Color recognition machine

1. Learning objectives

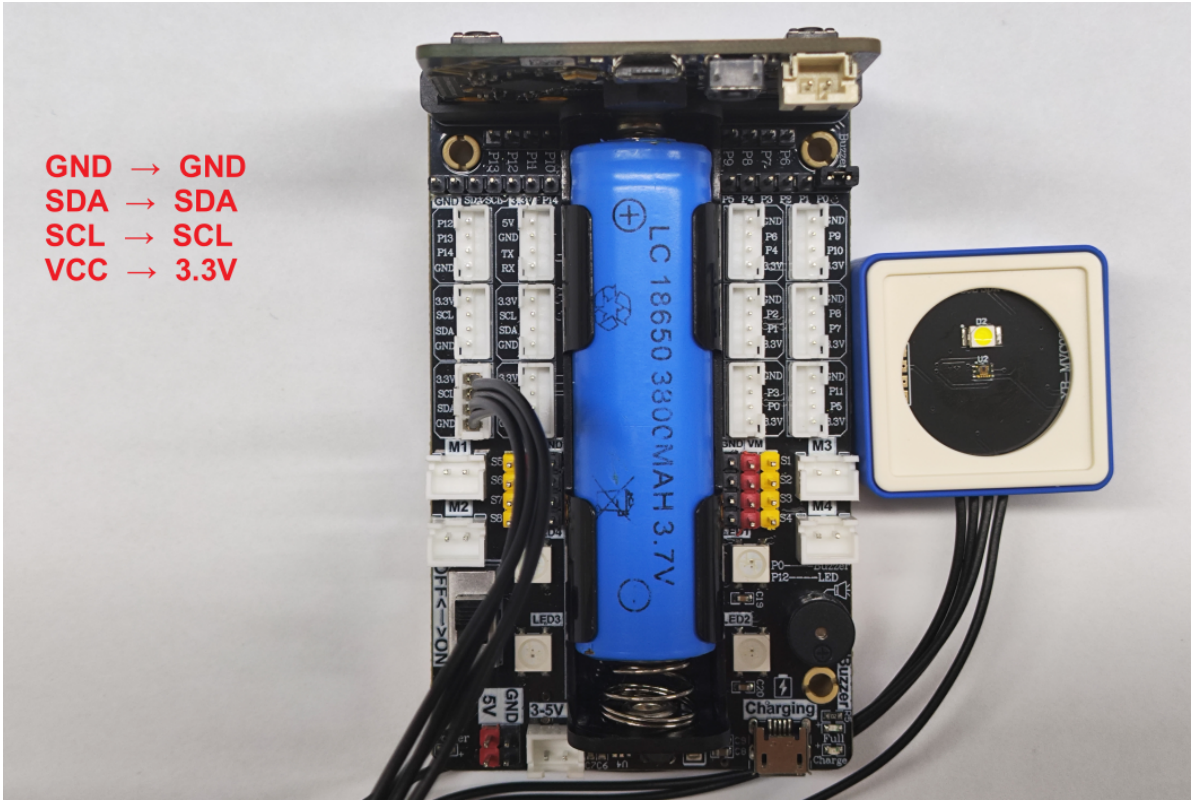
In this course, we mainly learn how to implement the temperature and humidity reminder function through MakeCode graphical programming.

2. Building blocks

For the building blocks steps, please refer to the installation drawings of [Assembly Course]--[Color recognition machine] or the building blocks installation brochure in the materials.

3. Sensor wiring

The color recognition module is connected to the I2C (SDA, SCL) interface.



