Control_180°_servo

1.Learning goals

In this lesson, we mainly learn how to control 180° servo by micro:bit and Super:bit expansion board.

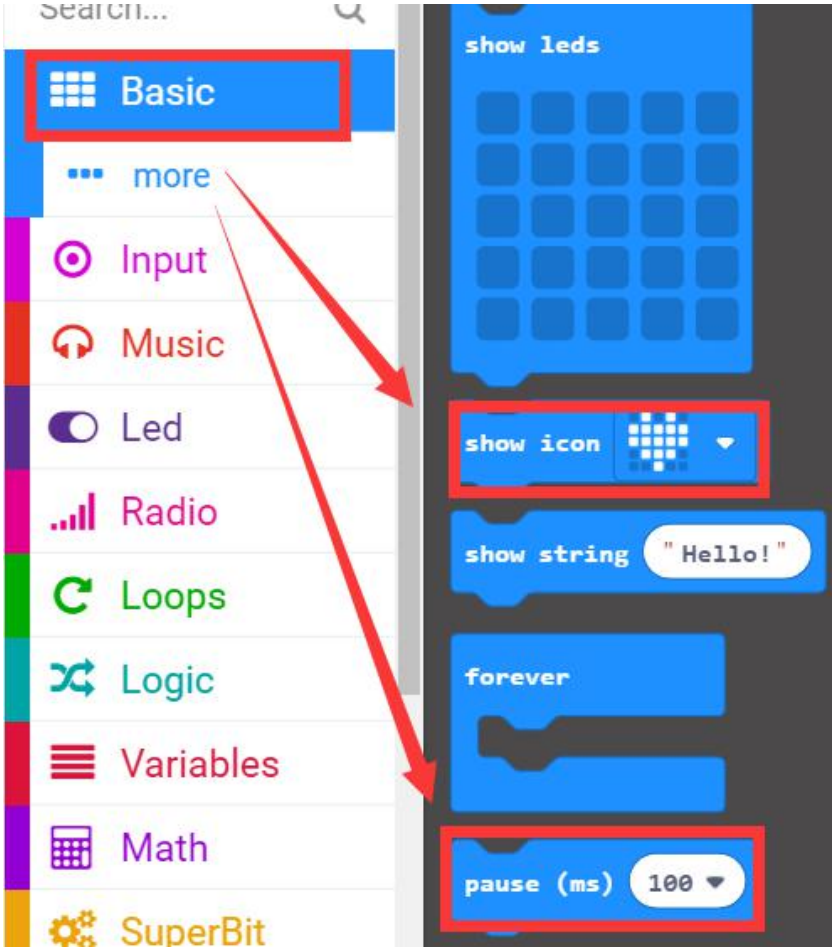
2.Programming method

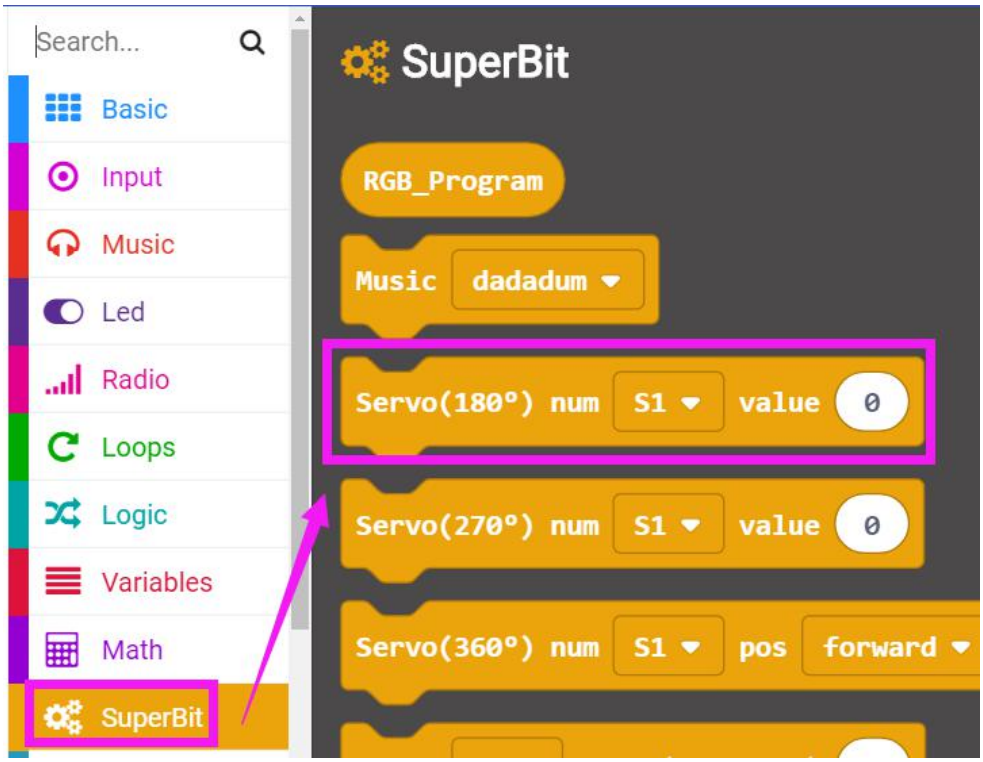
Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: **http://microbit.org/** to enter the programming interface. Add the Yahboom package https://github.com/lzty634158/SuperBit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

