Small-light

1.Learning goals

In this lesson we mainly use micro:bit and basic expansion boards, and learn how to use the input building block to read the analog value of pin P2. Programming makes the micro:bit with the horizontal base expansion board to illuminate at night.

Through programming, the two RGB light of Basic expansion board can be illuminated in an environment with weak light intensity.

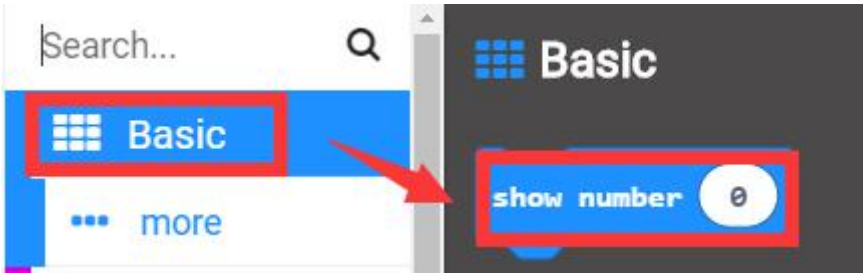
2.Programming method:

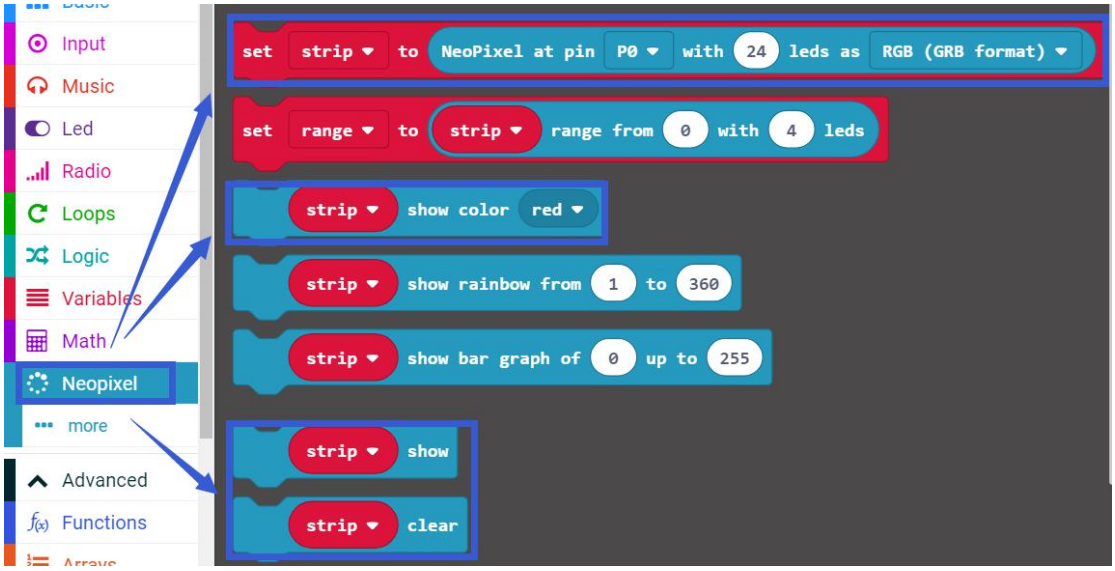
Mode 1 online programming: First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: **http://microbit.org/** to enter the programming interface to program.

Mode 2 offline programming: We need to open the offline programming software. After the installation is complete, enter the programming interface, click【New Project】to program.