4. Programming

Method 1 Online programming:

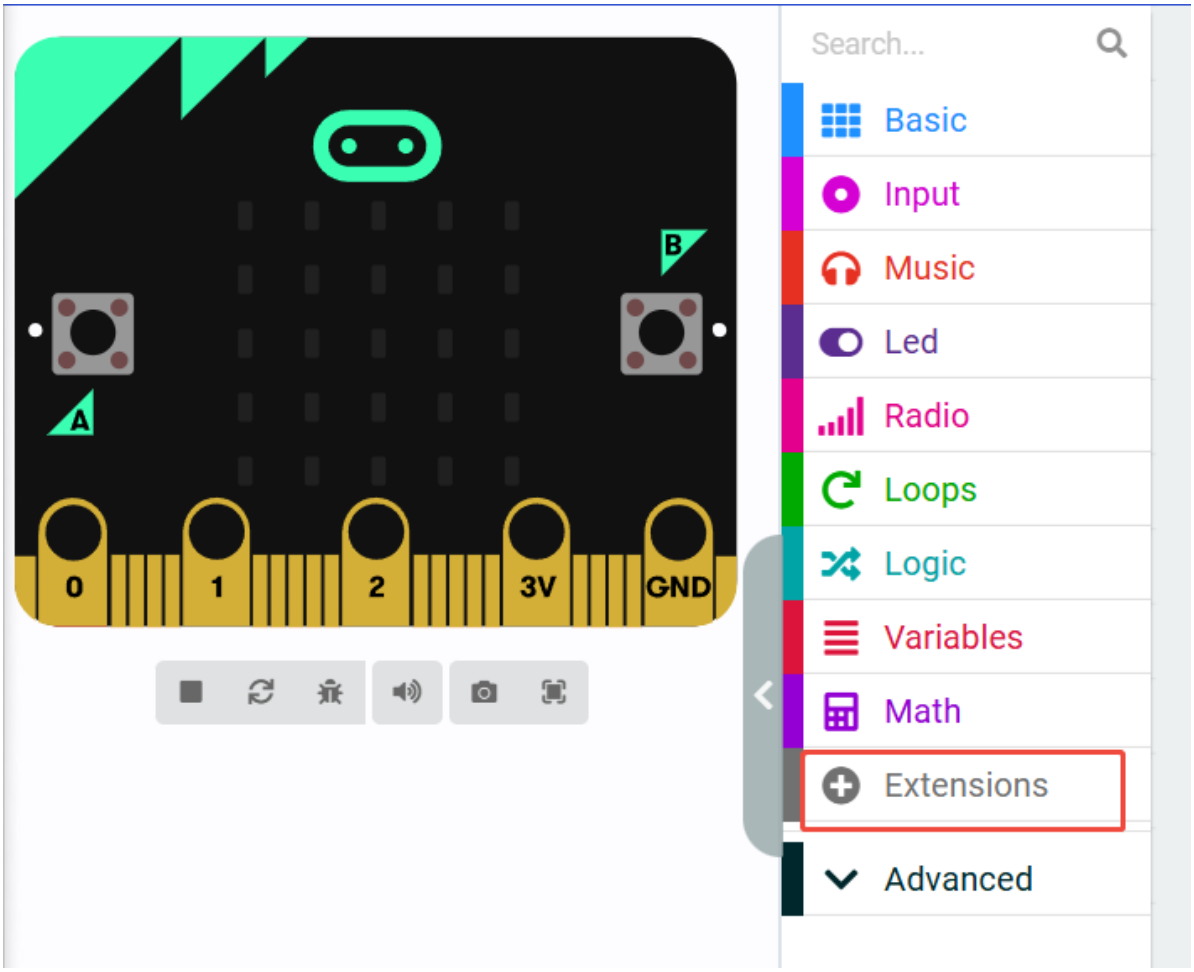
First, connect micro:bit to the computer via a USB data cable. The computer will pop up a U disk. Click the URL in the U disk: https://makecode.microbit.org/ to enter the programming interface. Then, add the Yahboom software package to program.

