Surrounding distance detection system

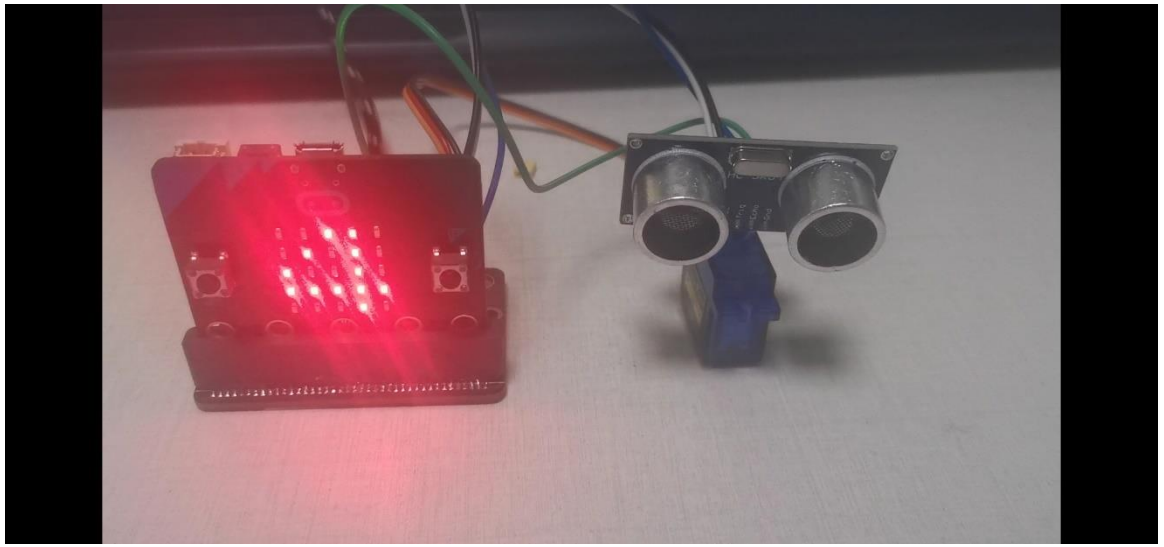
1、Achieve the goal

2、Preparation before class

3、Wiring

4、Block programming

Surrounding distance detection system

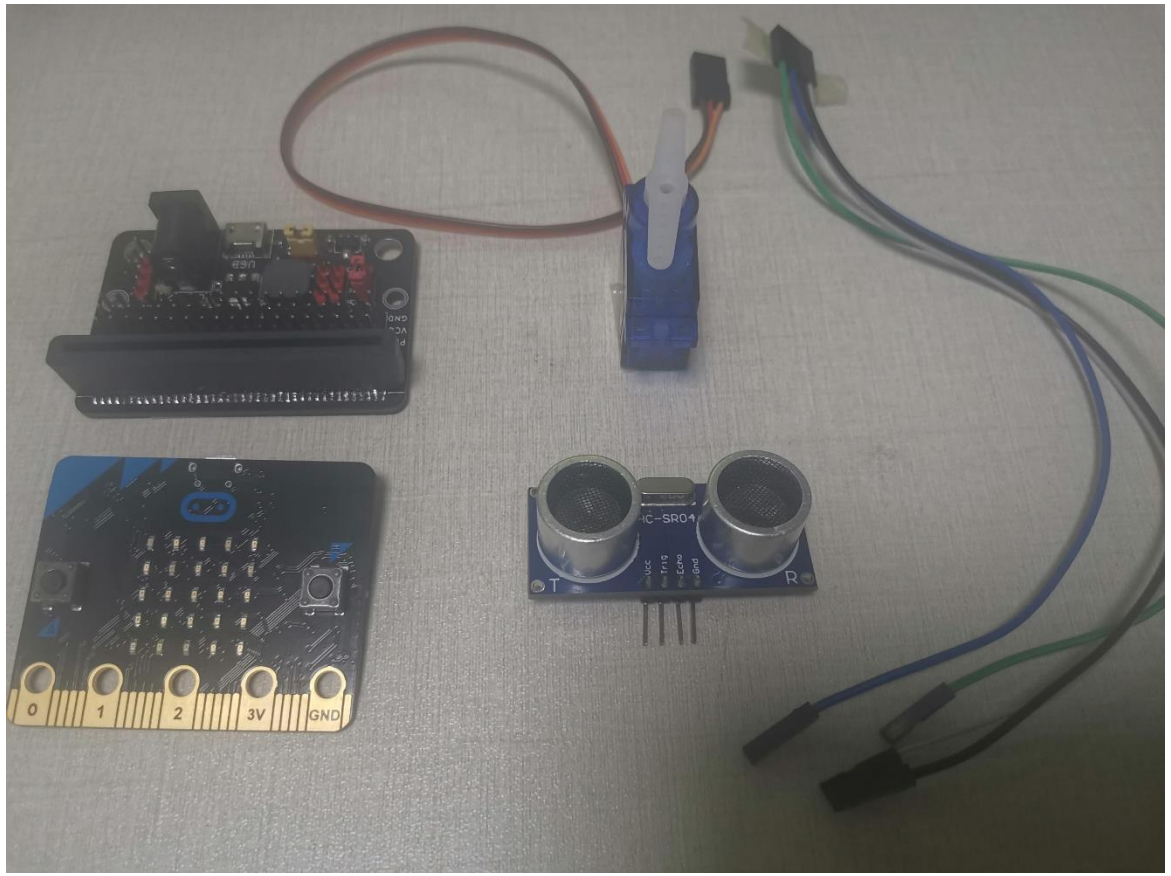


1、Achieve the goal

When the steering gear turns to 0°, 90°, 180°, and every time it turns to a certain Angle, the ultrasonic wave begins to measure the distance ahead and displays the distance on the screen.

Surrounding distance detection system

2、Preparation before class



Prepare microbit motherboard, USB cable, battery, ultrasonic module, extended version, PWM steering gear, dupont line.

Surrounding distance detection system

3、Wiring

The brown line of the steering gear is connected to the GND of the extension plate, the red line of the steering gear is connected to the VCC of the extension plate, and the yellow line of the steering gear is connected to the P0 pin of the extension plate

