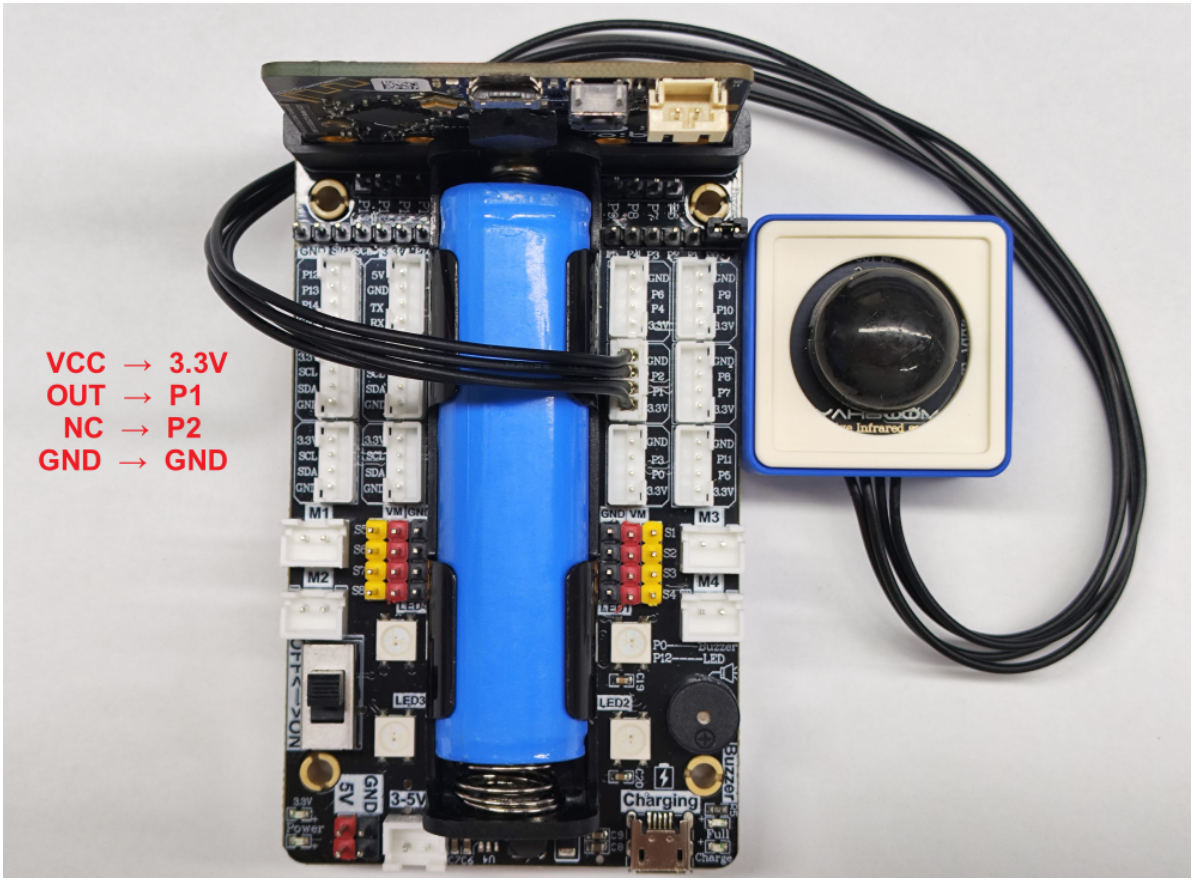
Human body infrared detection broadcast

1. Learning objectives

In this course, we mainly learn how to realize the display of human infrared detection broadcast function through python programming.

2. Sensor wiring

The human infrared sensing module is connected to the P1P2 interface.



3. Code analysis

For the program of this course, please see the **Human-body-infrared-detection-broadcast.py** file.

```
from microbit import *
import WOM_Sensor_Kit
import music
```

