Automatic cooling device

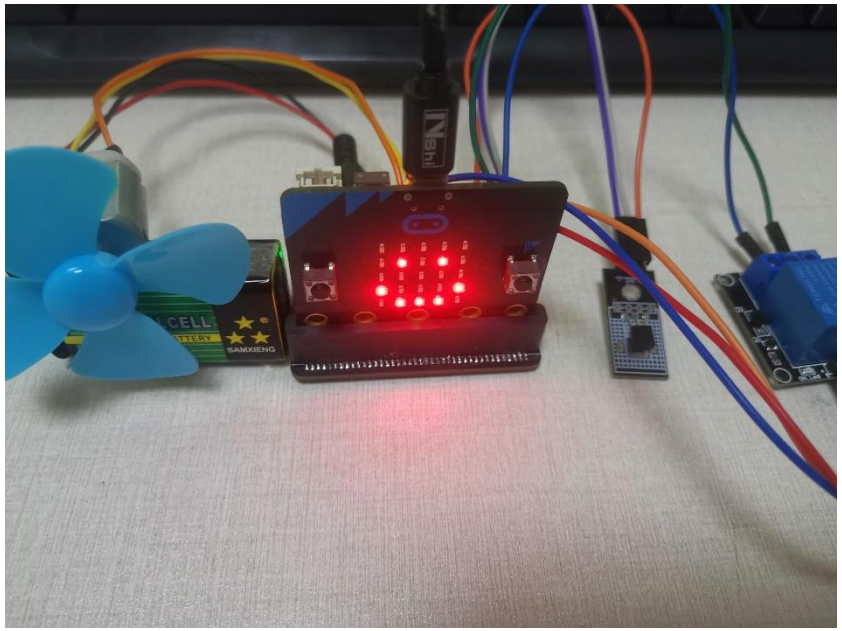
1、Achieve the goal

2、Preparation before class

3、Wiring

4、Block programming

Automatic cooling device



1、Achieve the goal

When the temperature is too high, the relay is turned on and the motor is rotated to cool the air through the wind blade

When the temperature is normal, the relay will be closed and the motor will stop rotating (when using the motor, please be careful not to allow the motor to rotate for too long, otherwise it will get hot and burn out).

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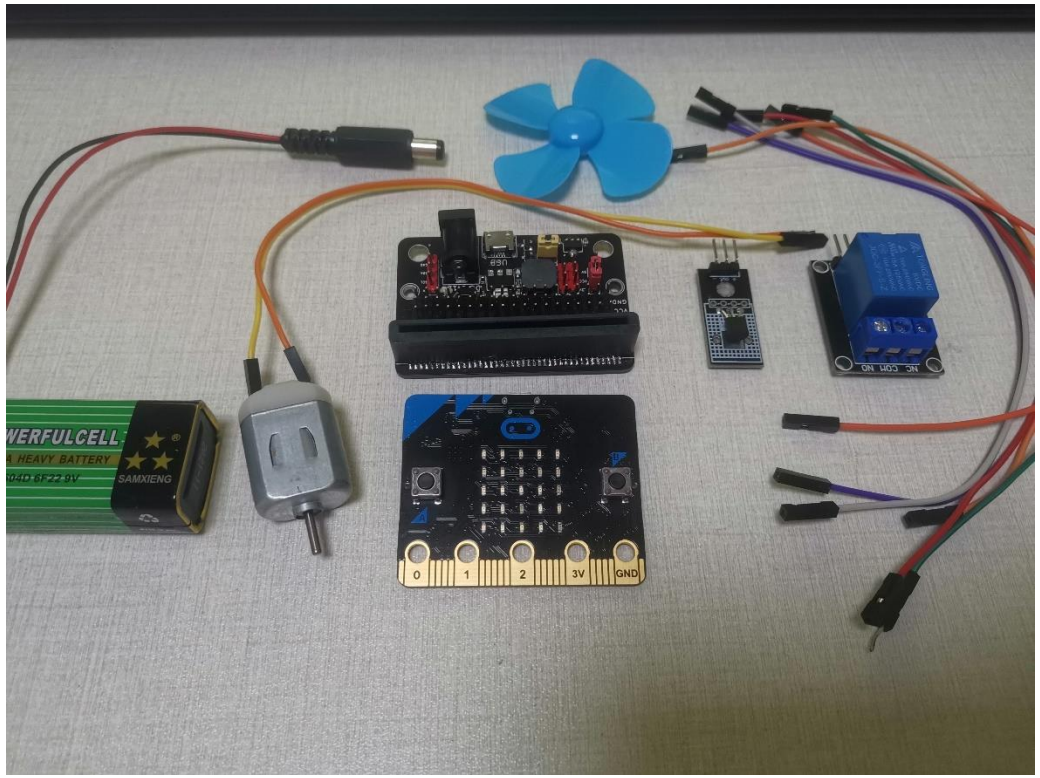

2、Preparation before class

Prepare microbit motherboard, a USB cable, a battery, temperature module, motor, fan blade, expansion board, relay, dupont line.

