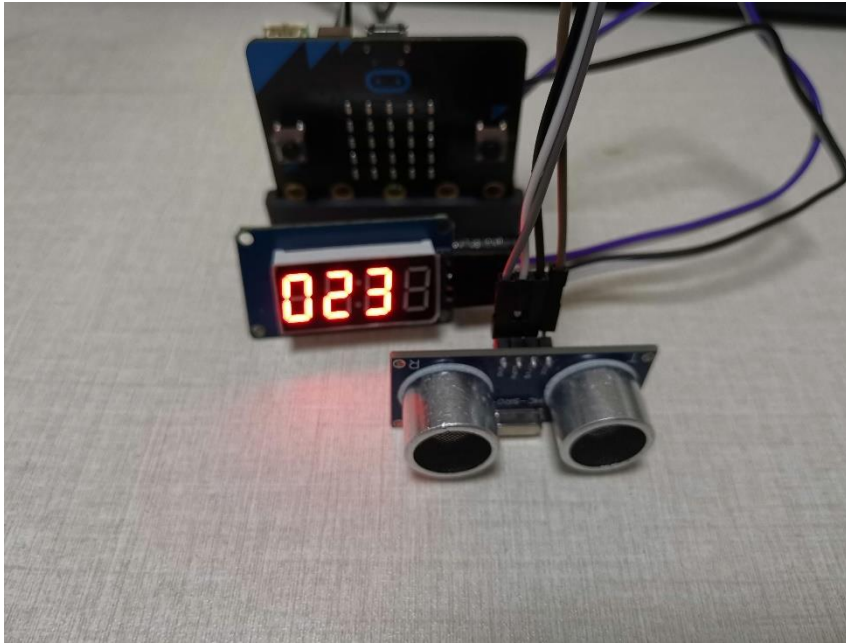# Digital tube shows the ultrasonic distance

1、 Achieve the goal

2、 Preparation before class

3、 Wiring

4、 Block programming
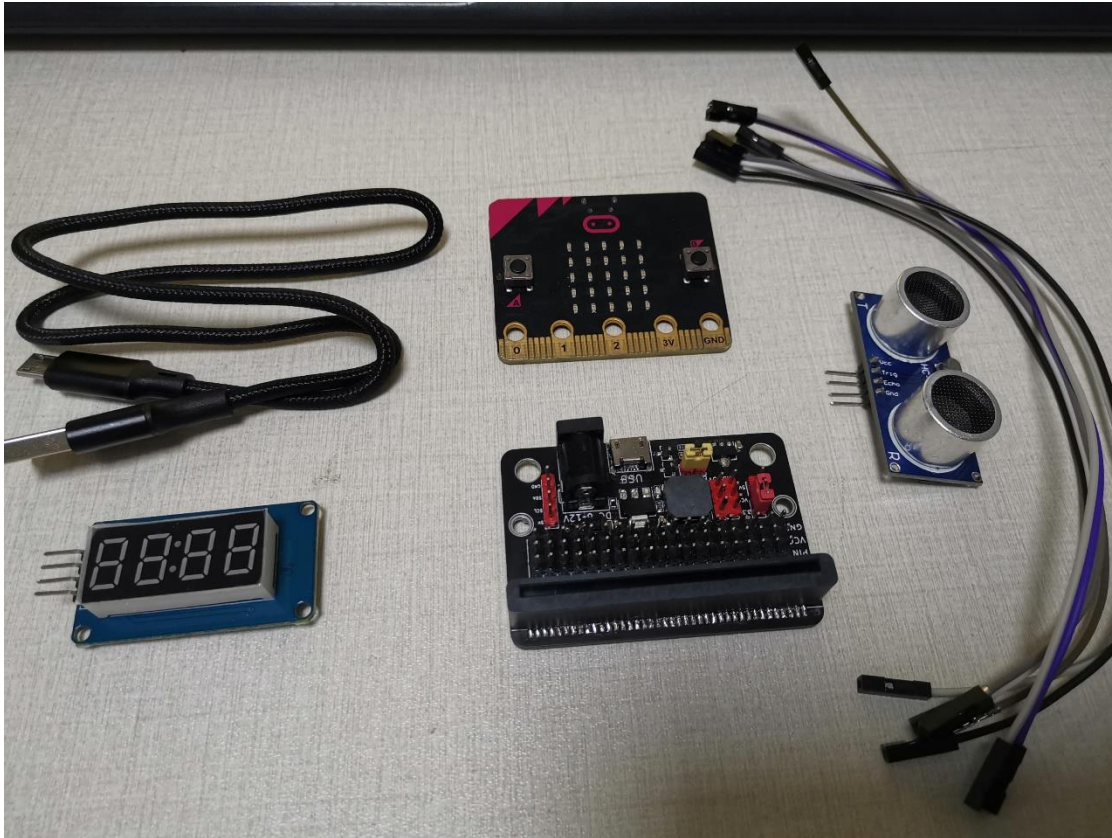
Digital tube shows the ultrasonic distance

