Dancing and singing

1. Learning objectives

In this course, we mainly learn how to use MakeCode graphical programming to make the Biped robot "sing" and "dance" at the same time, that is, the motor and buzzer work at the same time.

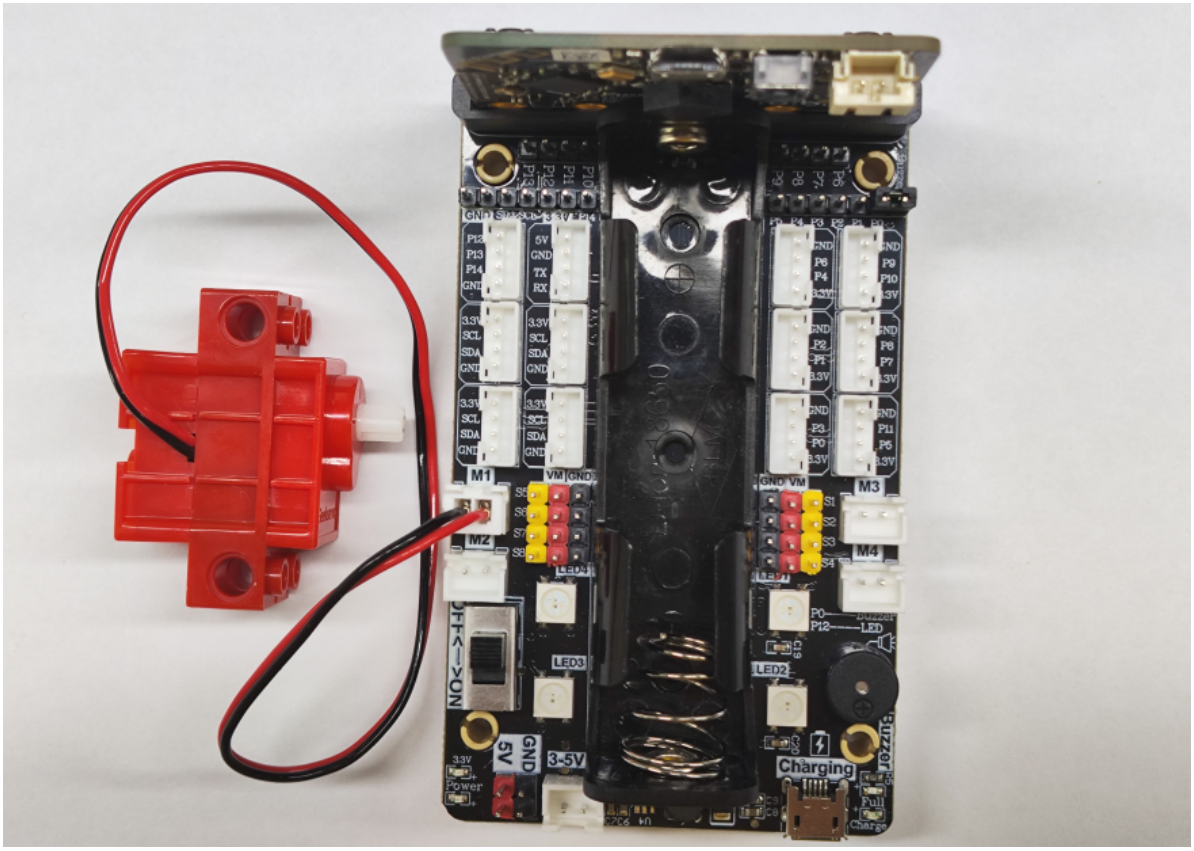
2. Building blocks

For the building blocks steps, please refer to the installation drawings of **[Assembly Course]--[Biped robot]** in the materials or the building blocks installation book.

3. Motor wiring

Insert the motor wiring on the left side of the car into the M1 interface of the Super:bit expansion board, with the black wire close to the battery side;

As shown below:



