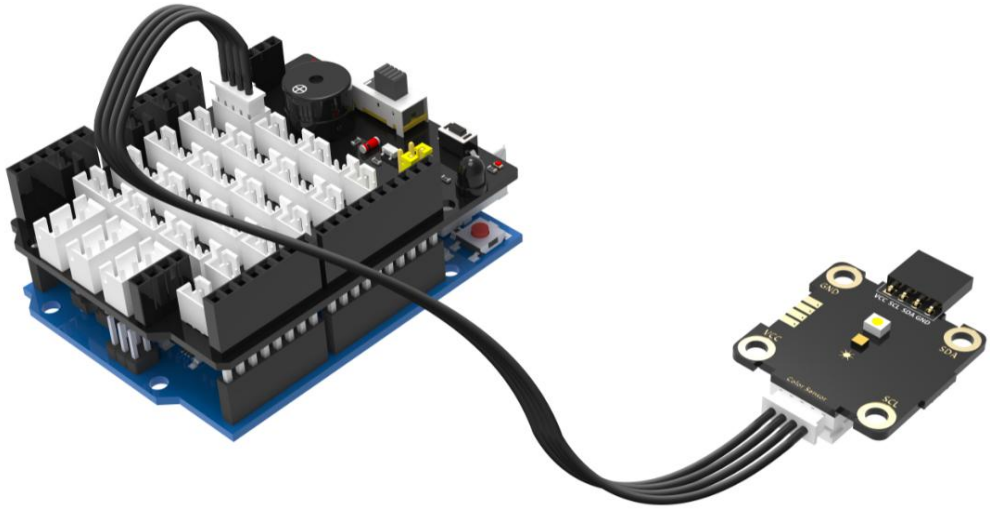
Experimental content: Recognize the three color values of red, green and blue and print them out through the serial port.

Experiment preparation: UNO board *1, Plugkit sensor expansion board *1, USB data cable *1, Color recognition sensor module *1, 4pin cable(PH2.0) *1.

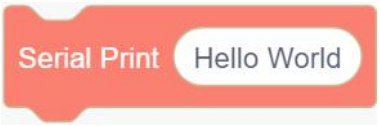
Experimental wiring:

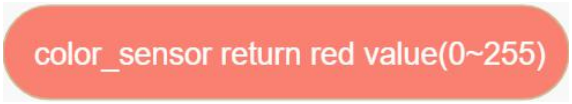


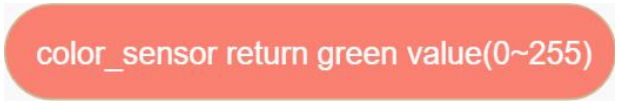
Color recognition sensor module is connected to the interface of the sensor expansion board with silk screen (GND, SDA, SCL, 5V).

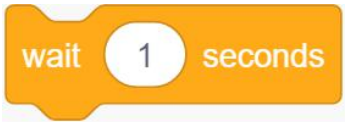
Experimental steps:

1.Select the following blocks in the [Plugkit], [Control].

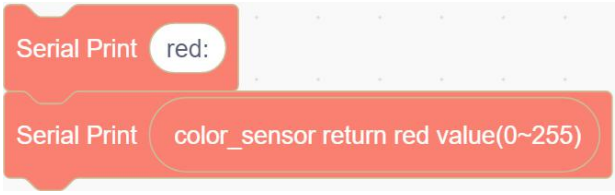






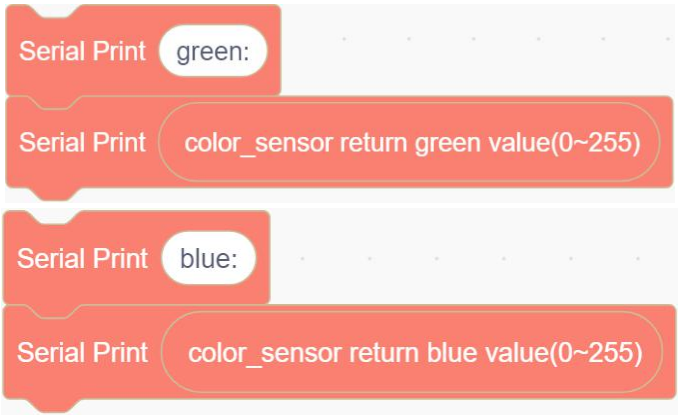


2.Put color_sensor return red value(0 ~ 255) block into the input of the block serial port block. In order to better distinguish the data printed by the serial port, we need to add serial print red: block. (Note, : is a colon with English characters.)