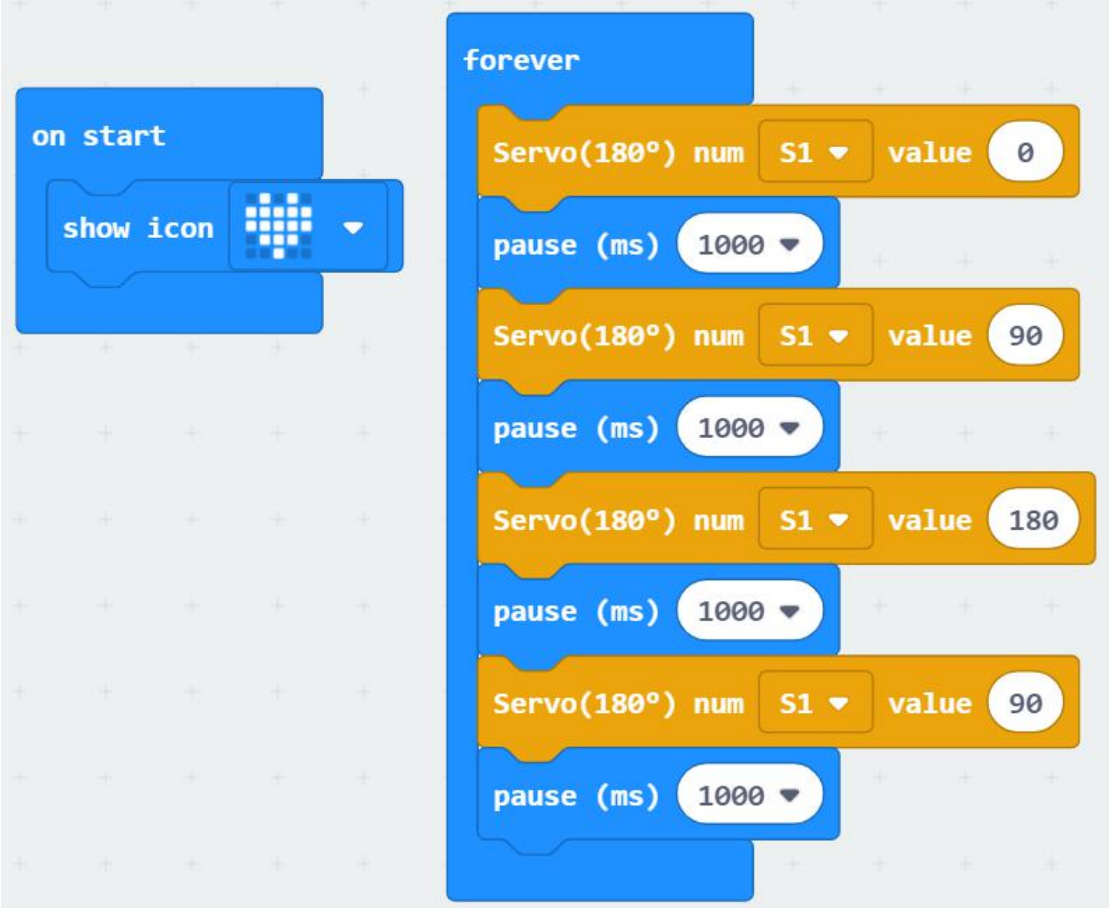




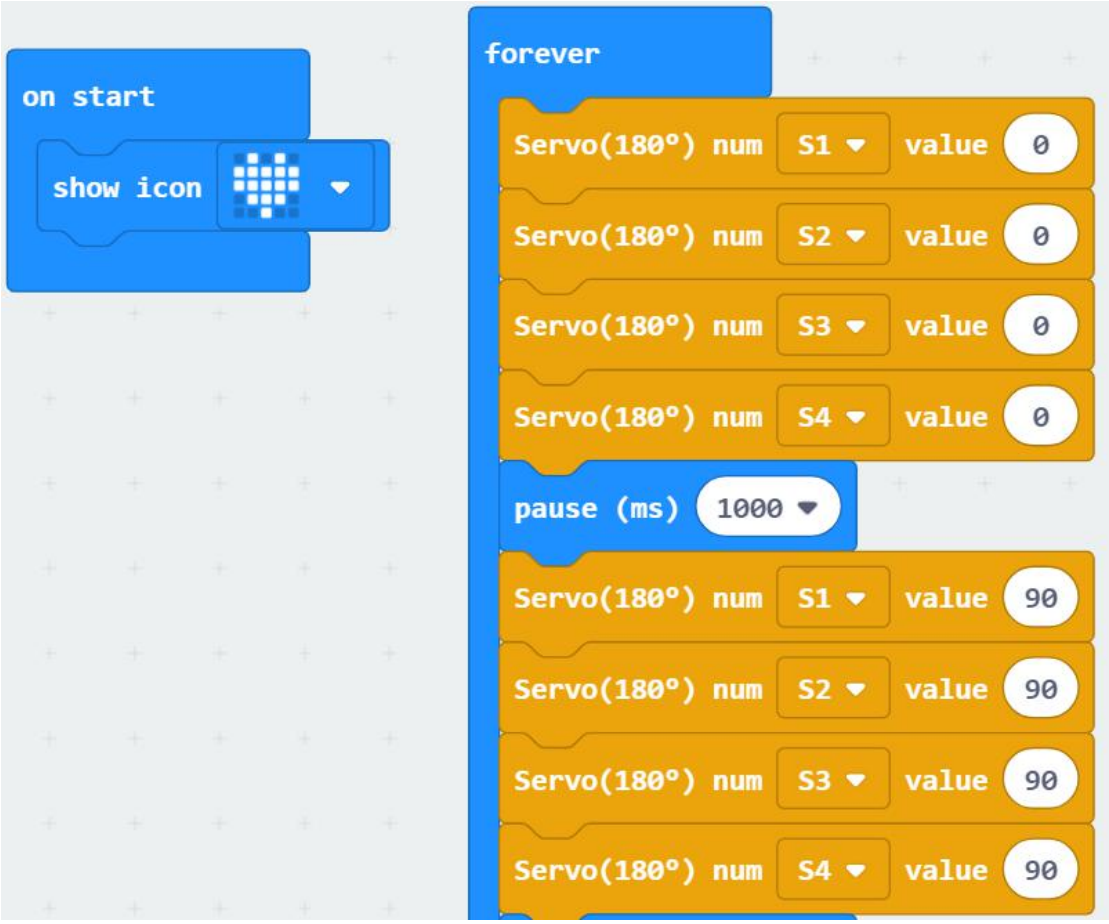
4.Combine building block

The summary program is shown below:

Control one 180° servo



Control four 180° servos




pause (ms) 1000
Servo(180°) num S1 value 180
Servo(180°) num S2 value 180
Servo(180°) num S3 value 180
Servo(180°) num S4 value 180
pause (ms) 1000
Servo(180°) num S1 value 90
Servo(180°) num S2 value 90
Servo(180°) num S3 value 90
Servo(180°) num S4 value 90


pause (ms) 1000

Hardware connection

Control one 180°**servo**

Connect the 180°servo to the S1 interface of the Super:bit expansion board. The orange wire of the 180°block servo is connected to the yellow pin of S1, the red wire of the 180°block servo is connected to the red pin of S1, and the brown wire of the 180°block servo is connected to the black pin of S1.

Control four 180° servo

Connect the 180° block servo to the S1 interface of the Super:bit expansion board. The orange wire of the 180° block servo is connected to the yellow pin of S1-S4, the red wire of the 180° block servo is connected to the red pin of S1-S4, and the brown wire of the 180° block servo is connected to the black pin of S1-S4.

5. Experimental phenomena

After the program is successfully downloaded, the micro:bit dot matrix will display the heart pattern and control the 180° servo rotation.

The servo will return to 0° at the beginning,

Then the rotation angle: 0°->90°->180°->90°- >0°, the time interval is 1 second.

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