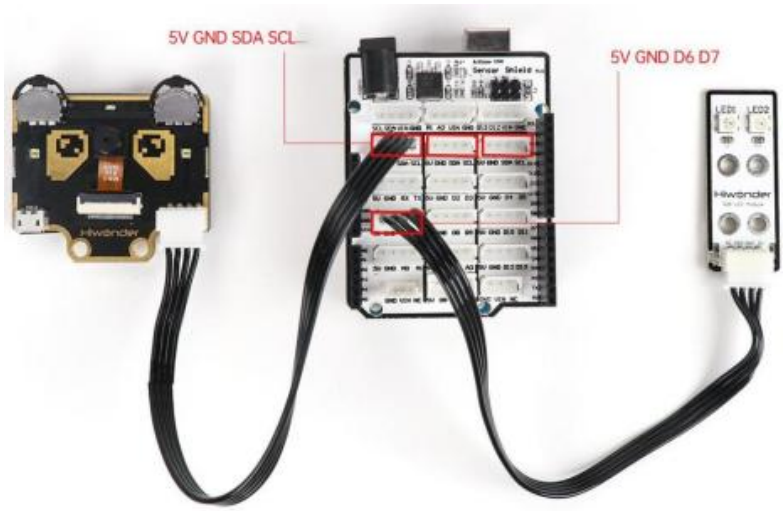
Lesson 1 Color Recognition Integration with Arduino

1. Preparation

Connect WonderCam and RGB LED Module to Arduino Expansion Board using 4-Pin cable.

RGB LED Module connects to port (5V GND D6 D7).

WonderCam can be connected to any IIC port (5V GND SDA SCL).



2. Learning Objective

① To know the connectivity of WonderCam and RGB LED Module on Arduino Expansion Board.

② To understand the program logic.

3. Programming Plan

In this lesson,we are using the Visual module Color Recognition function to integrate with Arduino to identify color. The program will initialize the Visual module follow by detecting color. When color is detected, it will proceed to program executions.

