

## Customize the front and back sides

### 1.Learning goals

In this lesson, we mainly learn how to control building block motor and RGB lights by micro:bit and Super:bit expansion board.

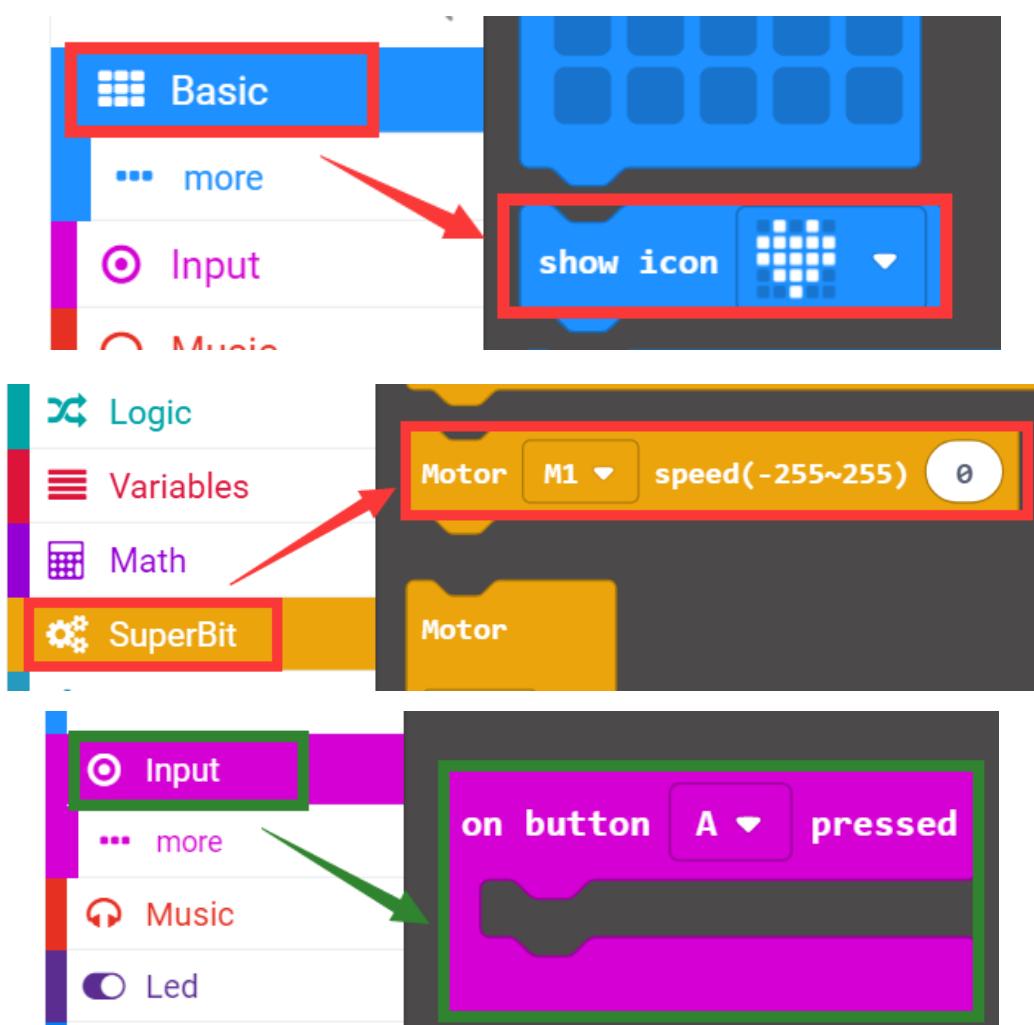
### 2.Programming method

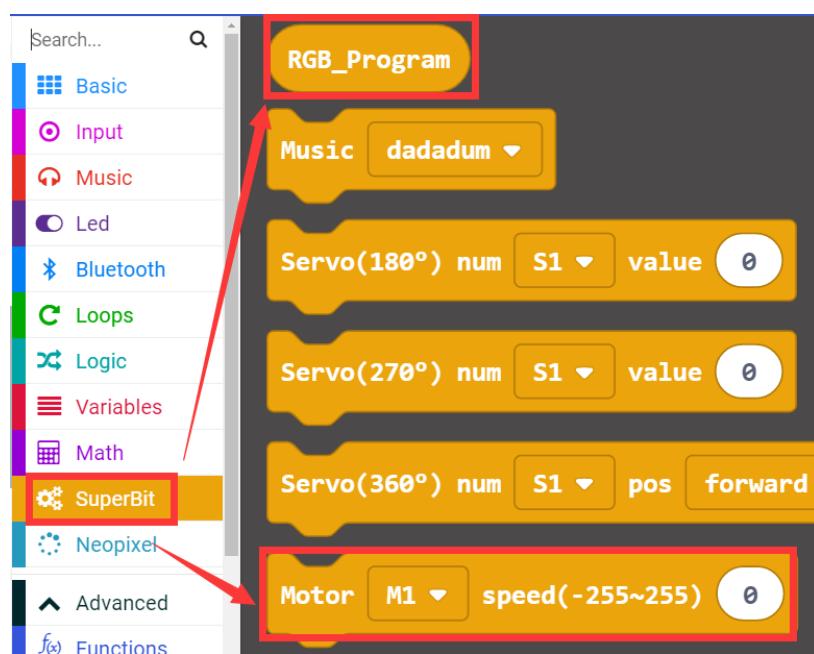
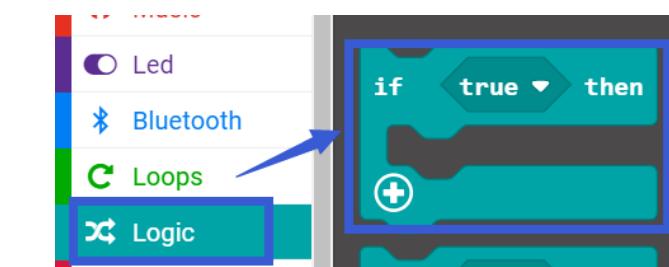
