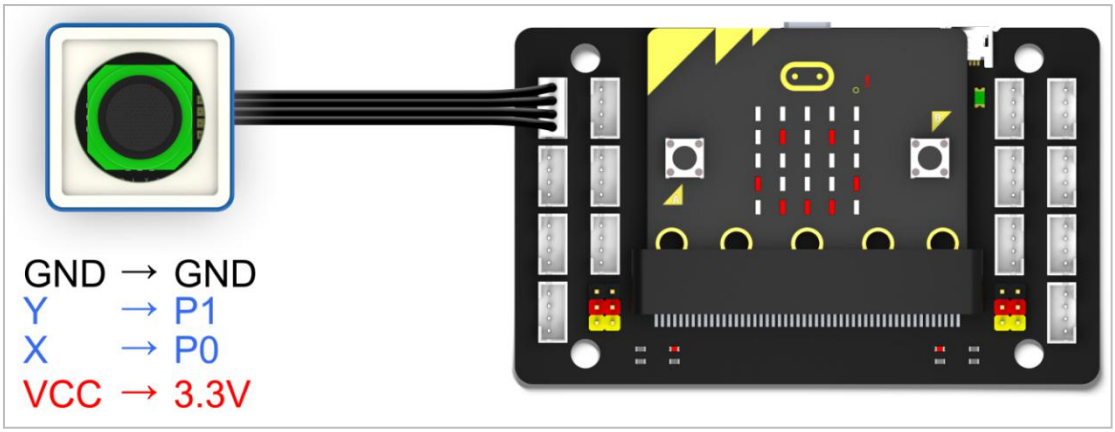
Control rocker

1. Learning target

In this course, we will learn how to use Micro:bit and rocker module to achieve read the status of the joystick.

2. Preparation

Connect the module to Micro:bit board by expansion board, as shown below.



3. About code

```
# -*- coding: utf-8-*-# Encoding cookie added by Mu Editor
from microbit import *
import WOM_Sensor_Kit

while True:
    # Parameter definition: WOM_rocker (pin X, pin Y, status) returns 1 or 0
    if WOM_Sensor_Kit.WOM_rocker(pin0, pin1, WOM_Sensor_Kit.WOM_up) == 1:
        display.show(Image.ARROW_N)
    elif WOM_Sensor_Kit.WOM_rocker(pin0, pin1, WOM_Sensor_Kit.WOM_down) == 1:
        display.show(Image.ARROW_S)
    elif WOM_Sensor_Kit.WOM_rocker(pin0, pin1, WOM_Sensor_Kit.WOM_left) == 1:
        display.show(Image.ARROW_E)
    elif WOM_Sensor_Kit.WOM_rocker(pin0, pin1, WOM_Sensor_Kit.WOM_right) == 1:
        display.show(Image.ARROW_W)
```

1) from microbit import * means to import all library files from the microbit library. This statement is required for every program when using the microbit.

2) import WOM_Sensor_Kit means to import the library of the magic block world. This library must be imported when using the related functions of the magic block world.

3) while True: means is that infinite loop.

4) if WOM_Sensor_Kit.WOM_rocker(pin0, pin1, WOM_Sensor_Kit.WOM_up) == 1: means is that

make RGB lights up white. Determine the status of the joystick module

5) display.show(Image.ARROW_N) Micro:bit dot matrix display arrow pattern.