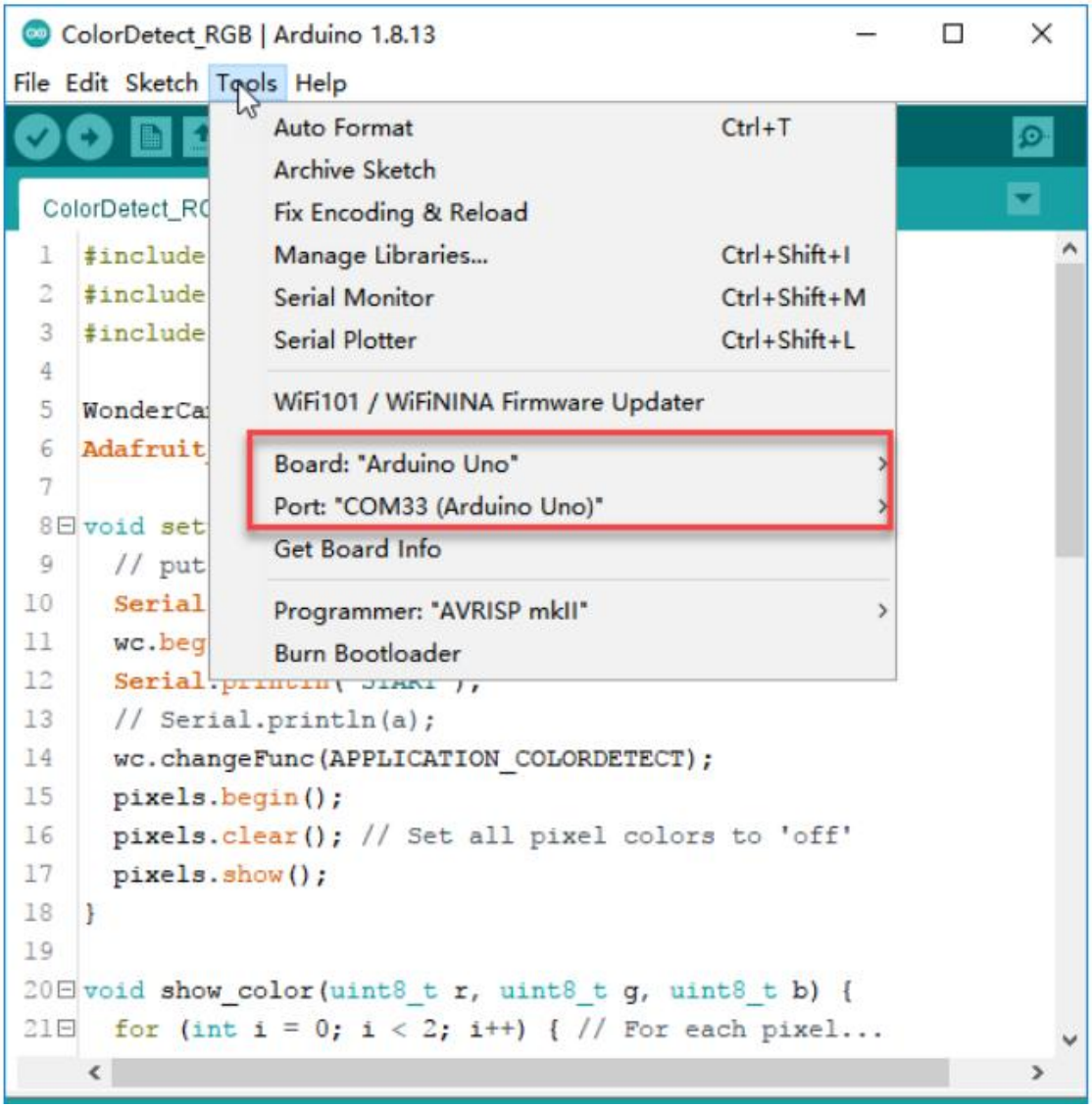
4. Compiling Program and Upload

This full program code can be found in folder “Color Recognition Arduino Program” in “05_ColorDetect_RGB”.

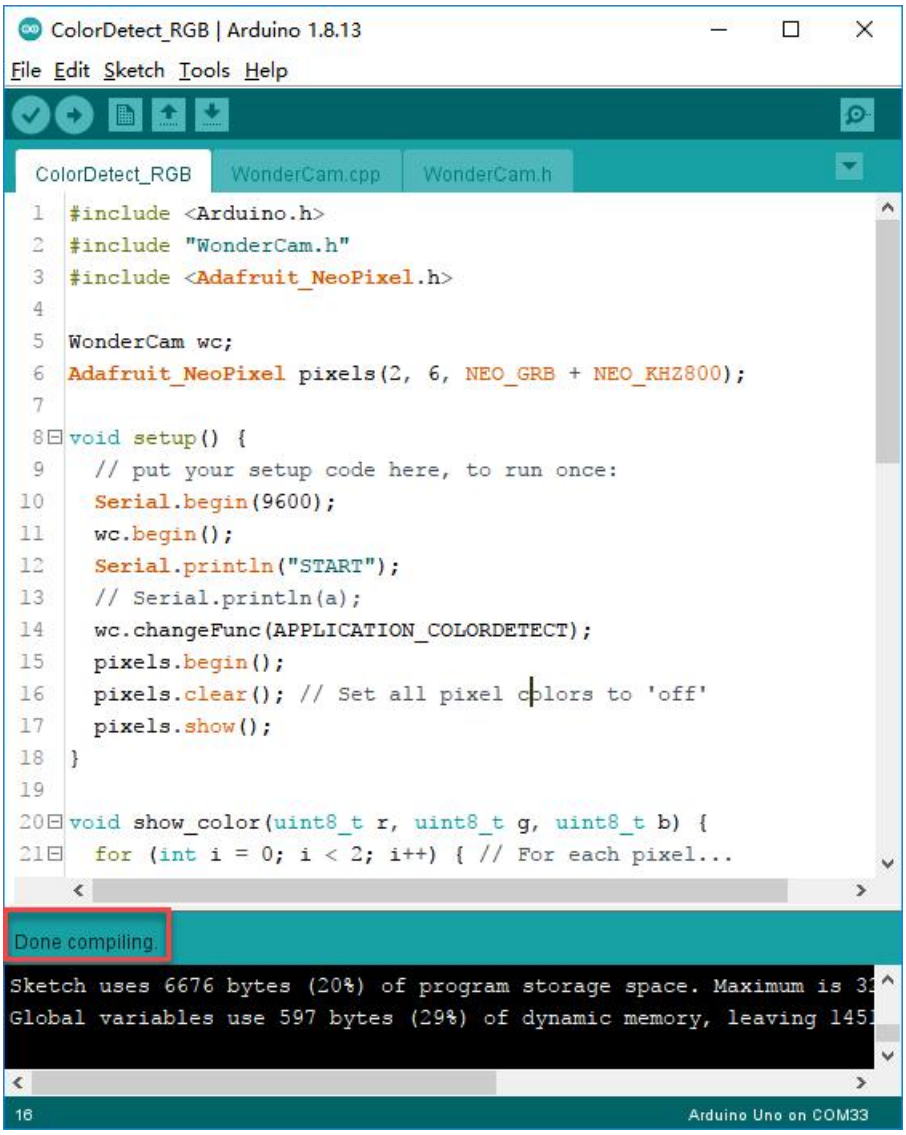
1) Connect Arduino UNO board to computer.

