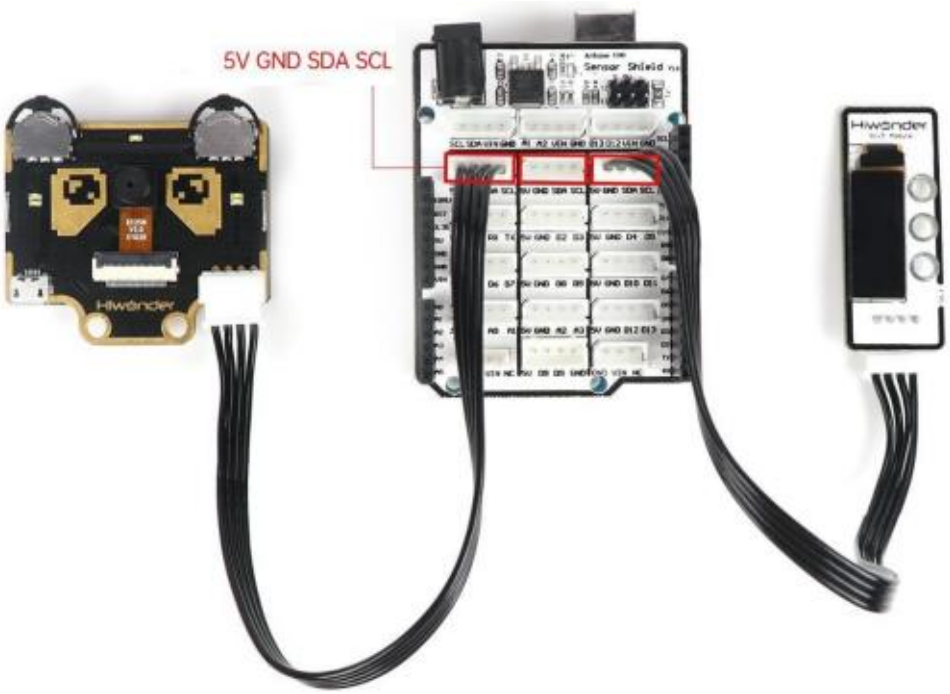
Lesson 5 Number Recognition Integration with Arduino

1. Preparation

Connect WonderCam and OLED Display Module to Arduino Expansion Board using 4-Pin cable.

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



2. Learning Objectives

① To know the connectivity of WonderCam and OLED Display Module on Arduino Expansion Board.

② To understand the program logic.

3. Programming Plan

In this lesson, we are using the Visual Line Following function to integrate with Arduino to conduct Number Recognition. The program will initialize the Visual module follow by detecting number using the preprogrammed codes. When a

number is recognized, it will present the identified number with corresponding number presented on OLED display module.