3.Looking for blocks

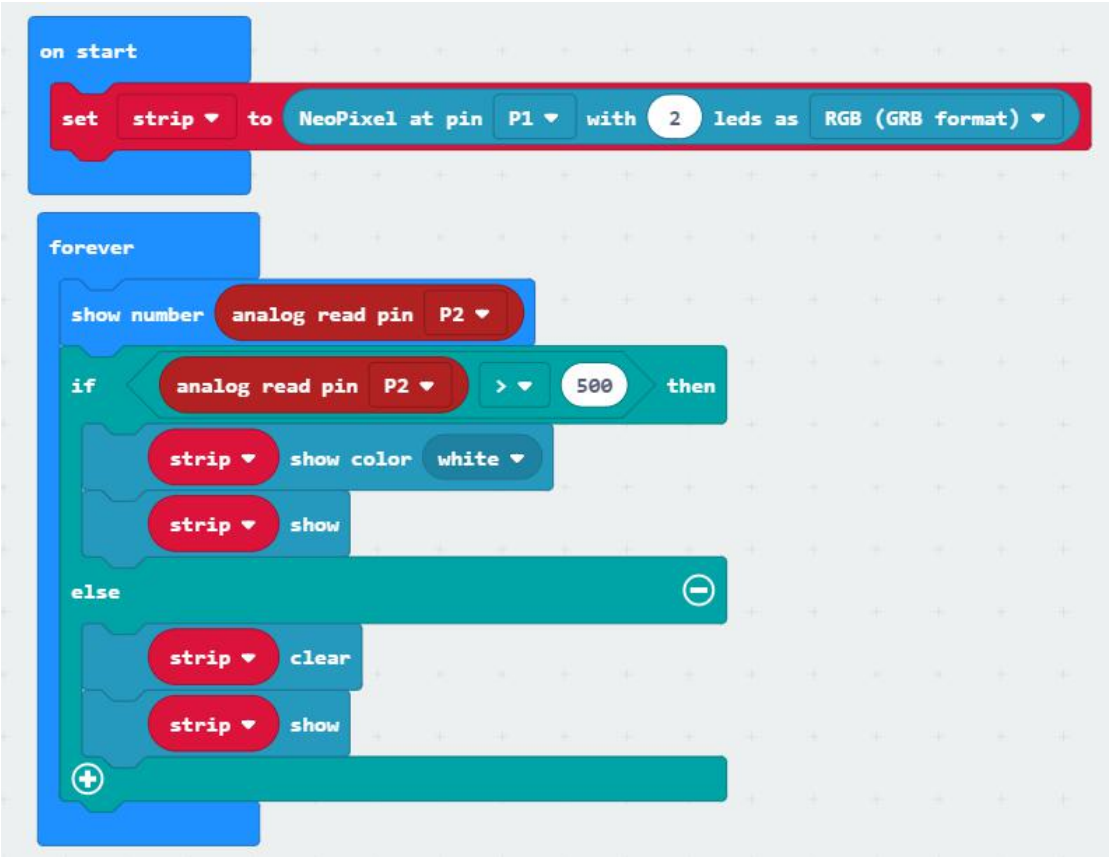
The following is the location of the building blocks required for this programming.



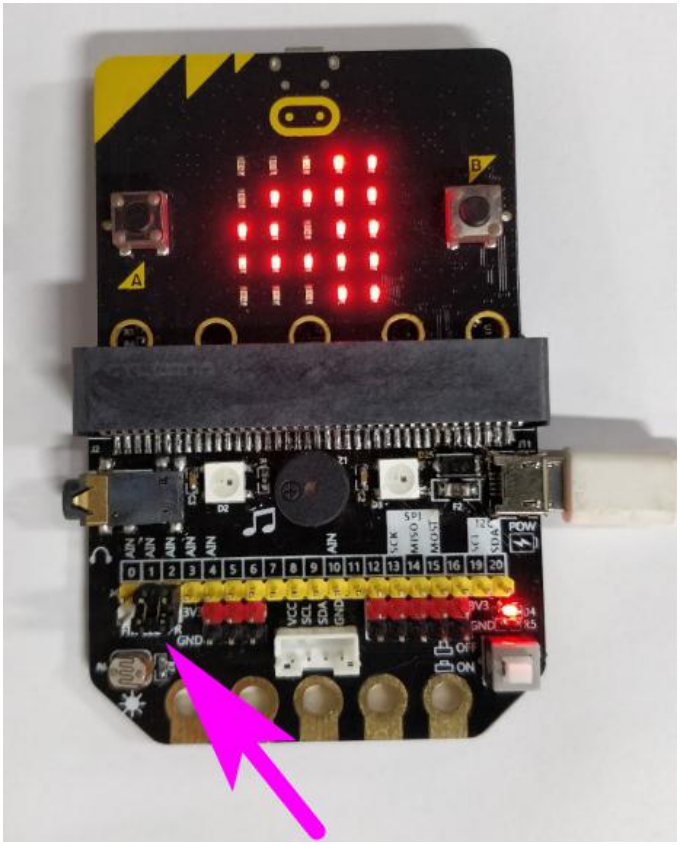


4.Combine building block

The summary program is shown below:



Note: The jumper cap needs to be installed on the P1 and LED, P2 and PR pins on the basic expansion board. As shown below.



5. Experimental phenomena

After the program is successfully downloaded, the analog value of P2 pin will be displayed on the micro:bit, and the analog value will change with the change of the light intensity. The stronger the light intensity, the smaller the displayed value; When the analog value is greater than 500, the LED light will be light up.