Freestyle advance

1. Learning objectives

In this course, we mainly learn how to use MakeCode graphical programming to achieve Freestyle advance.

2. Building blocks

For detailed steps of building blocks, please refer to the installation drawings of **[Assembly Course]--[Freestyle]** in the materials or the building block installation album.

3. Motor wiring

The motor wiring on the left side of the car is inserted into the M1 interface of the Super:bit expansion board, and the black line is close to the battery side;

The motor wiring on the right side of the car is inserted into the M3 interface of the Super:bit expansion board, and the black line is close to the battery side;

As shown below:
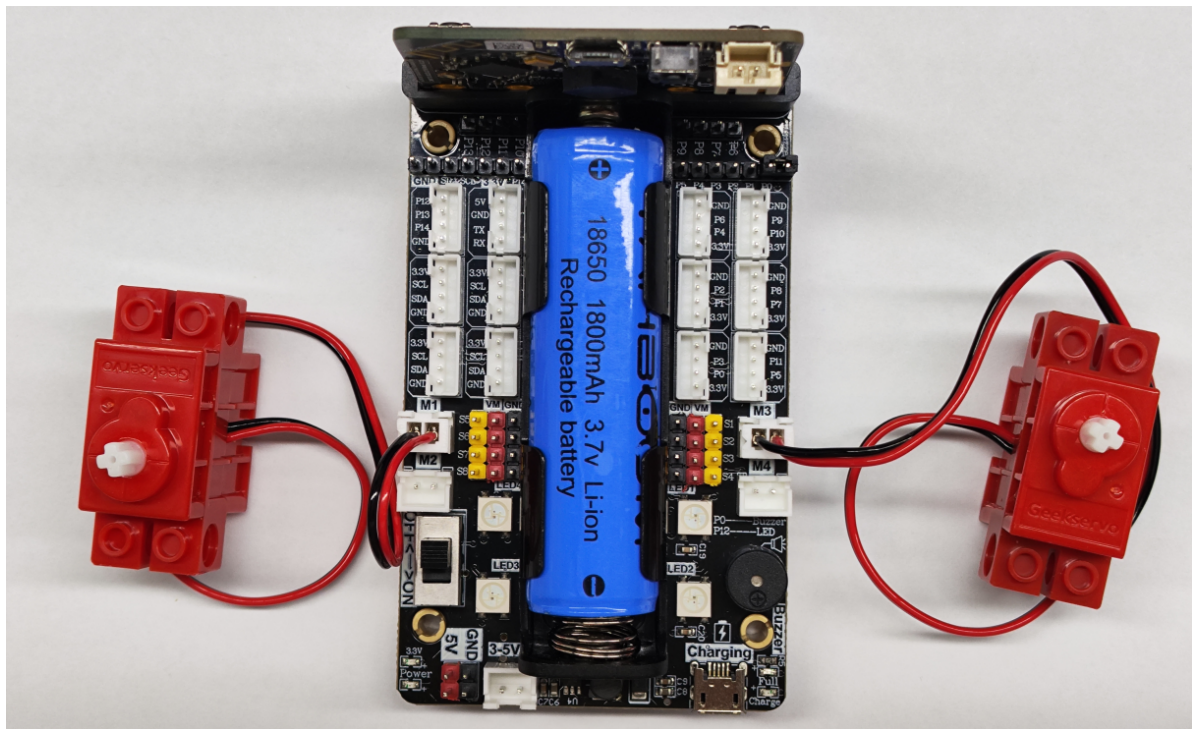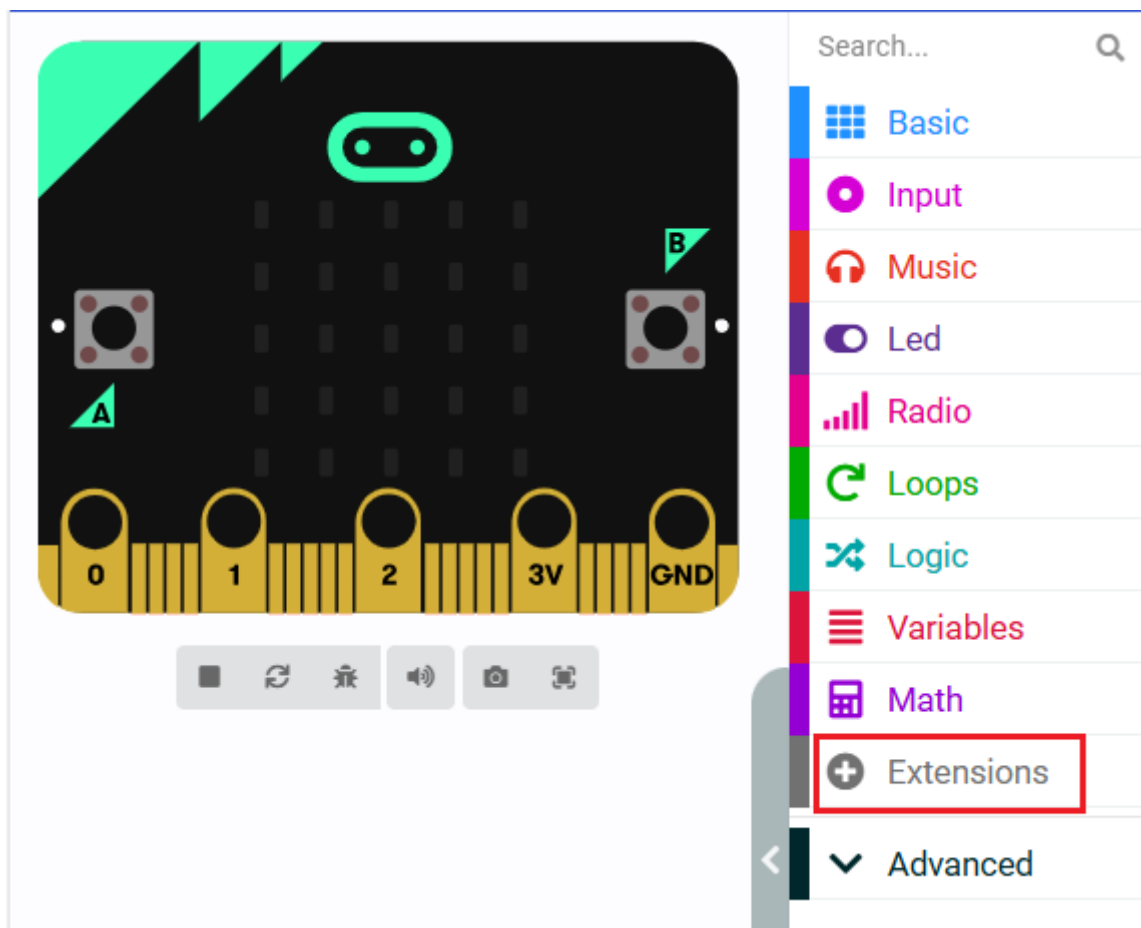
4. Programming