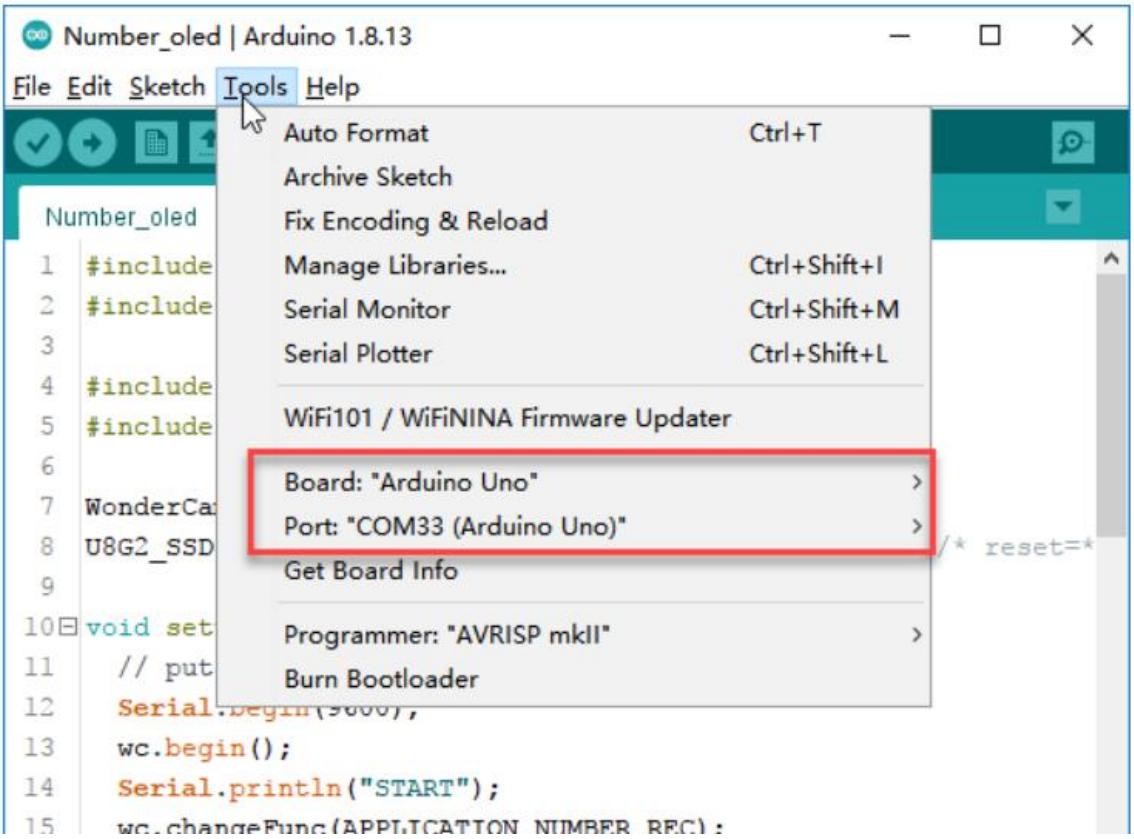
4. Compiling Program and Upload

This full program code can be found in folder “Number