1、Achieve the goal

The digital tube displays the distance value detected by the ultrasonic sensor. When the distance detected changes, the digital tube display data will also change at any time

Digital tube shows the ultrasonic distance

2、Preparation before class

Prepare microbit mainboard, USB cable, battery, digital tube module, extended version, ultrasonic sensor module, dupont line.

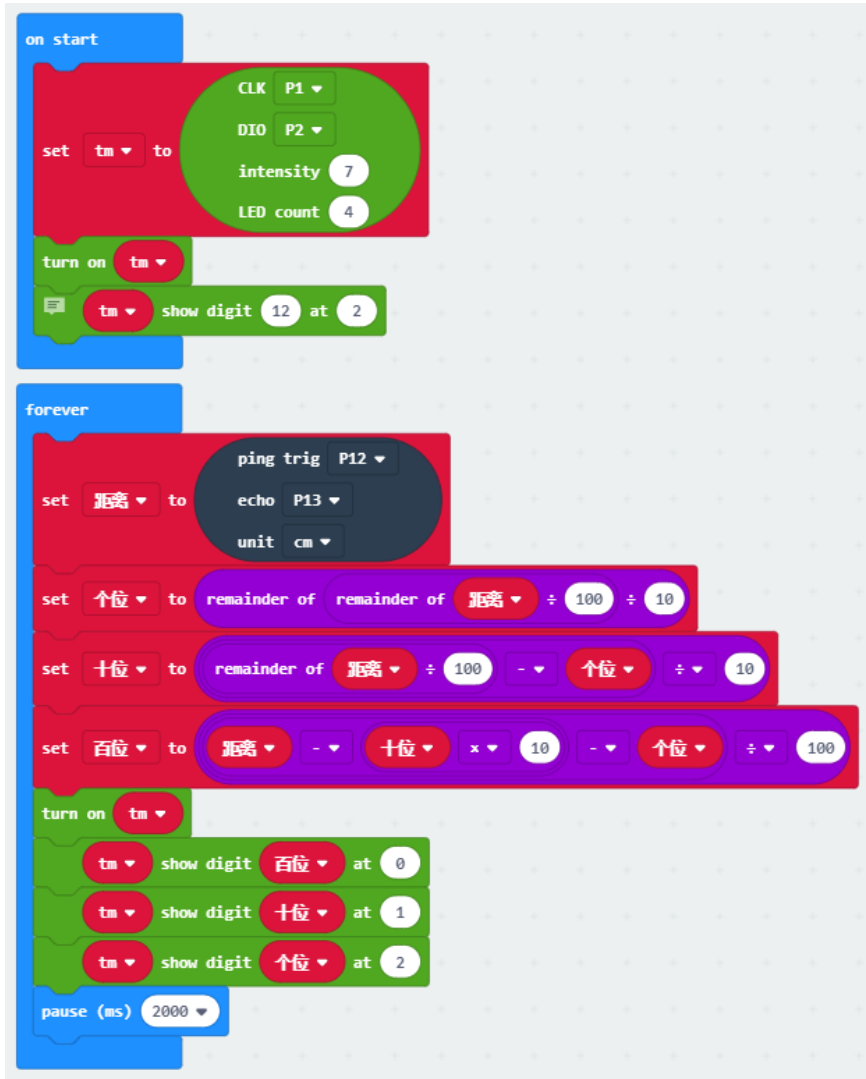# Digital tube shows the ultrasonic distance

3、Wiring

The ultrasonic VCC pins are connected to the 5V pins connected to the extension version, the Gnd pins are connected to the Gnd pins of the extension version, the Echo pins are connected to the P13 pins of the extension plate, and the Trig pins are connected to the P12 pins of the extension plate