Method 1 Online programming:

First, connect micro:bit to the computer via a USB data cable, and a U disk will pop up on the computer. Click the URL in the U disk: https://makecode.microbit.org/ to enter the programming interface. Then, add the Yahboom software package **https://github.com/YahboomTechnology/SuperBitLibV2** to start programming.

Method 2 Offline programming:
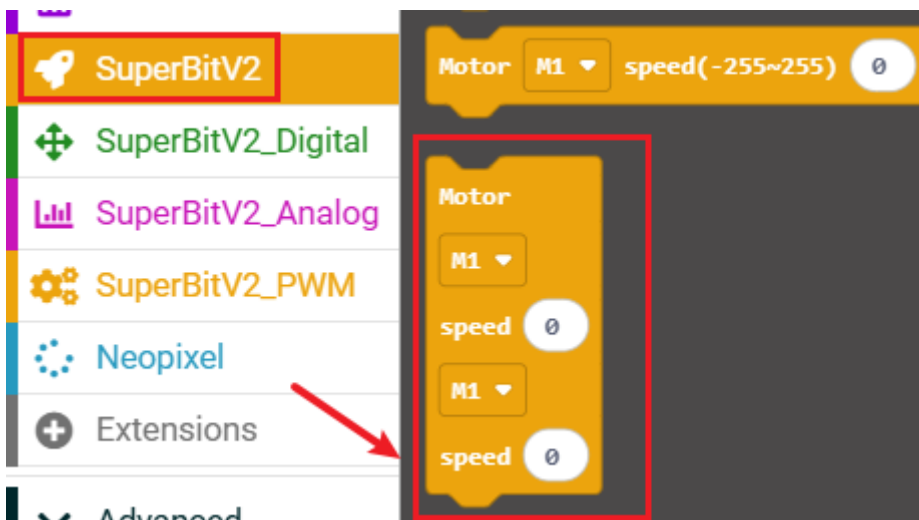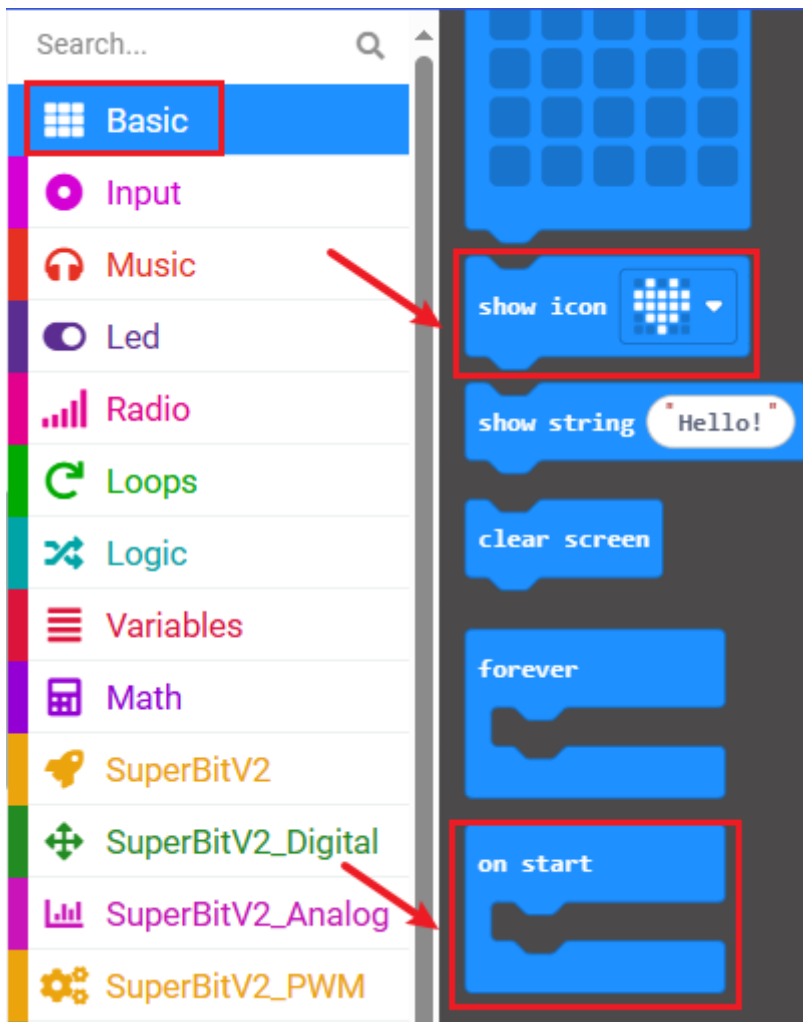
Open the offline programming software MakeCode and enter the programming interface. Click [New] and add the Yahboom software package **https://github.com/YahboomTechnology/SuperBitLibV2** to start programming.
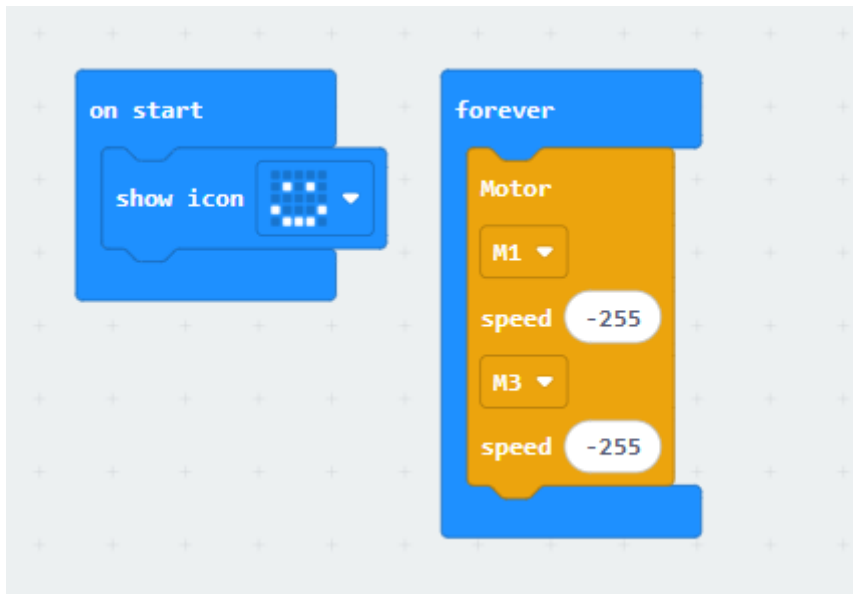
4.1 Add expansion package
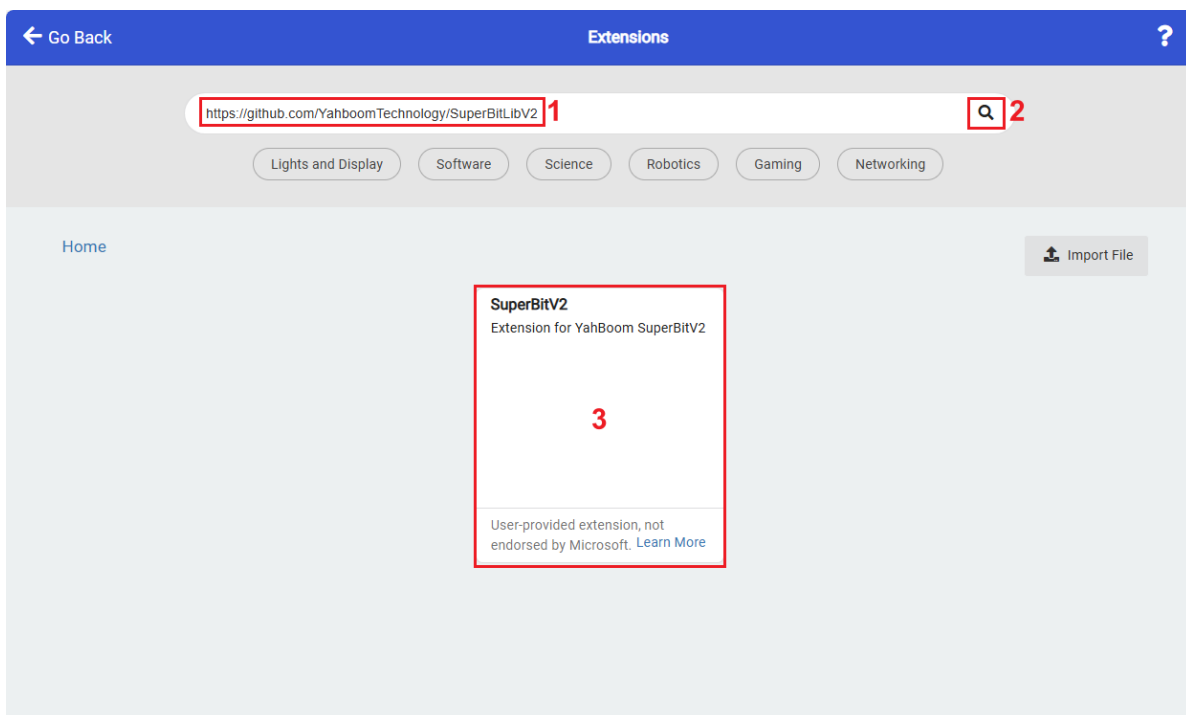