Recognition Program” in “11_Number_oled”.

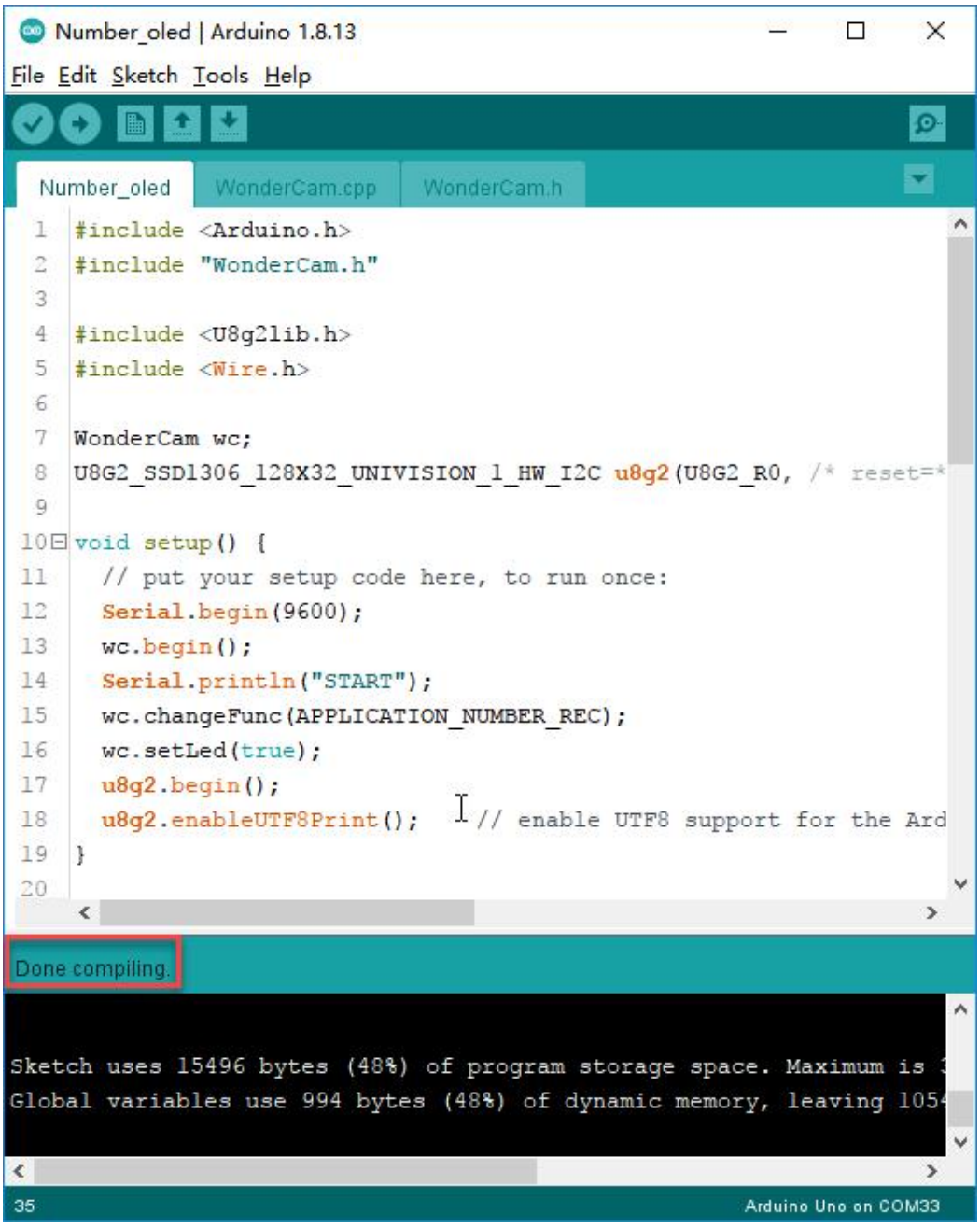
1) Connect Arduino UNO board to computer.