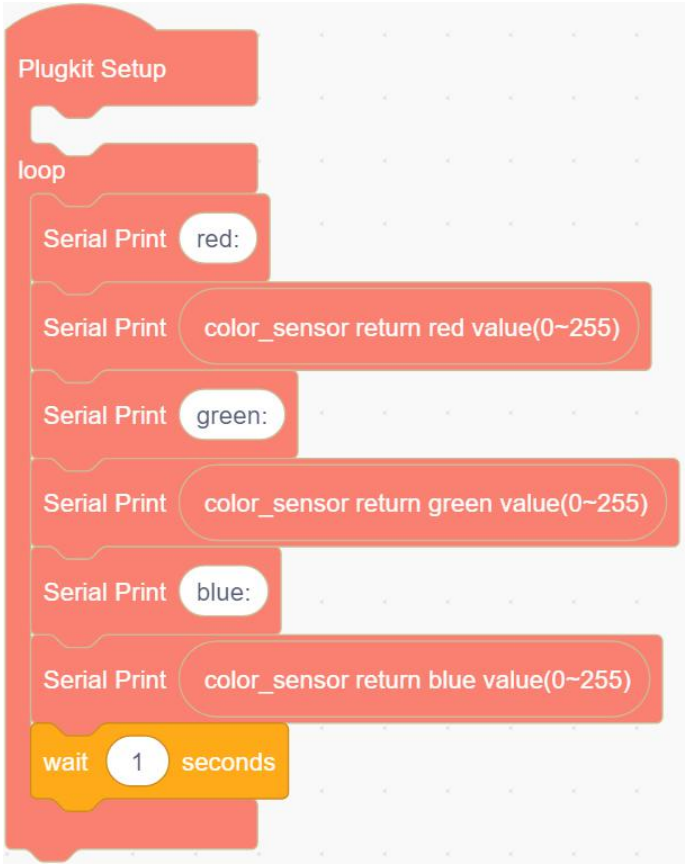


3.About serial port print color sensor returns green value and blue value, which can be modified by

copying the combination of the wooden blocks on the area, so it is not explained in detail here.



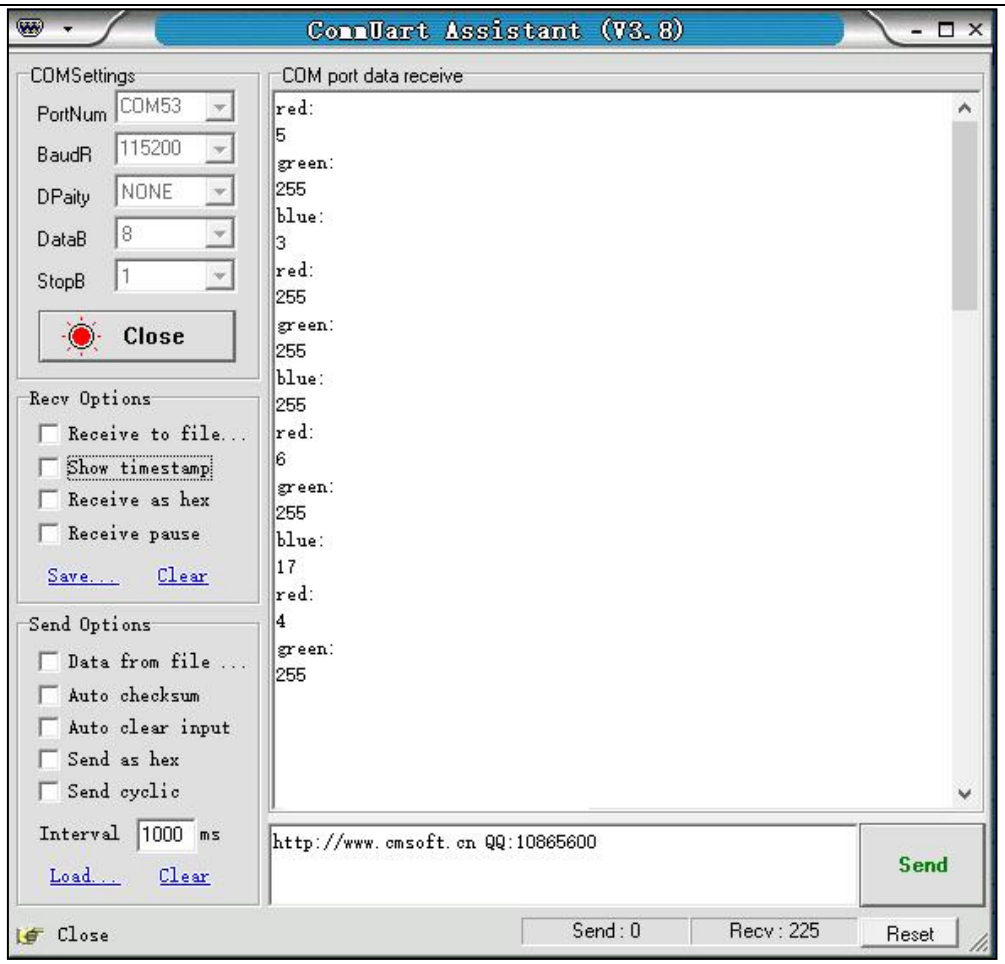
4.Put the block combination of step 2 and add wait a seconds block into the loop block.



5.Compiling and uploading programs.

Experimental phenomena: The serial port prints the red, green, and blue color values of the object recognized by the color recognition sensor every 1s. Open the serial port debugging assistant, select the baud rate of 115200, and open the serial port.

You can observe that when the sensor recognizes red, the red value is close to 255, and the green and blue values are less than 10. When the sensor recognizes green, the green value is close to 255, and the red and blue values are less than 10. When the sensor recognizes blue, the green value is close to 255, and the red and green values are less than 10. When red, green, and blue values approaching 255, it is white.


ComUart Assistant (V3.8)
COMSettings
PortNum COM53
BaudR 115200
DPaity NONE
DataB 8
StopB 1
Close
Recv Options
Receive to file...
Show timestamp
Receive as hex
Receive pause
Save...
Clear
Send Options
Data from file ...
Auto checksum
Auto clear input
Send as hex
Send cyclic
Interval 1000 ms
Load...
Clear
COM port data receive
red:
5
green:
255
blue:
3
red:
255
green:
255
blue:
255
red:
6
green:
255
blue:
17
red:
4
green:
255
http://www.cmsoft.cn QQ:10865600
Send
Close
Send : 0
Recv : 225
Reset