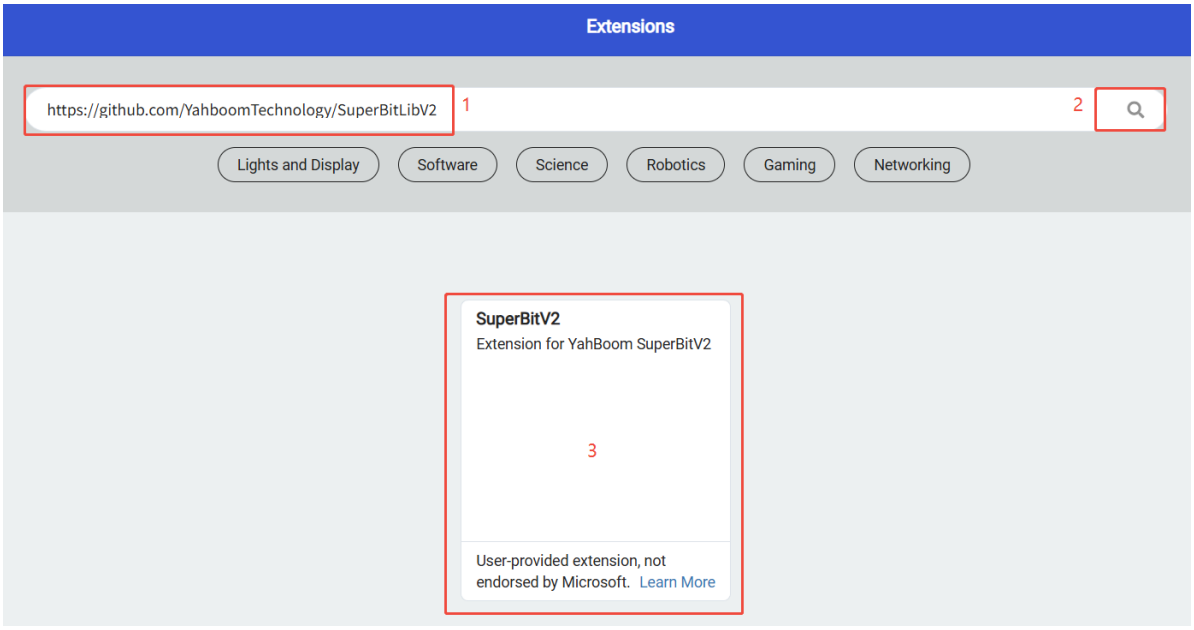
Method 2 Offline Programming:

Open the offline programming software MakeCode and enter the programming interface. Click [New] and add the Yahboom software package to start programming.

superbit kit expansion package: https://github.com/YahboomTechnology/SuperBitLibV2
Color recognition sensor: https://github.com/YahboomTechnology/module_world_color