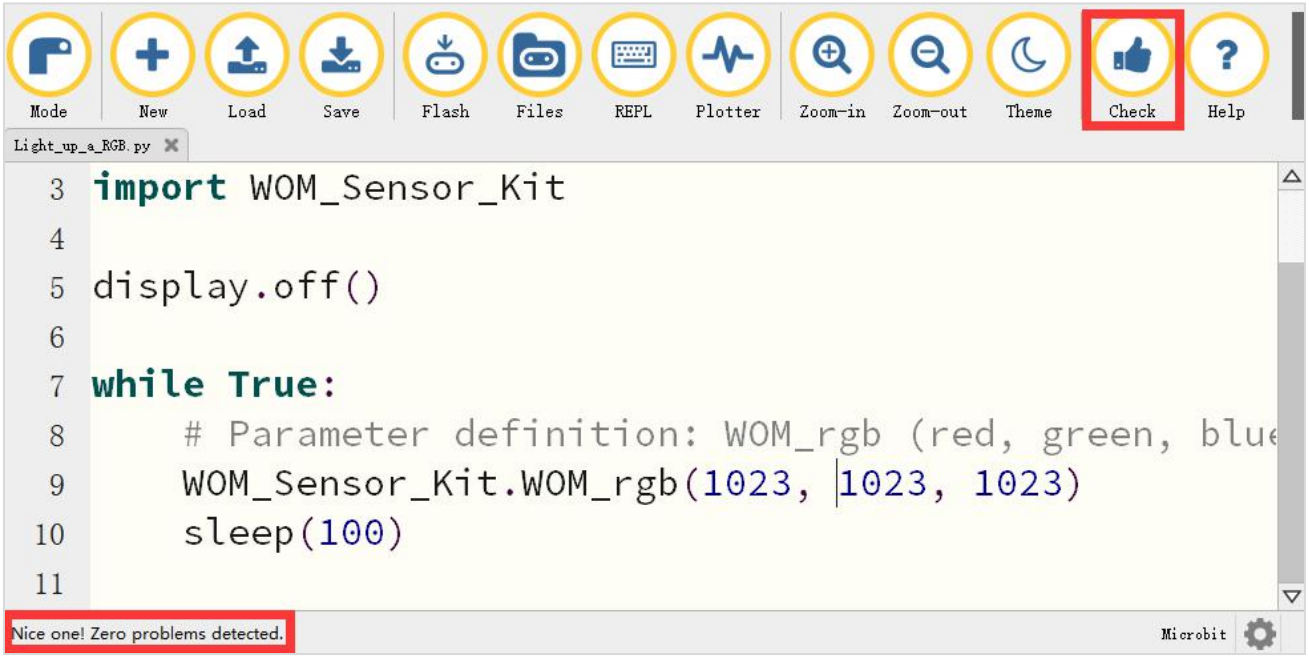
4.Writing and download code

4.1 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, use the Tab key (tab key) to indent and the last line must be a space.

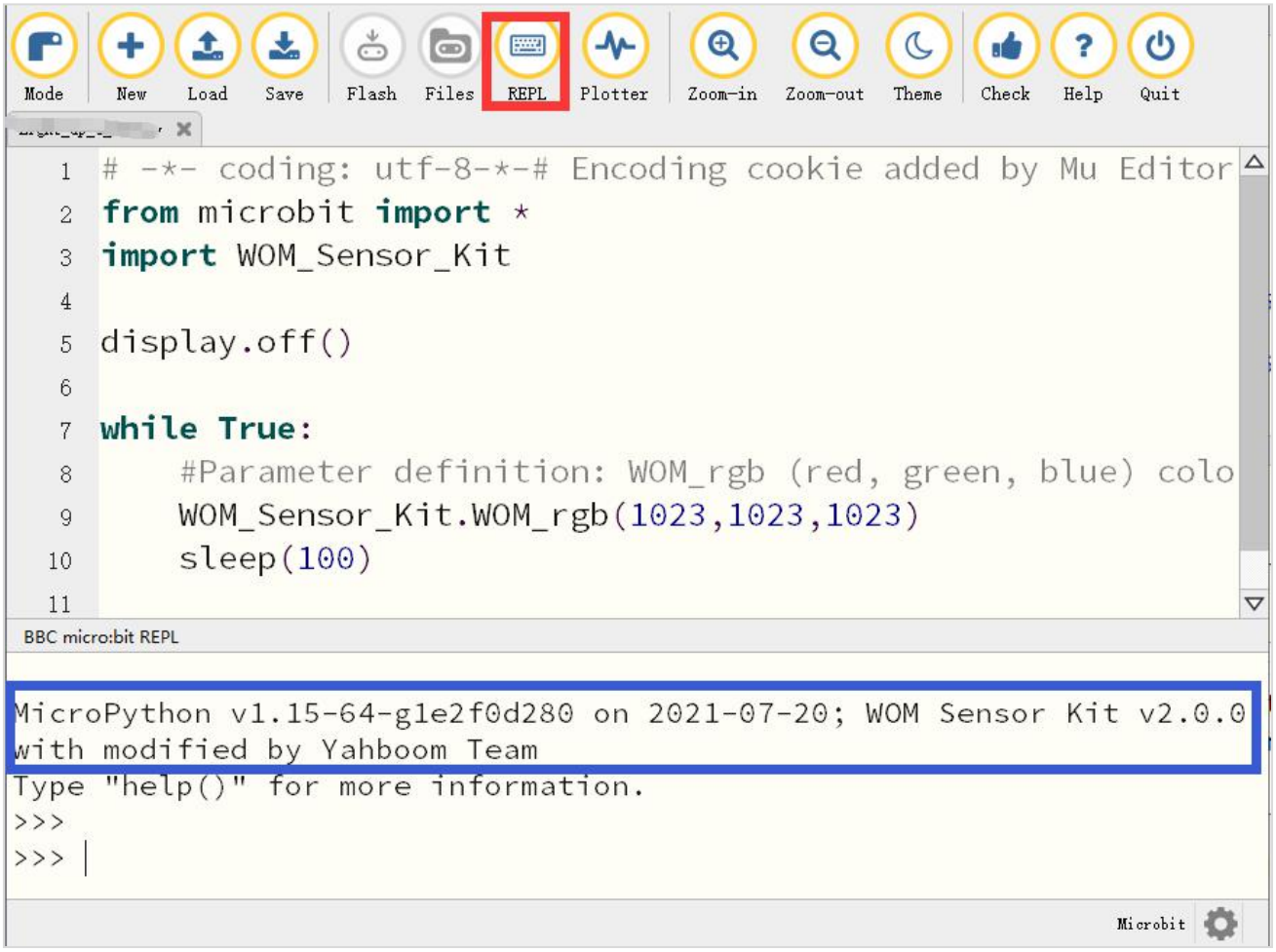
4.2 You can click the “Check” button to check if our code has an error.