The VCC and GND pins of the digital tube are connected to the VCC and GND pins of the extended edition, while the CLK and DIO are connected to the P1 and P2 pins of the expansion plate, respectively
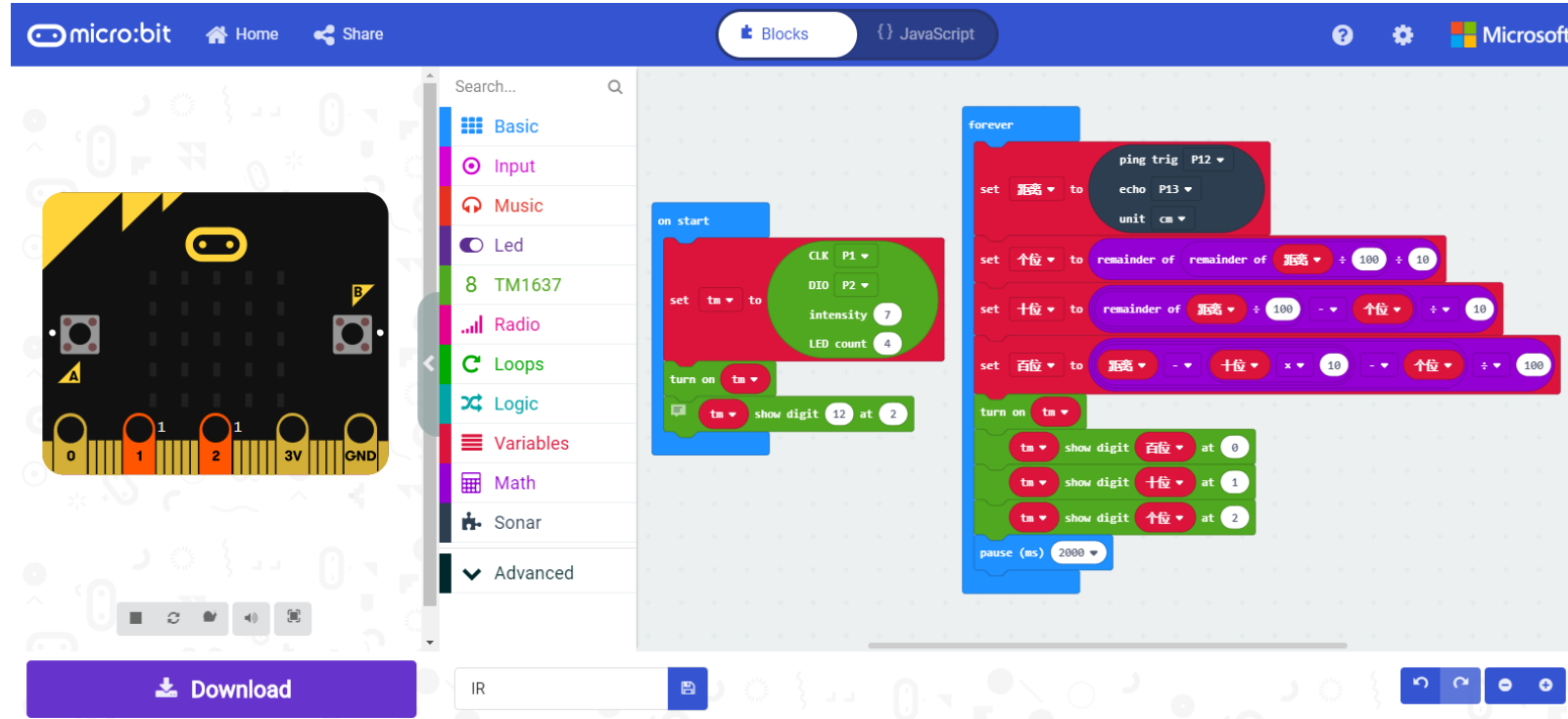
Digital tube shows the ultrasonic distance

4、Block programming

1. When starting up, first initialize the digital tube. 7 represents brightness and 4 represents 4-bit digital tube

2. In the infinite loop, obtain the distance measured by ultrasonic wave, and then extract the hundreds, tens and ones of the distance by mathematical calculation formula, and display it in the 0, 1 and 2 positions of digital tube

Digital tube shows the ultrasonic distance

5、Download experience

1. Click "download", download the program to the microbit, connect the circuit, and you can see the result of your programming