2) In “ Number Recognition Program ” in “06_LineFollow”, 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).

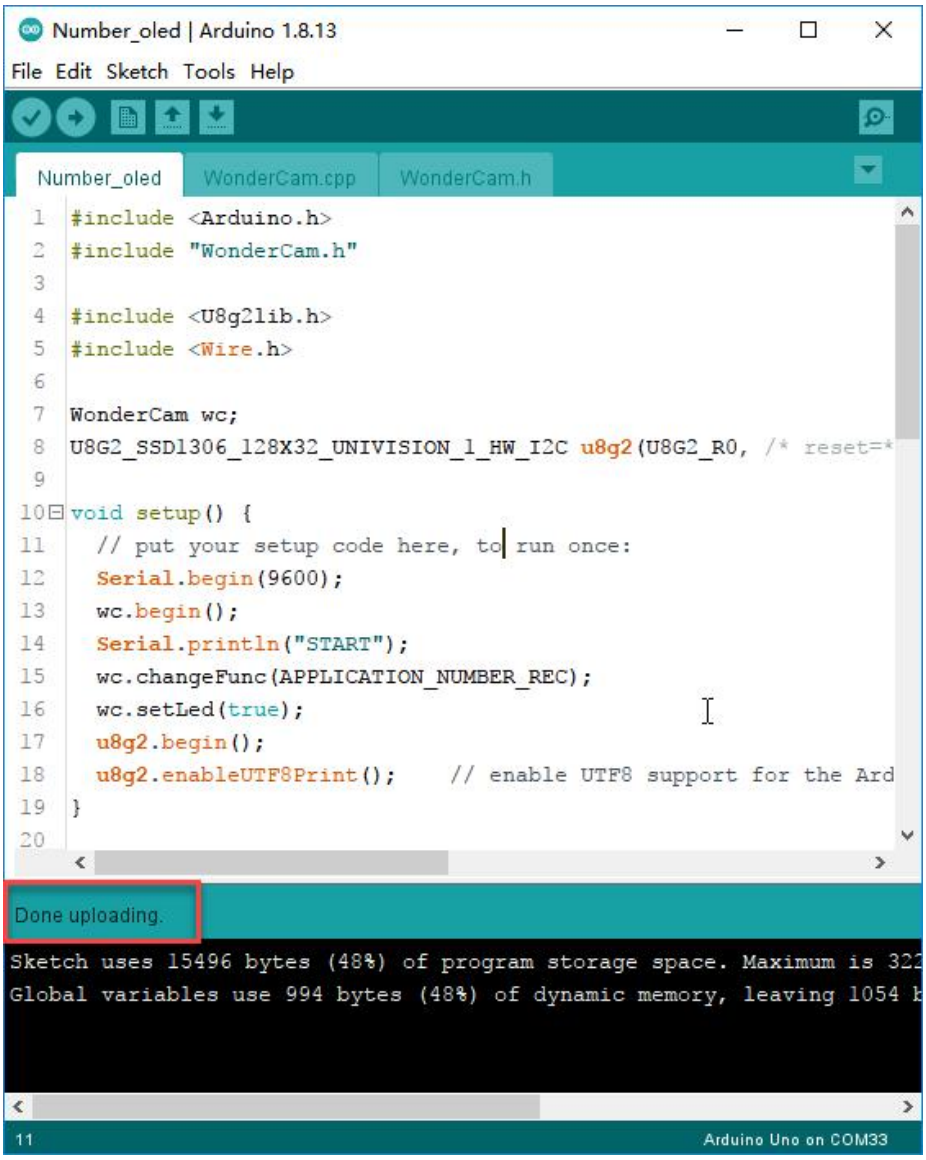


4) In Arduino IDE Program, click button on the menu and wait for compilation process to complete.



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.

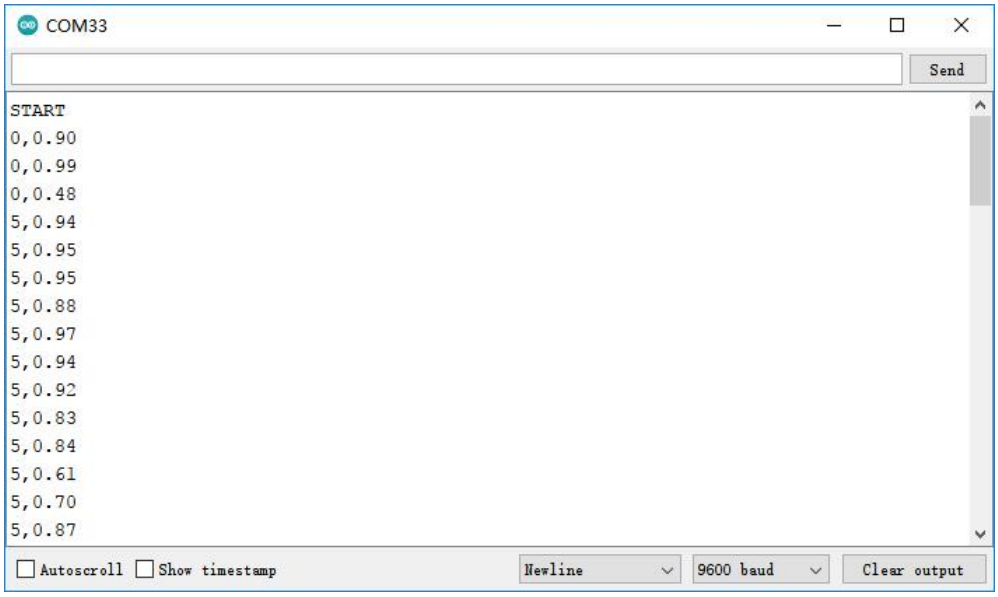


5. Result

* Please use the numbers template provided.

Once program had been uploaded, WonderCam will automatically switch to Nubmer Recognition interface. When a number is recognized, it will present the identified number with corresponding number presented on OLED display module.

Concurrently, the trust value will also be presented in Arduino Monitor Serial Port interface.


COM33
Send
START
0,0.90
0,0.99
0,0.48
5,0.94
5,0.95
5,0.95
5,0.88
5,0.97
5,0.94
5,0.92
5,0.83
5,0.84
5,0.61
5,0.70
5,0.87
Autoscroll
Show timestamp
Newline
9600 baud
Clear output