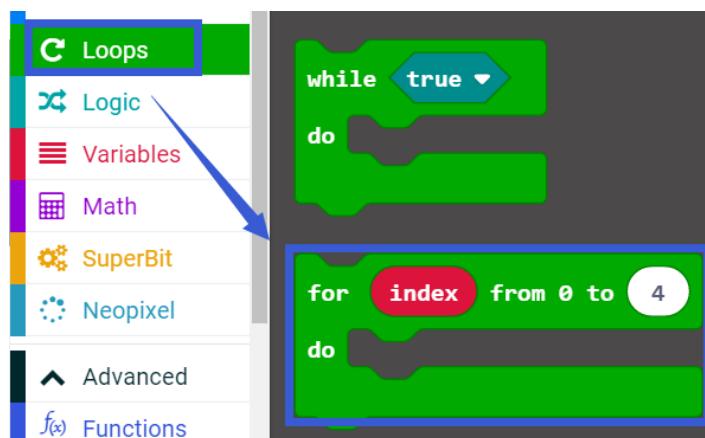
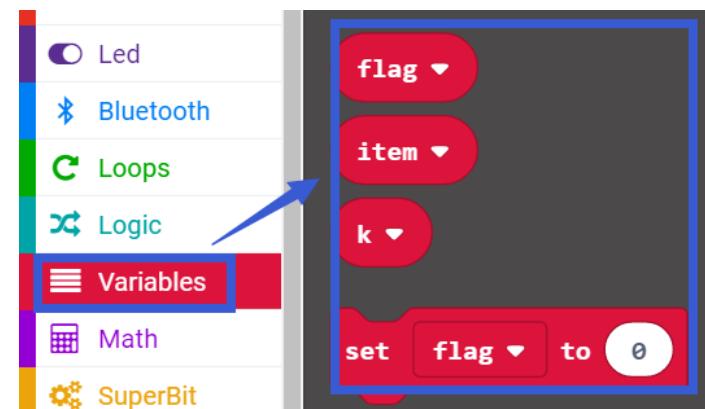
**Mode 1 online programming:** First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: <http://microbit.org/> to enter the programming interface. Add the Yahboom package <https://github.com/lzty634158/SuperBit>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