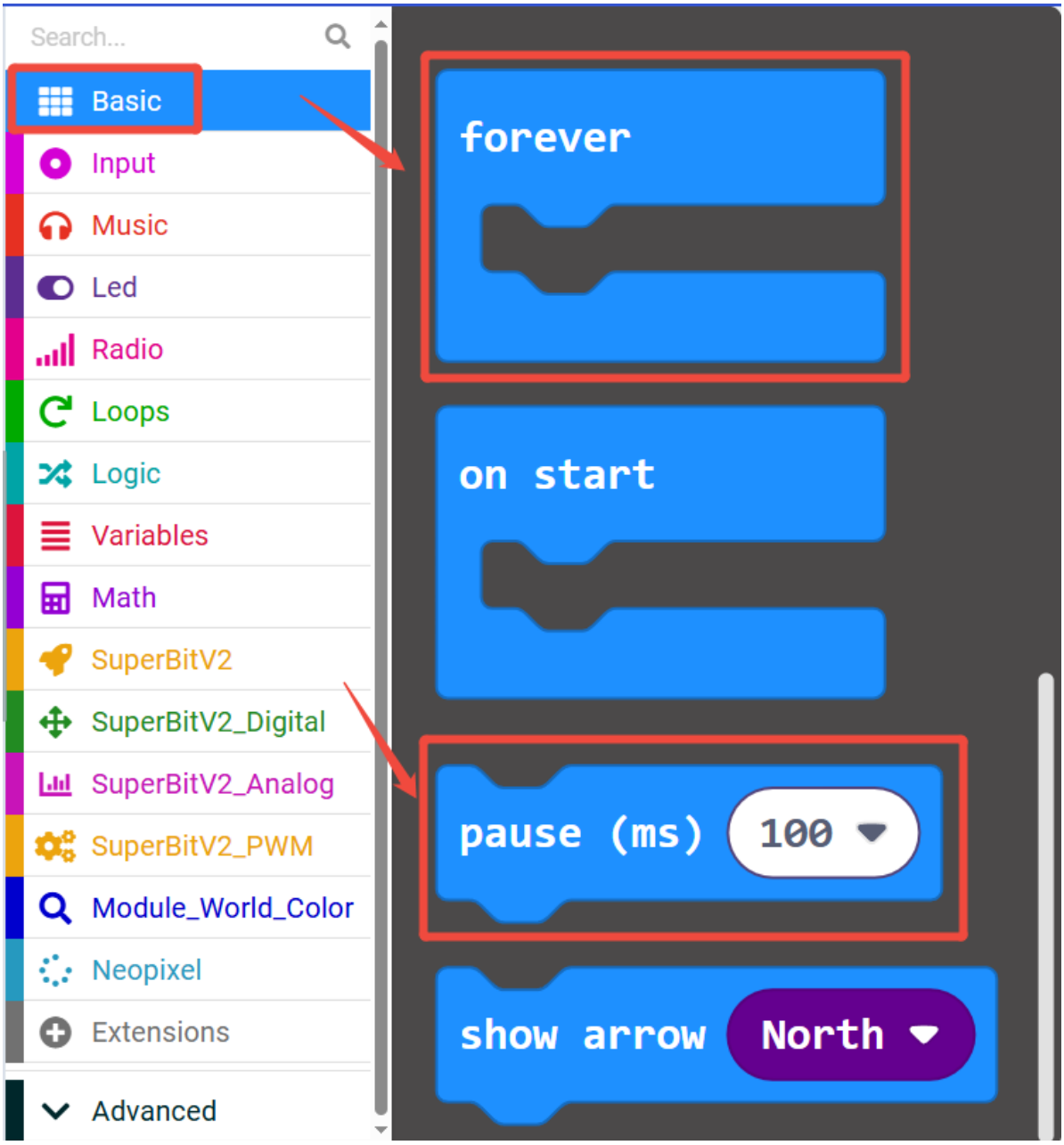
4.1 Add expansion package

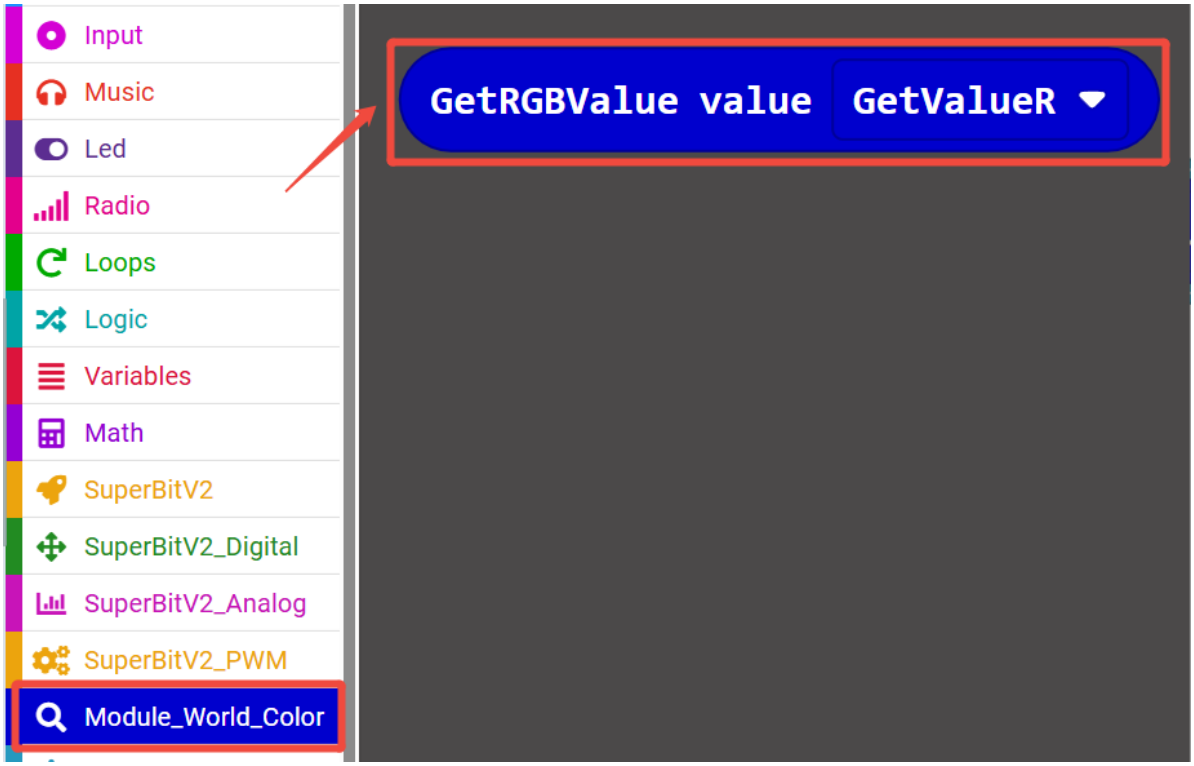


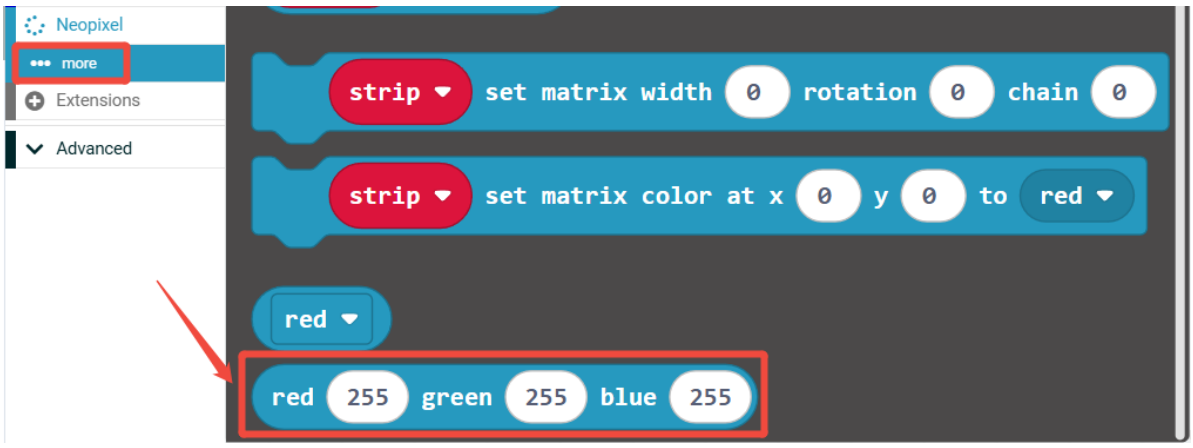


4.2 Building blocks used

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

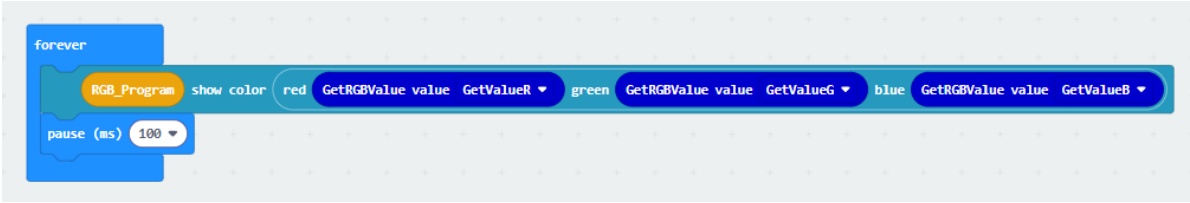






4.3 Combining blocks

The summary program is shown in the figure below.



You can also directly open the **Color-recognition-machine.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 runs successfully, the color sensor recognizes different colors, and the RGB light displays the corresponding color.