4. Programming

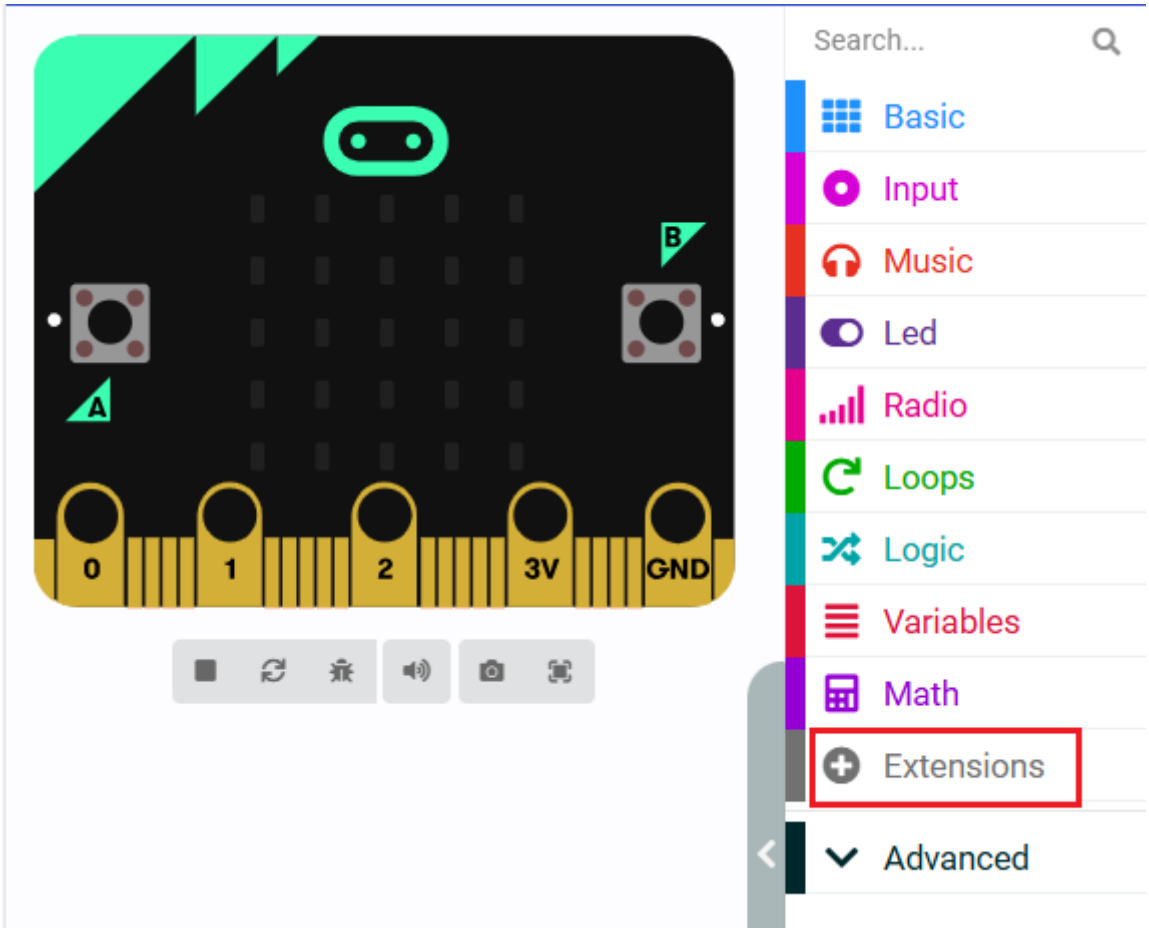
Method 1 Online programming:

