7. Roshambo

1. Learning goals

In this lesson, we will learn to use micro:bit and Wrist:bit complete roshambo game.

2.Code and analysis

```
from microbit import *
import microbit
import random

scissors = Image("99009:"
                 "99090:"
                 "00900:"
                 "99090:"
                 "99009")

stone = Image("00000:"
              "09990:"
              "09090:"
              "09990:"
              "00000")

cloth = Image("99999:"
              "90009:"
              "90009:"
              "90009:"
              "99999")

display.show(Image.HAPPY)

while True:
    x, y, z = accelerometer.get_values()
    if x+y+z > 900:
        microbit.sleep(800)
        value = random.randint(0, 2)
        if value == 0:
            display.show(scissors)
        elif value == 1:
            display.show(stone)
        elif value == 2:
            display.show(cloth)
```

In the loop, determine whether there is shaking of the watch by detecting the three-axis acceleration of x, y, and z, and generate an integer random number between 0-2 through the randint() random number function to select the pattern of the rock paper scissors.

Note:

1 - The capital letter/lowercase letters must be distinguished !

2 - Correct spelling!

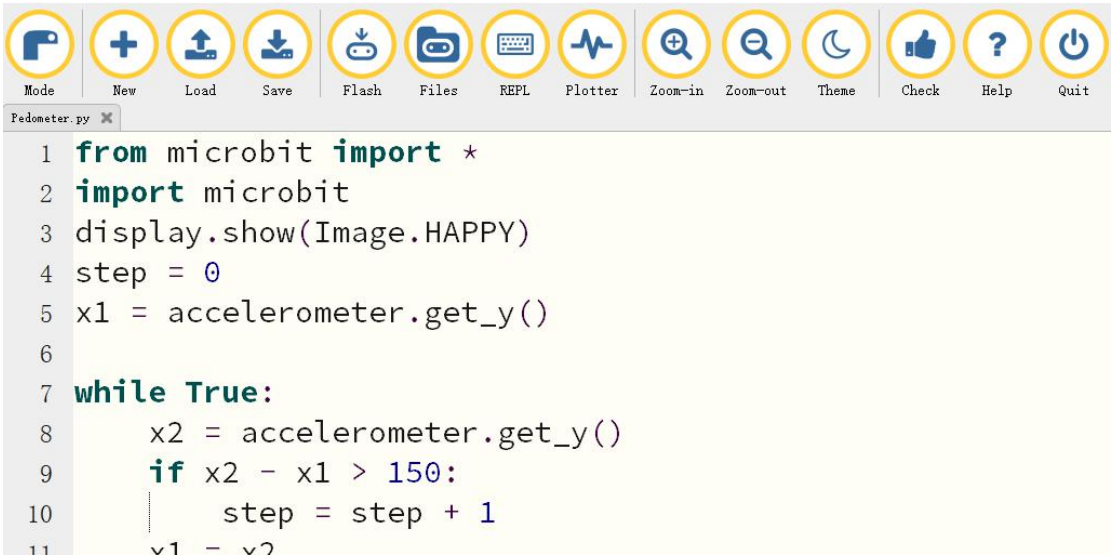
3 - Keywords such as # need a space between the content.

4 - You can only use the Tab key (tabulation key) for indentation.

