Control_stepper_motor

1.Learning goals

In this lesson, we mainly learn how to control stepper servo by micro:bit and Super:bit expansion board.

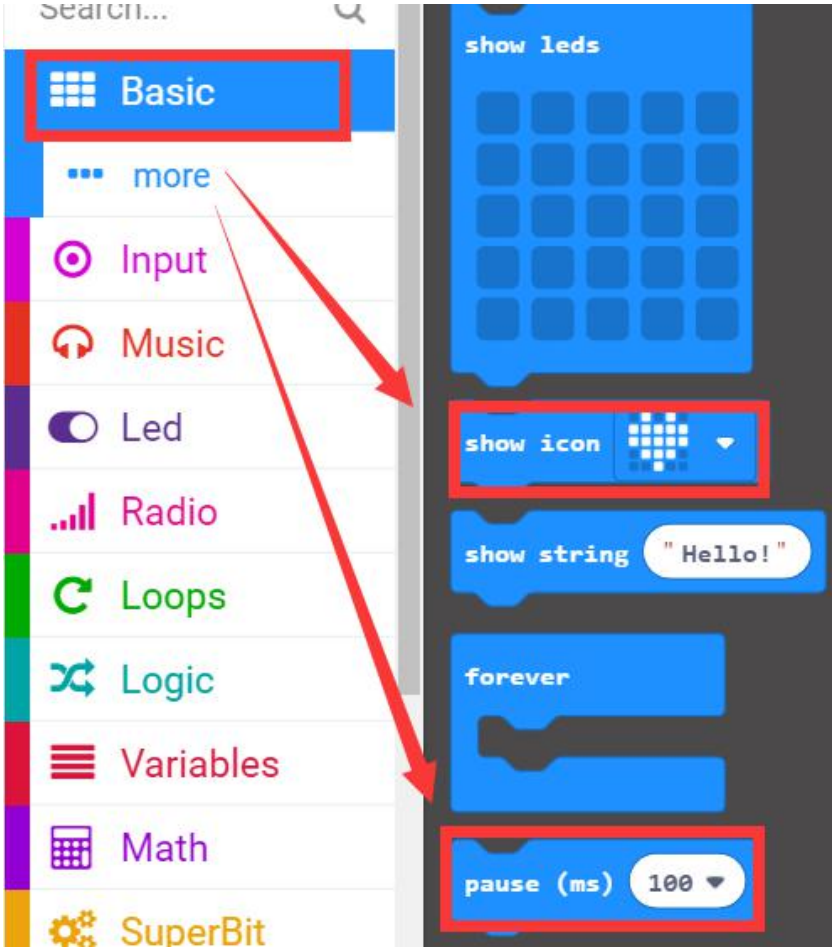
2.Programming method

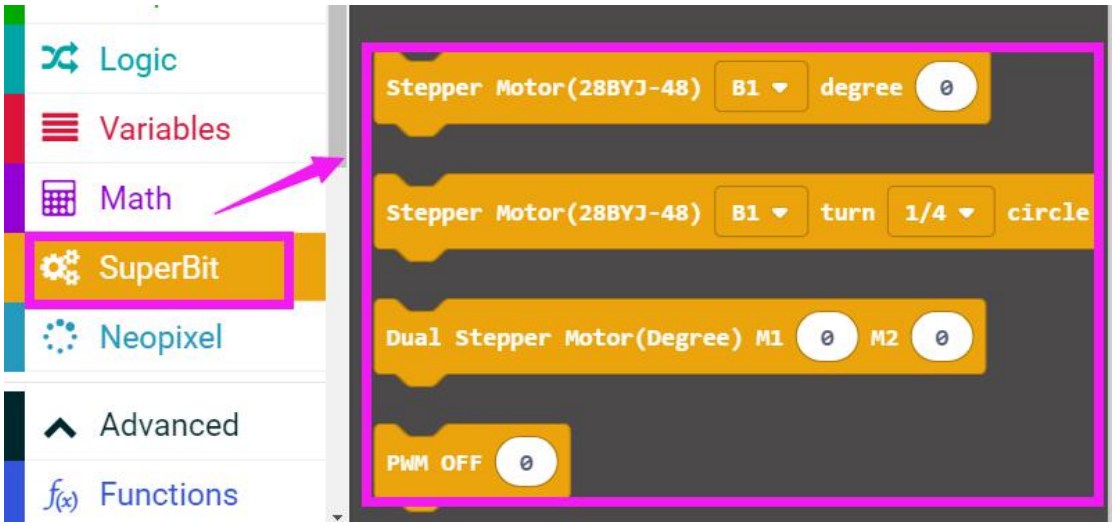
Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: **http://microbit.org/** to enter the programming interface. Add the Yahboom package https://github.com/lzty634158/SuperBit to program.

Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click【New Project】, add Yahboom package: https://github.com/lzty634158/SuperBit, you can program.

3.Looking for blocks

The following is the location of the building blocks required for this programming.





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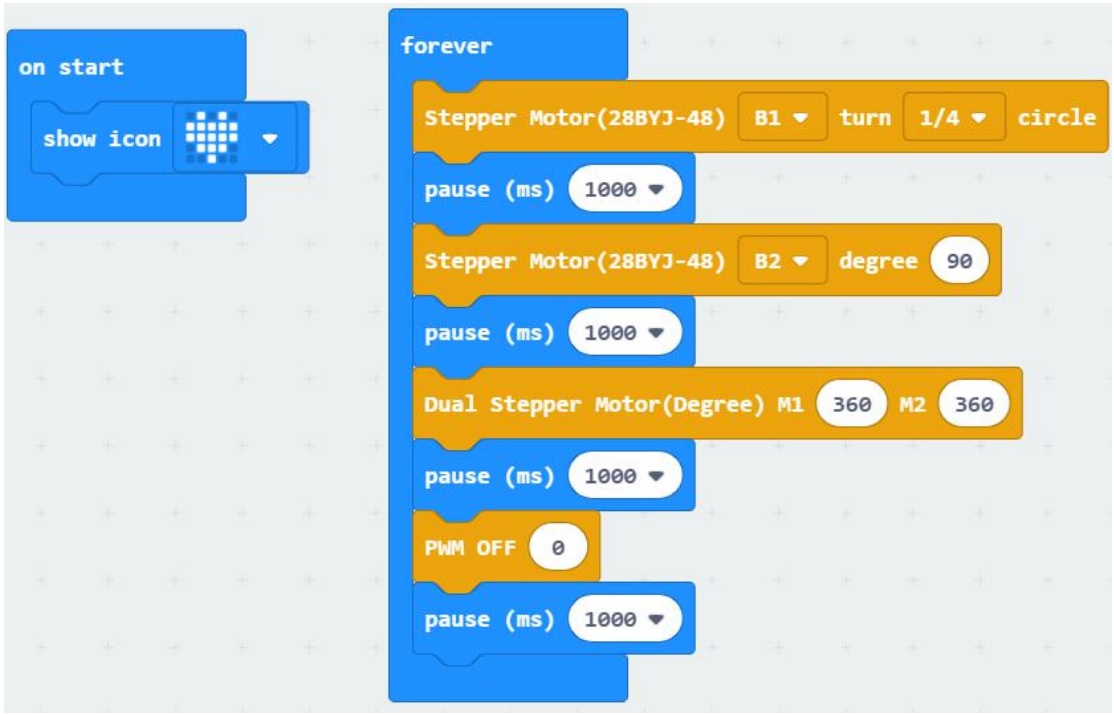

Hardware connection

The 28BYJ-48 stepper motor is connected to the B1 and B2 interfaces. The red wire of the stepper motor faces the outside of the expansion board, that is, the red wire is connected to the VM pin.

As shown below:

5. Experimental phenomena

After the program is successfully downloaded, the micro:bit dot matrix will display the heart pattern and control the stepper motor rotation.

First, the B1 stepper motor rotates 1/4 circle, in the case of counterclockwise, that is 90°, time interval is 1 second. Then, the B2 stepper motor rotates 90°, in the case of clockwise, time interval is 1 second. Next, the B1 stepper motor and B2 stepper motor rotates 360°, in the case of clockwise, time interval is 1 second. Finally, B1 stepper motor and B2 stepper motor stop, the interval is 1 second.

If you need to start over, press the reset button on the back of the micro:bit motherboard.