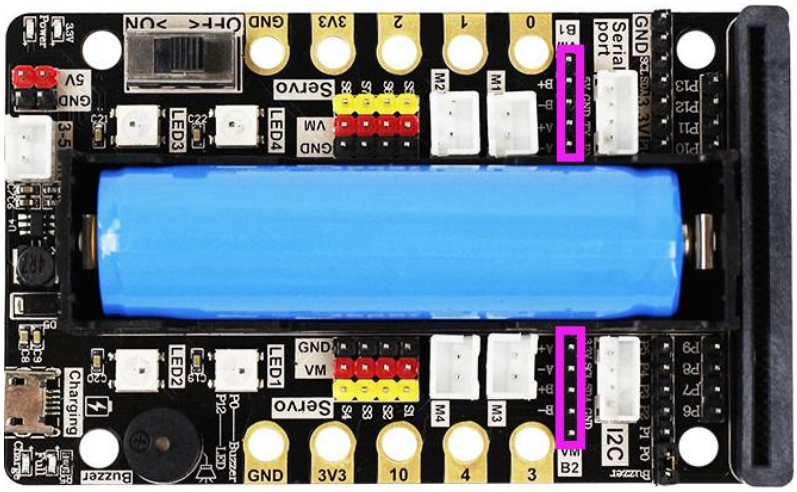
Drive stepper motor

1.Learning goals

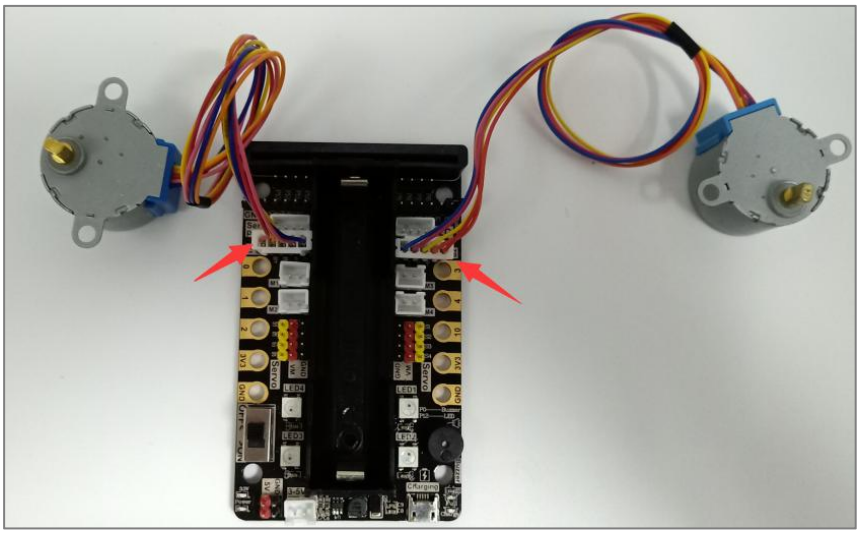
In this course, we mainly learn how to drive stepper motor connected to the superbit expansion board through MakeCode graphical programming.

Stepper motor interface is located on the expansion board as shown in the figure below.



2.Wiring of motor

The stepper motor wiring need to be inserted into the Super:bit expansion board B1,B2 interface, red wiring connect to VM pin, as shown below.



3. Programming method

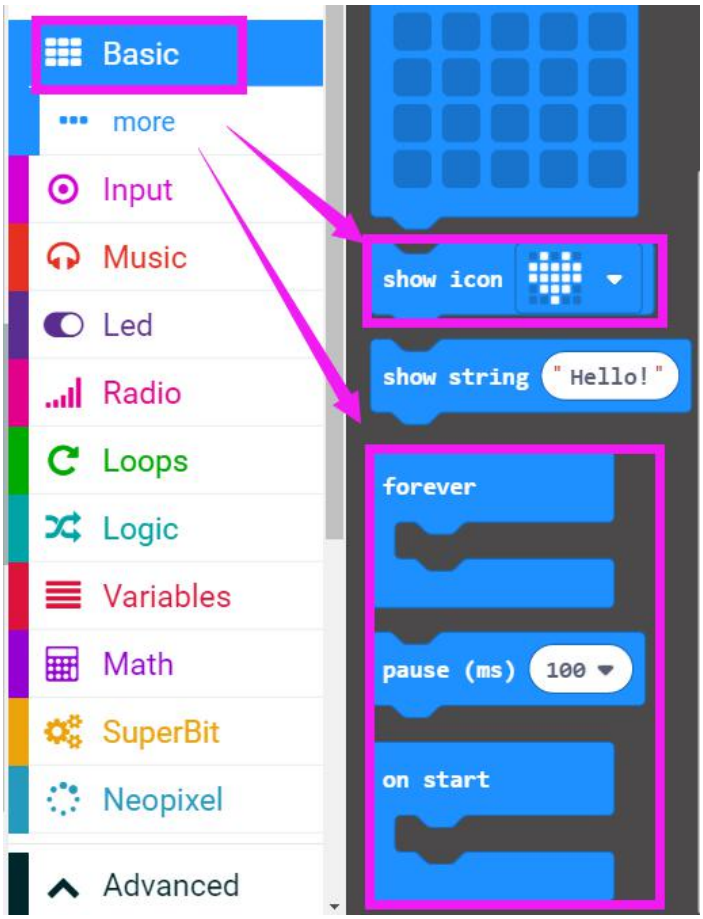
Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: http://microbit.org/ to enter the programming interface. Add the Yahboom package **https://github.com/lzty634158/SuperBit**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