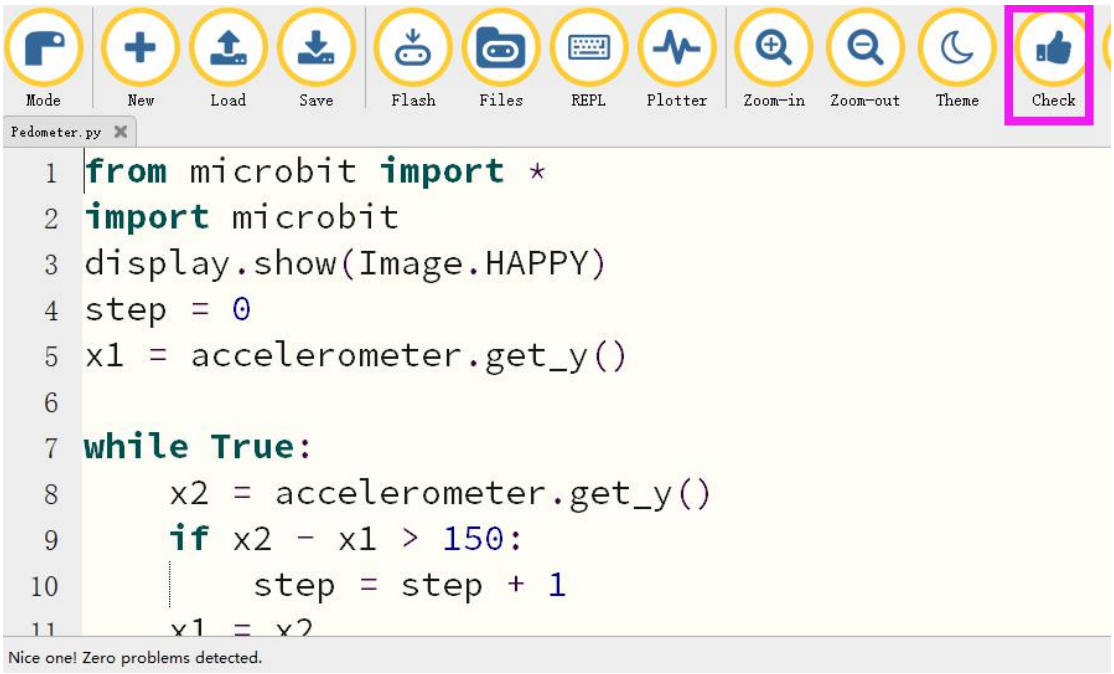
3. Programming and downloading

3.1 You should open the Mu software, and enter the code in the edit window, , as shown in figure .

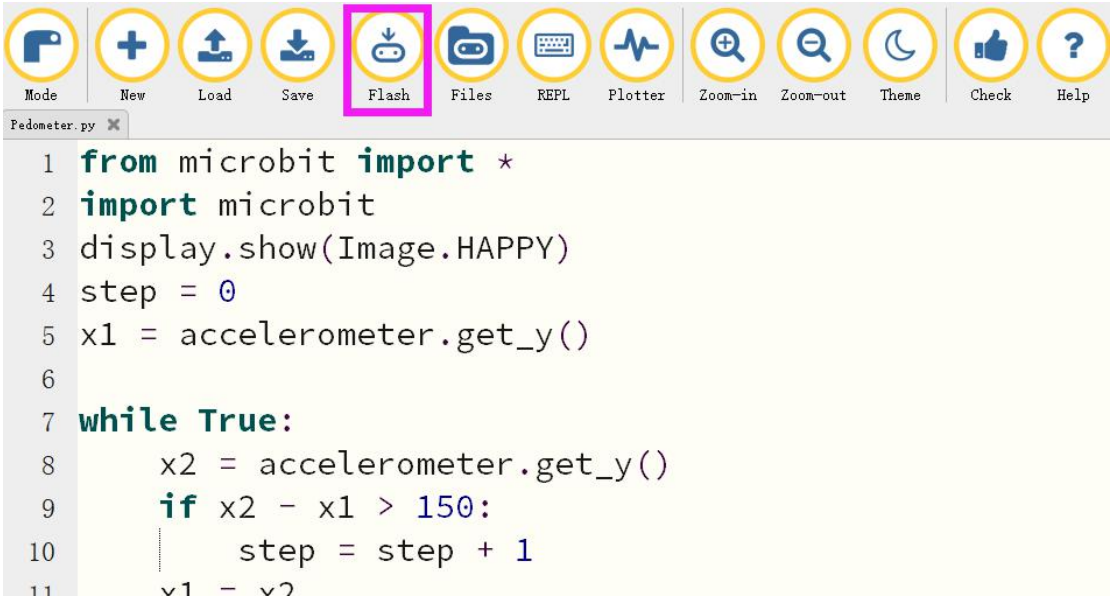
Note! All English and symbols should be entered in English, and the last line must be a space.



3.2 As shown in Figure, you need to 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.



3.3 You need to connect the micro data cable to micro:bit and the computer, then click the Flash button to download the program to micro:bit as shown in figure



4. Experimental phenomena

After the program is successfully downloaded.

Micro:bit dot matrix will display smile pattern, when you shake your wrist:bit, micro:bit will display “stone, scissors, cloth” pattern randomly.