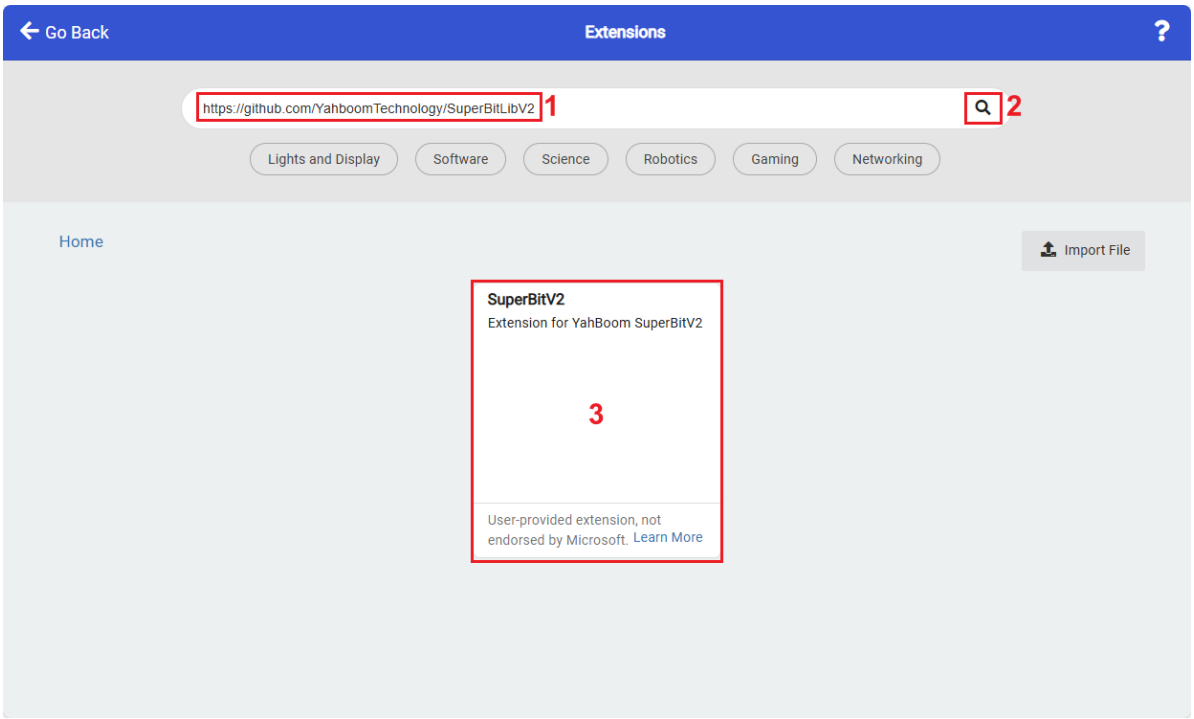
First, connect the micro:bit to the computer via a USB data cable. The computer will pop up a U disk. Click the URL in the U disk: https://makecode.microbit.org/ to enter the programming interface. Then, add the Yahboom software package **https://github.com/YahboomTechnology/SuperBitLibV2**, and you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