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3、Wiring

The + pin of the temperature sensor is connected to the expansion plate VCC, and the - pin is connected to the expansion plate

GND, OUT pins are attached to the extension plate P2

The motor is wired to the extension plate GND and relay NO pins

Relay COM pins are connected to the expansion board 5V, S to the expansion board VCC, + to the expansion board VCC, - to the expansion board GND

Dual power supply, using usb to power the microbit on one hand, and a battery or another usb cable to power the extension board on the other

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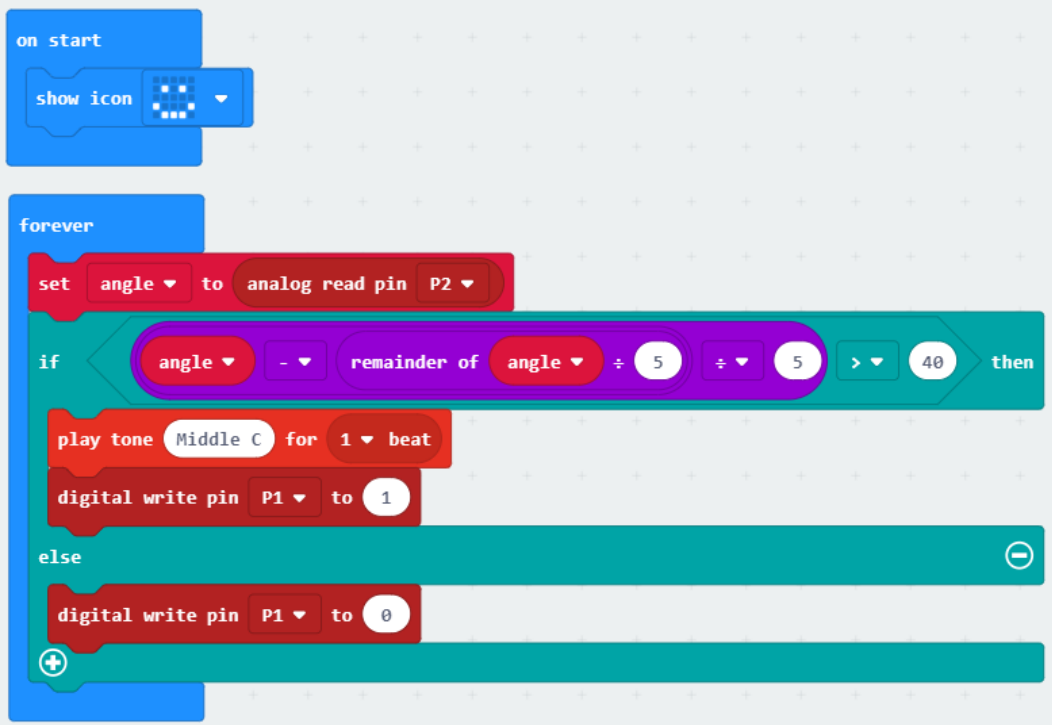
4、Block programmming



1. When the machine is turned on, the microbit screen displays an icon of a smiley face and then enters an infinite loop
2. In the infinite loop, read the analog value of the temperature sensor, then compare the processed value to determine whether the sound is emitted, set the level of P1 pin, control the relay switch, and determine whether the motor is driven

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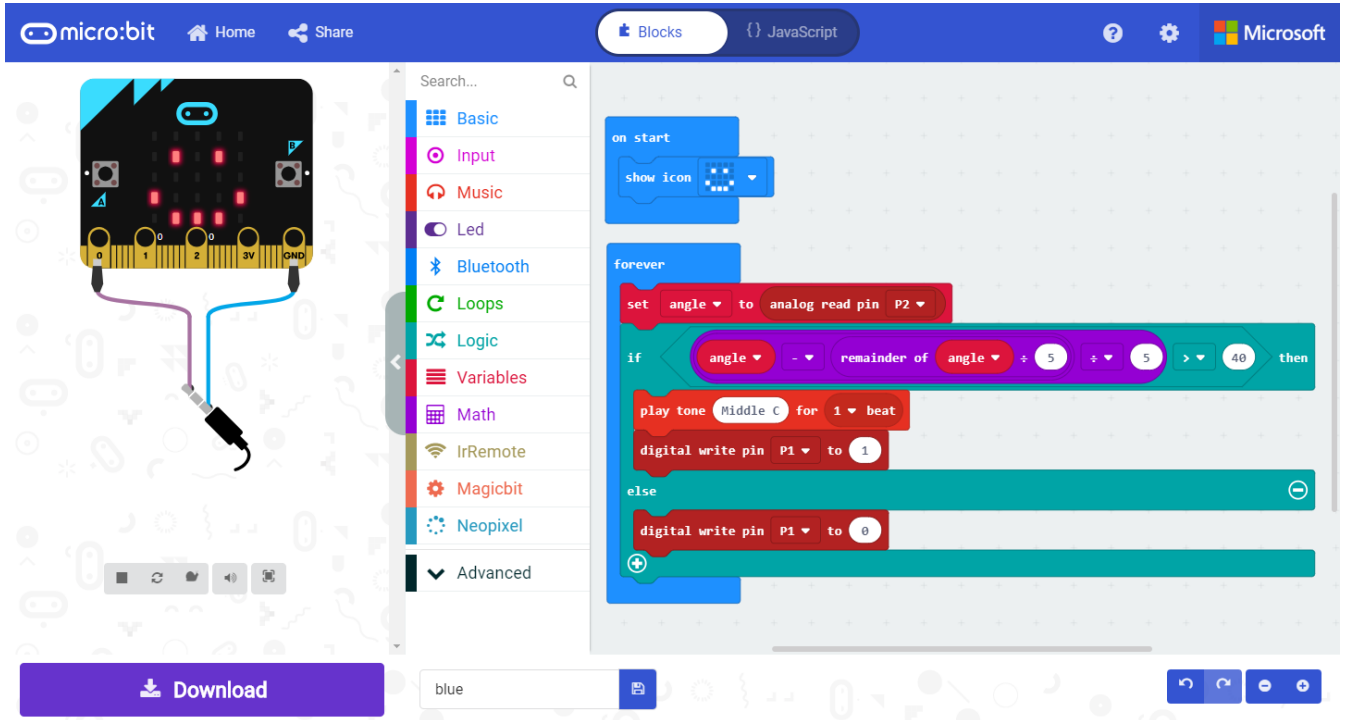

5、Download experience

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