2) In folder “Color Recognition Arduino Program” in “05_ColorDetect_RGB”, double click ino program.

3) In Arduino IDE program, open Tools in menu and select corresponding Development Board and port. (Port number shown in this lesson may differs in individual computer environment).

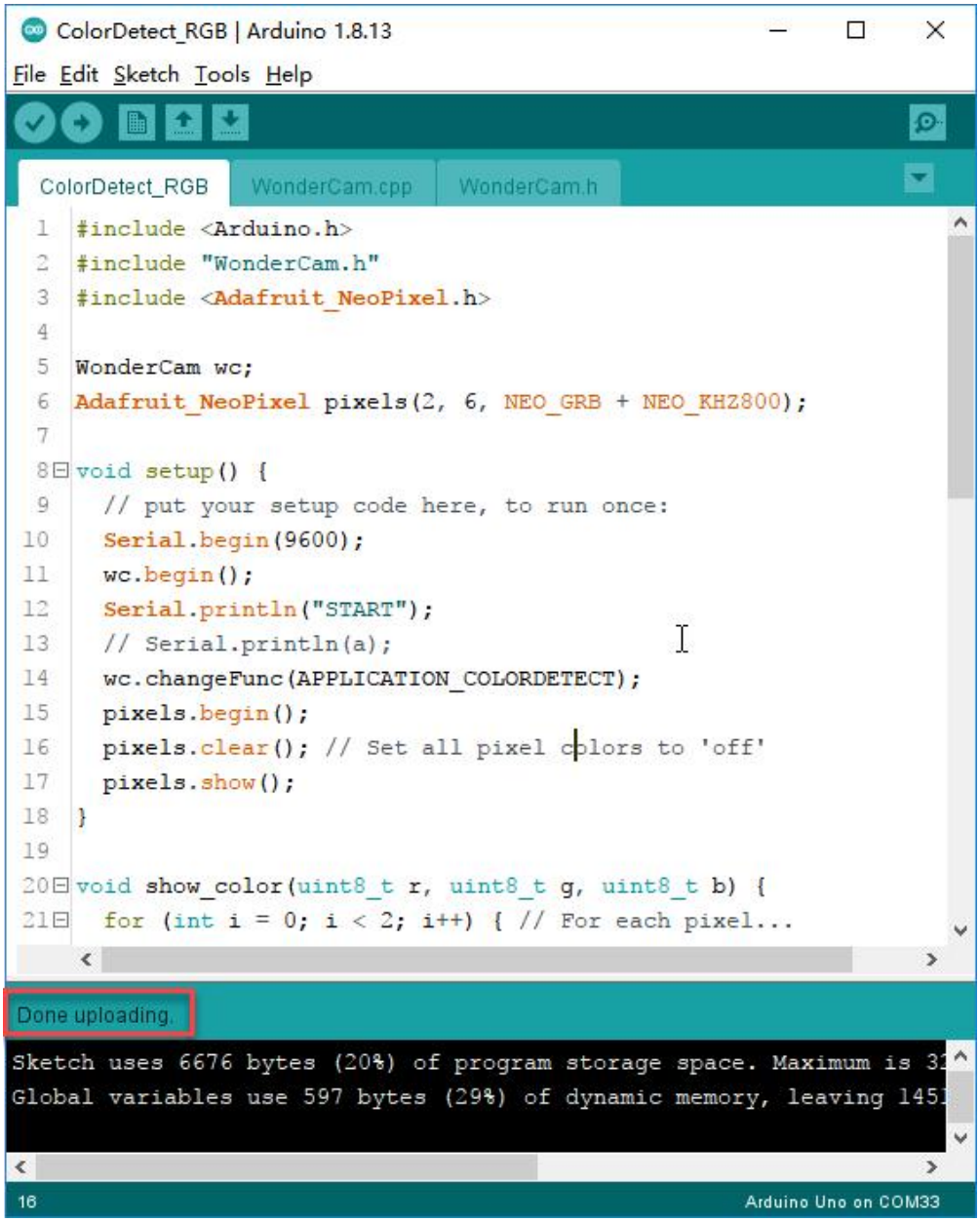


4) In Arduino IDE Program, click  button on the menu and wait for compilation process to complete.



5) Click  button to upload program to UNO Development Board. Wait for uploading process to complete.

6) During Uploading process, do not unplug or move the USB Cable to prevent transmission failure.



5. Results

Please refer to Lesson 1 Color Recognition on how to program color.

Once program had been uploaded, WonderCam will automatically switch to Color Leaning interface.You can start programming WonderCam to Learn three basic colors: Red, Green and Blue. When learning is completed, when WonderCam detected and recognized the color, the RGB LED Module will it up with corresponding color light.