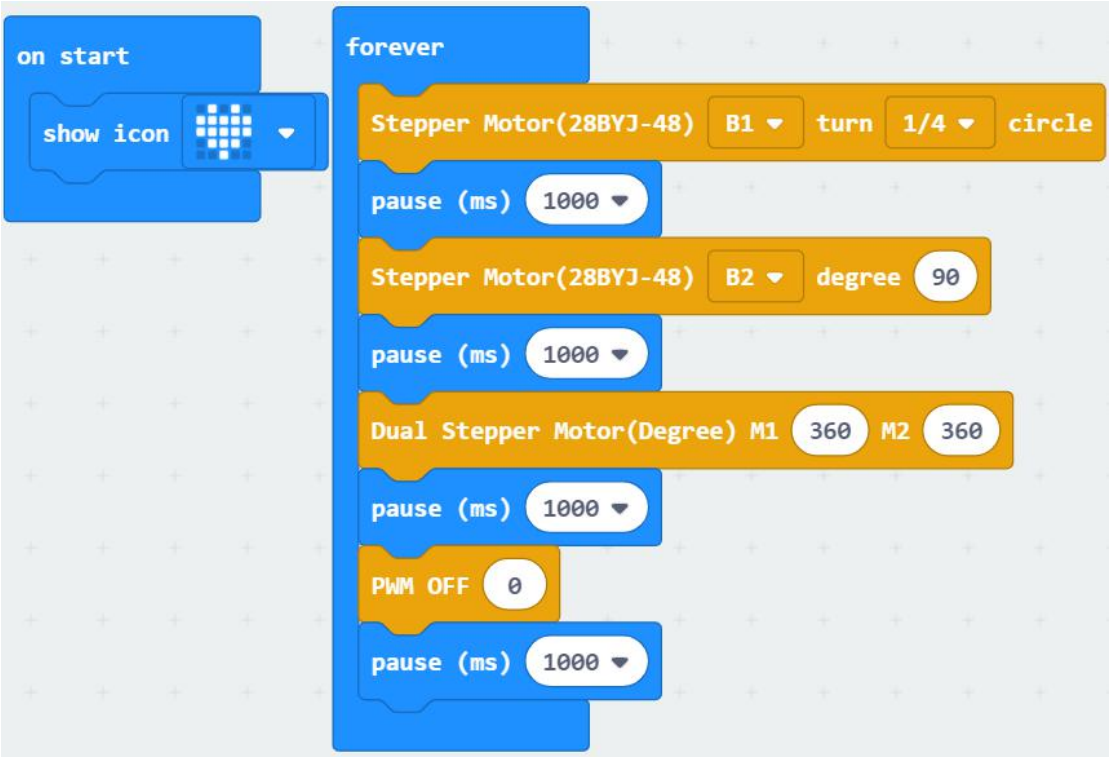
3.Looking for blocks

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



4.Combine block

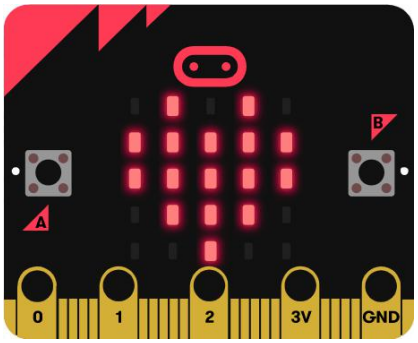
The summary program is shown below.



5.Experimental phenomena

After the program is successfully downloaded, the micro: bit dot matrix will display the heart pattern, as shown below.

Then, we can see that the stepper motor of the B1 interface rotates 1/4 turn (90°), the stepper motor of the B2 interface rotates 90°, and then the two rotate 360 degrees (one cycle) together, and keep the cycle in this state .



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