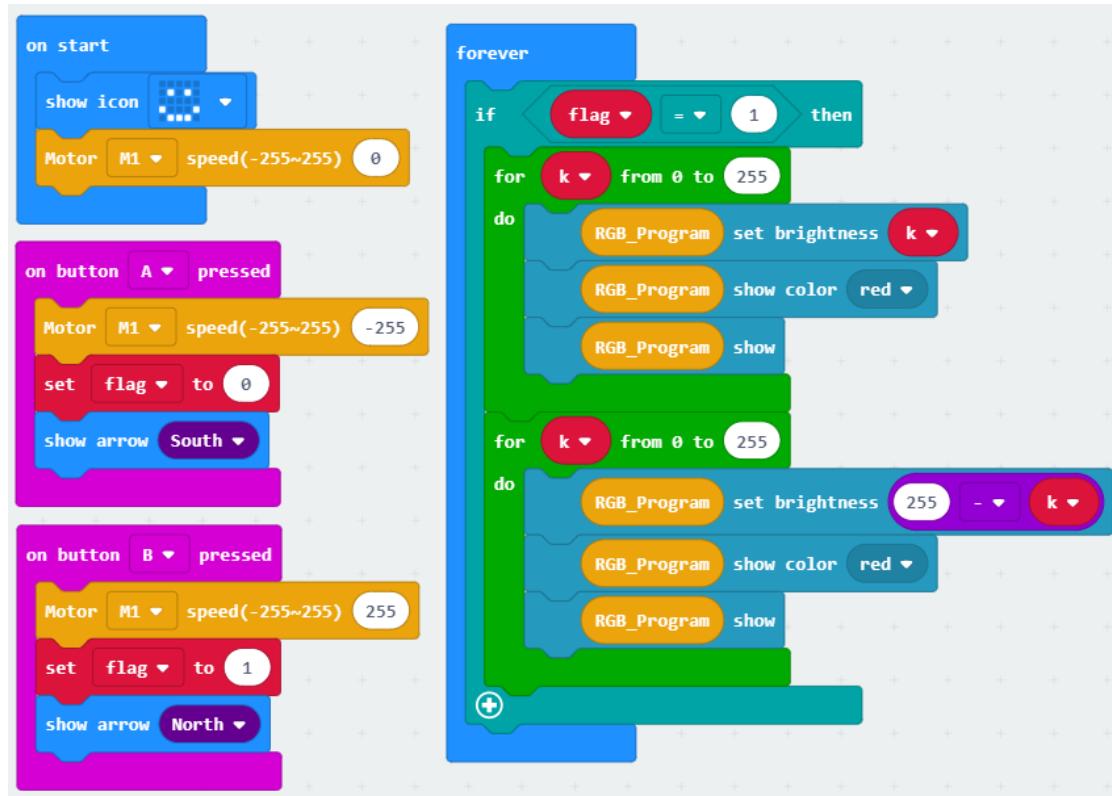
The following is the location of the building blocks required for this programming.





#### 4. Combine building block

The summary program is shown below:



#### 5. Assembly steps

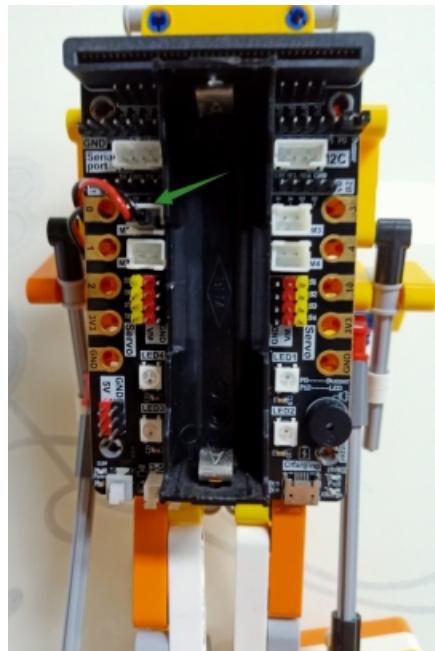
Please refer to **Assembly instructions** folder for building blocks assembly steps.

#### 6. About wiring:

As shown below,

**Building block motor connect to M1 interface of super:bit.**

The black wiring of the motor is near the battery side.



## 7. Experimental phenomena

After the program is successfully downloaded, the micro:bit dot matrix will display the smile pattern and the robot will stop. When we press the A button, the side with the motor is front for robot, the robot will advance and micro:bit dot matrix will display south arrow. When we press the B button, the side with the super:bit board is front for robot, the robot will back, micro:bit dot matrix will display north arrow and RGB light will realize breathing effect.