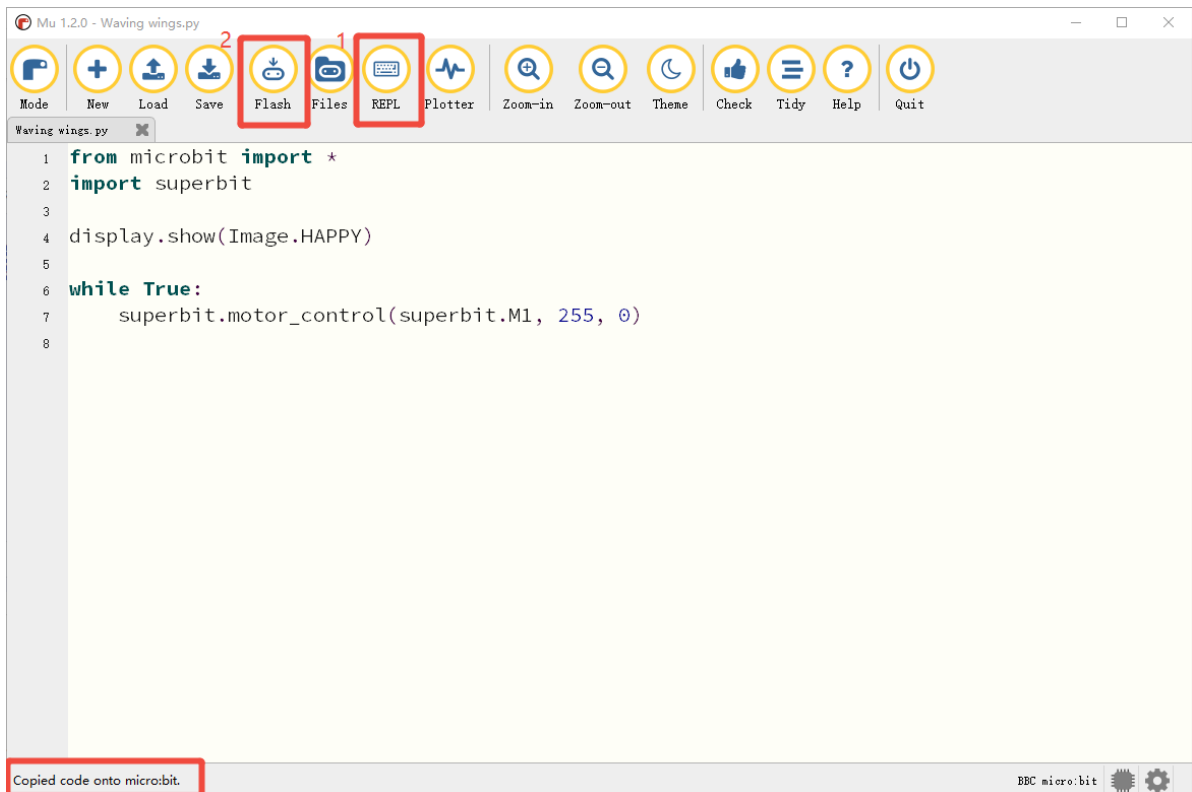
1. Open the Mu software and enter the code in the editing window. **Note! All English and symbols should be entered in English mode, use the Tab key (tab key) for indentation, and the last line ends with a blank program.**
2. Click the thumb 'Check' button to check if there are any errors in our code. If a cursor or underline appears in a line, it means a syntax error. Please check and modify it. If there is no error, the lower left corner will prompt that there is no problem with the detection.



3. Click the 'REPL' button to check whether the Superbit library has been downloaded. If not, please refer to [Preparation before class] --> [2.4 Python Programming Guide].



4. After the program is written, connect the computer and the microbit mainboard with a microUSB data cable, and click the 'Flash' button to download the program to the micro:bit mainboard. **(You need to click the 'REPL' button again to turn off the import library file function before you can download the program normally).**



5. If the download fails, please confirm whether the microbit is properly connected to the computer via the microUSB data cable and the Superbit Python library has been imported.

6. Experimental phenomenon

After the program is successfully downloaded, turn on the power switch, and a smiley face pattern will be displayed on the micro:bit dot matrix, as shown in the figure below. After turning on the power switch, the wings on both sides of the dragon knight begin to flutter.

If you need to restart, press the reset button on the back of the micro:bit motherboard.