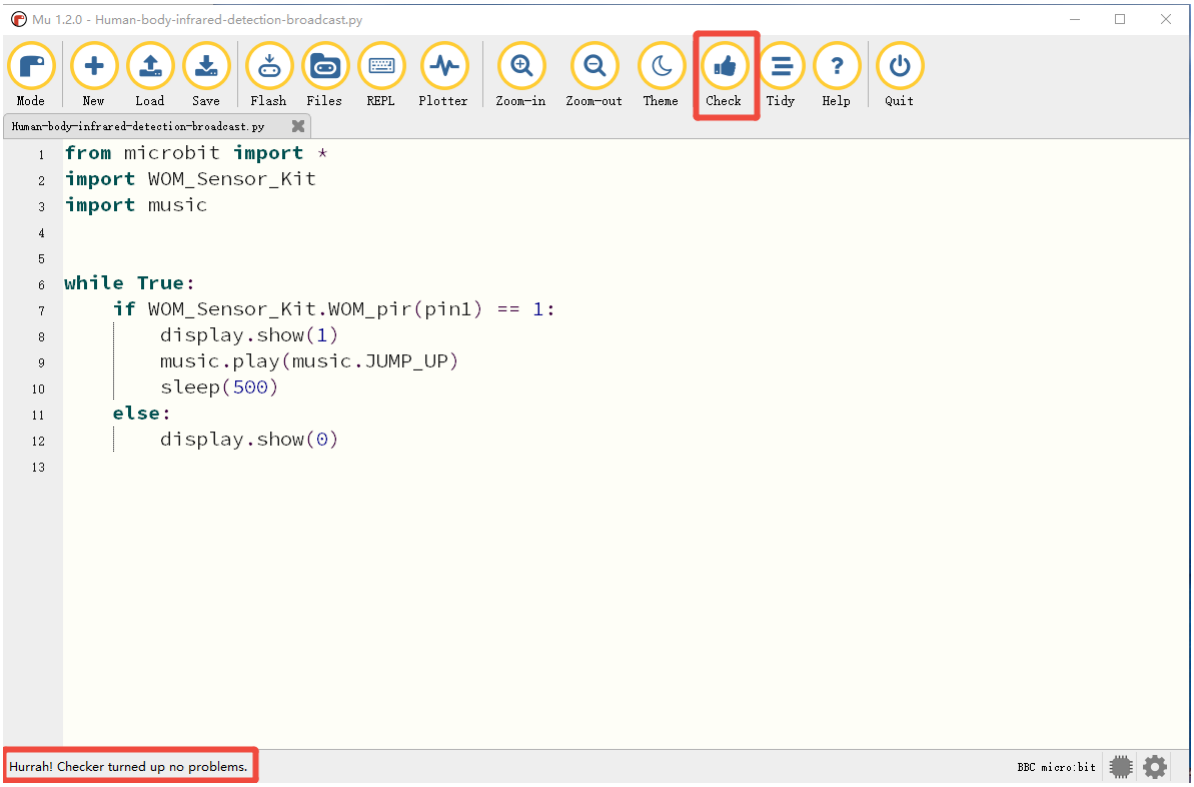
First, import the libraries needed for this lesson from microbit: WOM_Sensor_Kit library is used for sensors; music library is used to play music.

```
while True:
if WOM_Sensor_Kit.WOM_pir(pin1) == 1:
display.show(1)
music.play(music.JUMP_UP)
sleep(500)
else:
display.show(0)
```

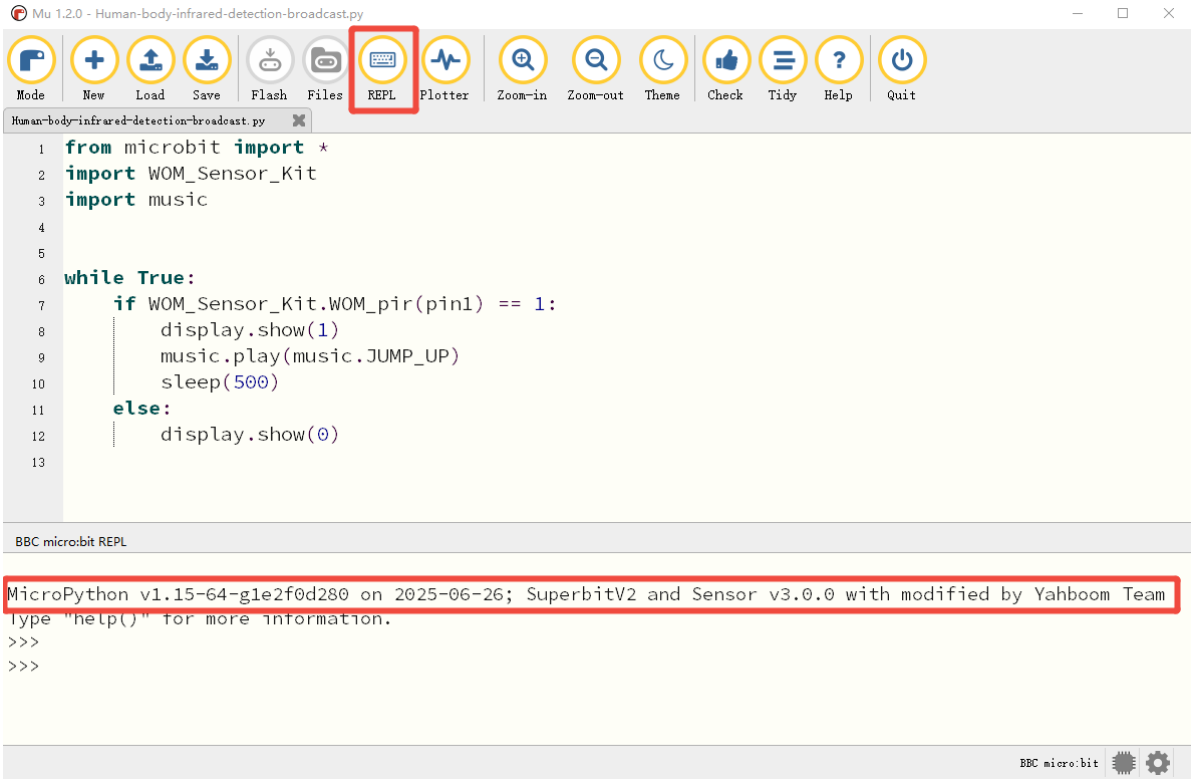
Read the value of the human infrared sensor module on `pin1` in an infinite loop. If a person is detected (the return value is `1`), display the number `1`, play the `JUMP_UP` sound effect, and wait for 0.5 seconds to avoid repeated triggering too quickly; if no person is detected, display the number `0`.