If a cursor or underline appears on a line, it indicates a syntax error, please check and modify. If there is no error in the program, the bottom left of the interface will prompt that there is no problem in detection.

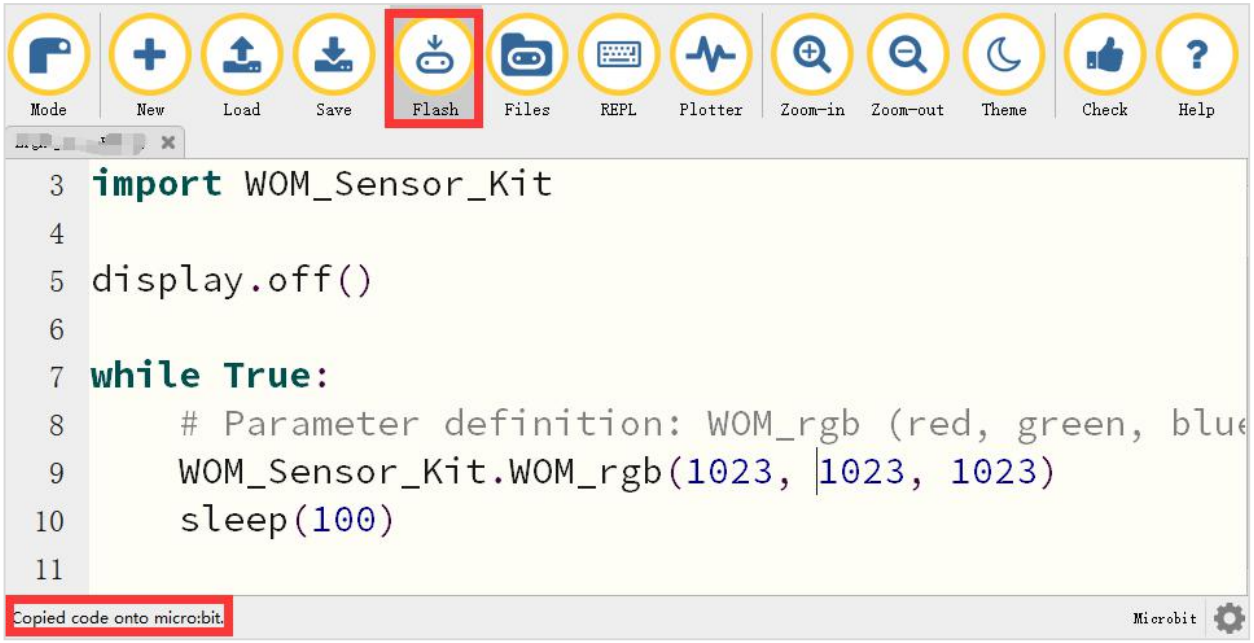


4.3 Click the ‘REPL’ button to check whether the WOM_Sensor_Kit Python library has been downloaded.

If not, please refer to [Preparation before class] --> [Python Programming Guide] .



4.4 After the program is written, use a micro USB cable to connect the computer and the micro:bit board. Please click the 'Flash' button to download the program to the micro:bit motherboard (You need to click the 'REPL' button again to close the function of importing library files before you download the program).



4.5 If the download failed, please confirm whether the micro:bit is connected to the computer through the micro USB data cable, and confirm whether the **WOM_Sensor_Kit Python library** has been imported.

5. Phenomenon

After the program is downloaded successfully. When we push the joystick in four directions, the Micro:bit dot matrix displays arrow patterns in different directions.