4.2 Blocks used

The location of the blocks required for this programming is shown in the figure below.

4.3 Combined blocks

The summary program is shown in the figure below.

You can also directly open the **microbit-Freestyle-advance.hex** file provided in this experiment and drag it into the browser that opens the URL, and the program diagram of the source code of this project will be automatically opened

5. Experimental phenomenon

After the program is successfully downloaded, the micro:bit dot matrix will display a smiley face, as shown in the figure below. Turn on the power switch, and Freestyle will keep moving forward.
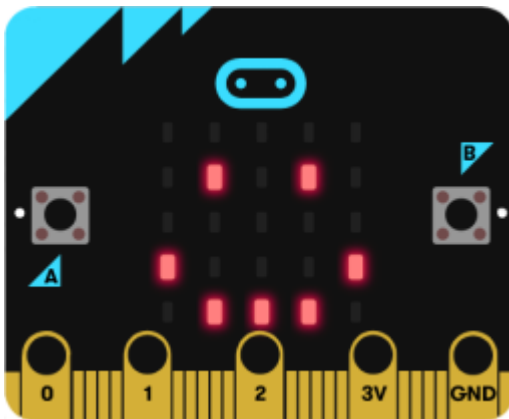
If you need to restart, please press the reset button on the back of the micro:bit motherboard.