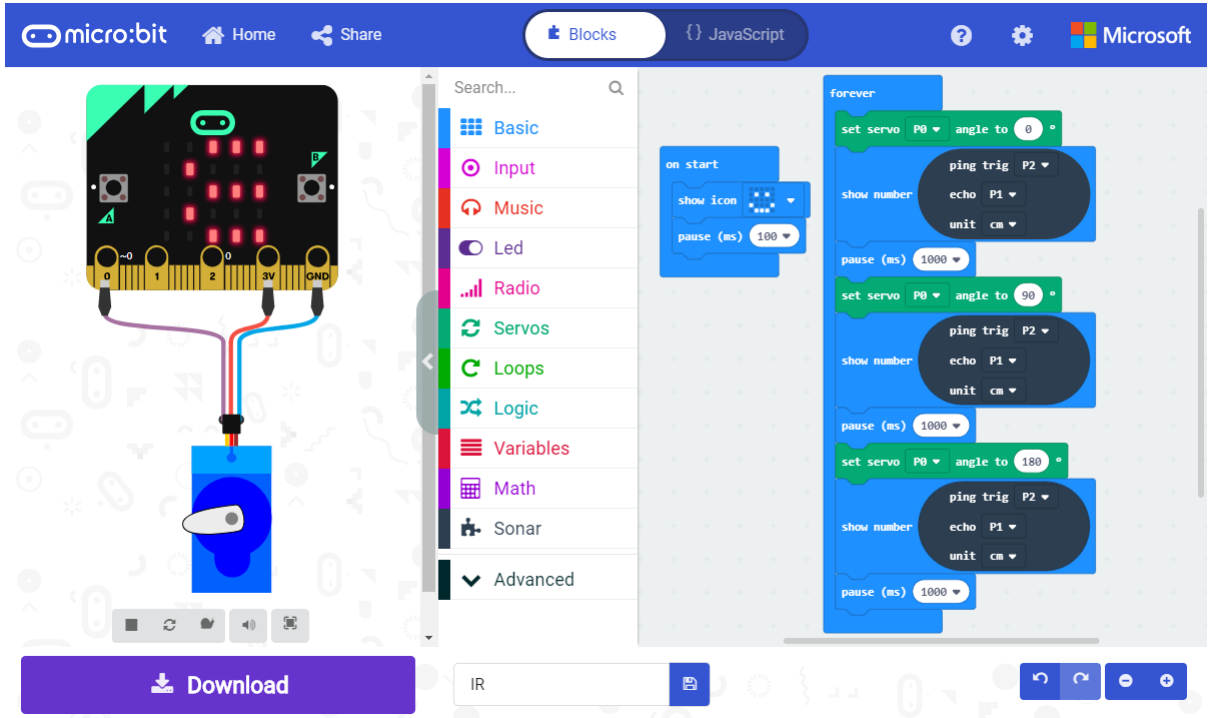
Ultrasonic VCC with extended version 5V, GND with extended version GND, Trig pin with extended version P2, Echo with extended version P1

Surrounding distance detection system

4、Block programming

1. When the machine is turned on, the screen will display a smiley face and pause for 100ms
2. In the infinite cycle, the steering gear turns to 0° and then displays the distance measured by ultrasonic wave; Pause 1000ms, rotate the steering gear 90°, and display the distance measured by ultrasonic wave; Pause 1000ms, turn the steering gear to 180°, display the distance measured by ultrasonic wave, and so on

Surrounding distance detection system



5、Download experience

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