4. Write and download the program

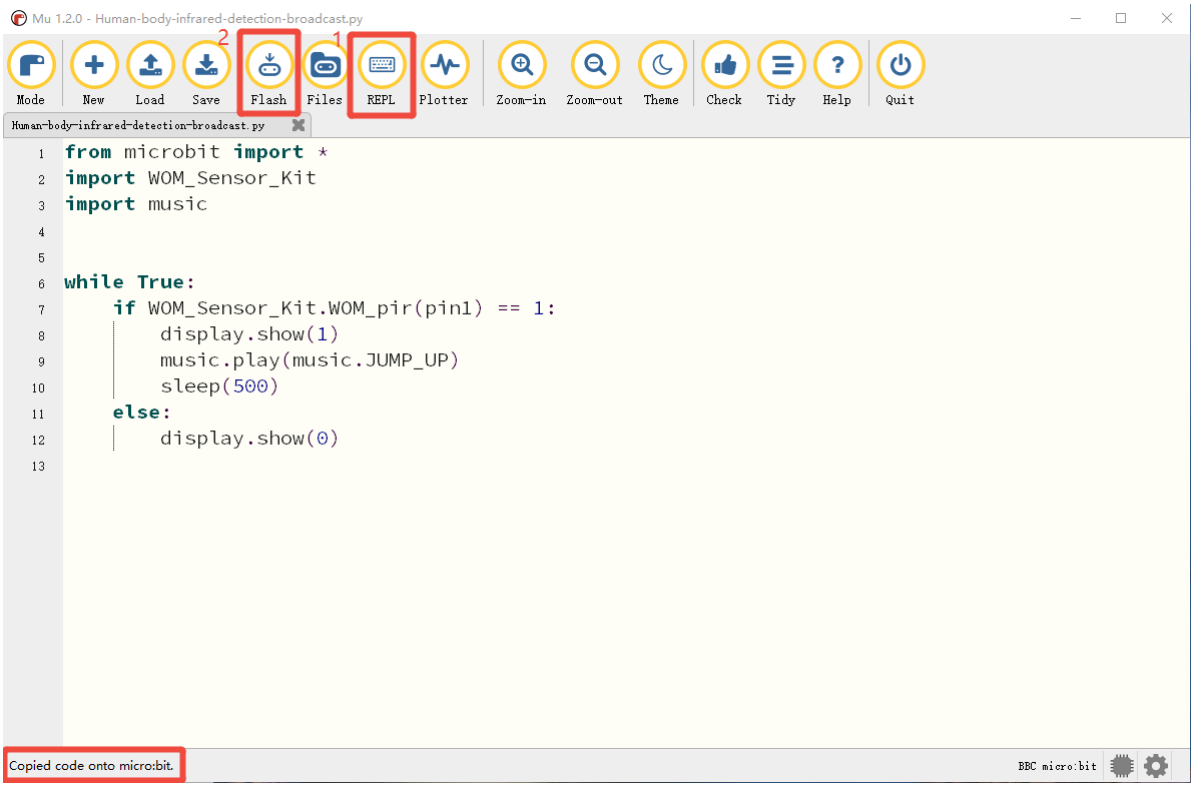
1. Open the Mu software and enter the code in the editing window. **Note! All English and symbols should be entered in English mode, use the Tab key (tab key) for indentation, and the last line ends with a blank program.**
2. Click the thumb 'Check' button to check if there are any errors in our code. If a cursor or underline appears on 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. Please 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.

5. Experimental phenomenon

After turning on the computer, wait for a few seconds to initialize. After the dot matrix displays 0, the program runs successfully. When the human infrared detects someone, the dot matrix displays 1 and then plays the jump up music, otherwise it displays 0.