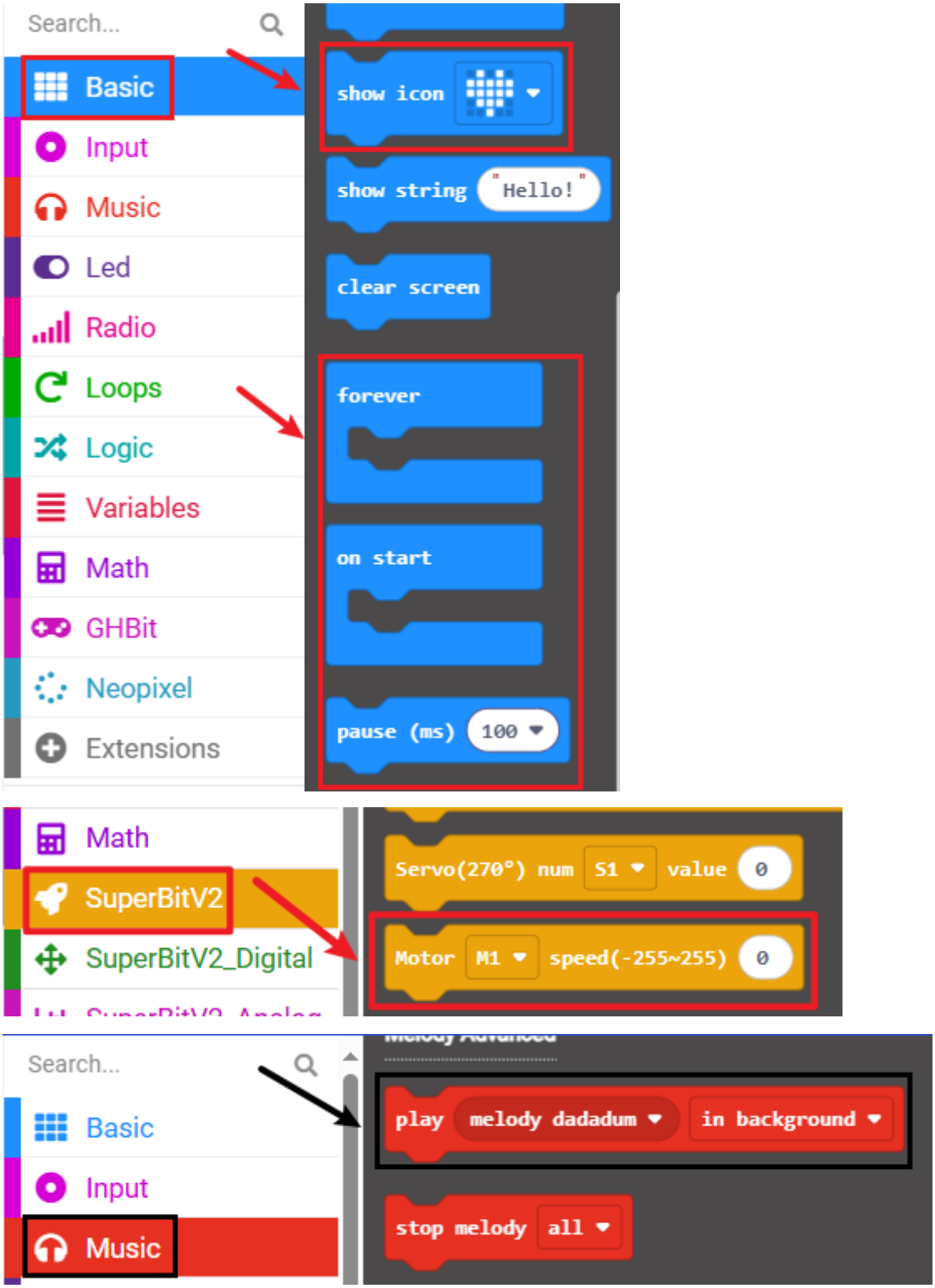
4.1 Add expansion package





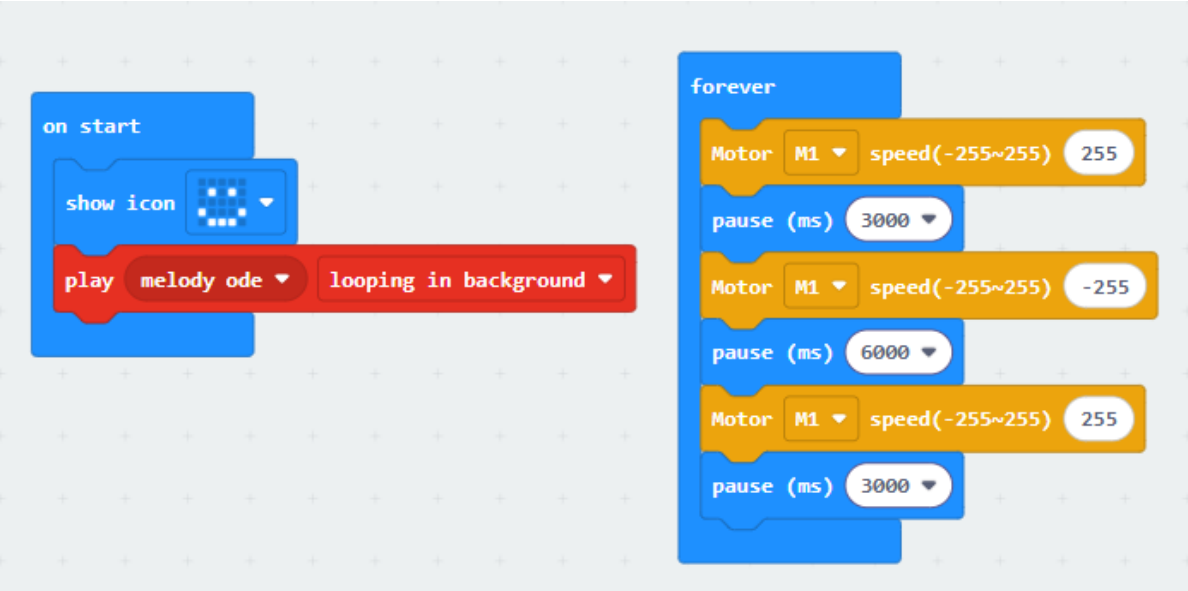
4.2 Building blocks used

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



4.3 Combining blocks

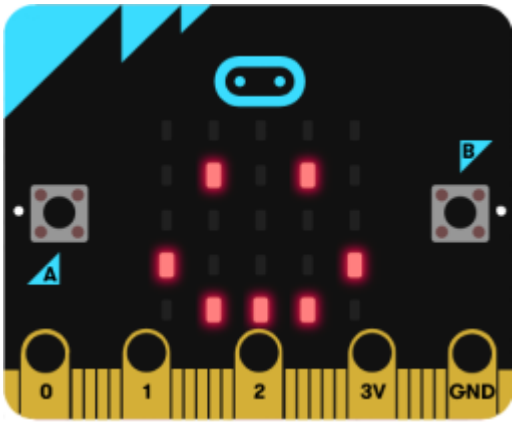
The summary program is shown in the figure below.



You can also directly open the **microbit-Dancing-and-singing.hex** file provided in this experiment and drag it into the browser that opens the URL, and the program diagram of this project source code 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, the Biped robot will play the music "Ode to Joy" and will also switch between different motion states of forward-->backward.



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