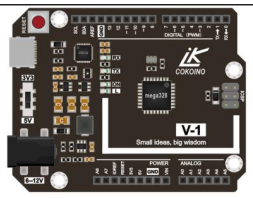
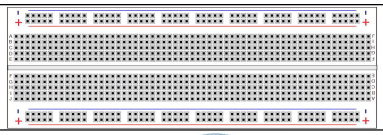
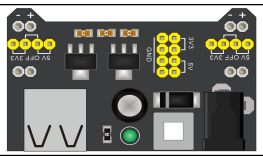
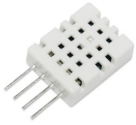
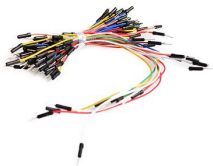
25.Make a hygrothermograph

ABOUT THIS PROJECT：

You will learn：

- How to make a hygrothermograph

1、Things used in this project

Hardware components	Picture	Quantity
V-1 board		1 PCS
Breadboard		1 PCS
30CM USB Cable		1 PCS
Breadboard power module		1 PCS
DHT12 Temperature and Humidity Sensor		1 PCS
Adjustable potentiometer		1 PCS
9V Battery Snap Connector		1 PCS
1602 LCD		1 PCS
Male to Male DuPont Line		22 PCS

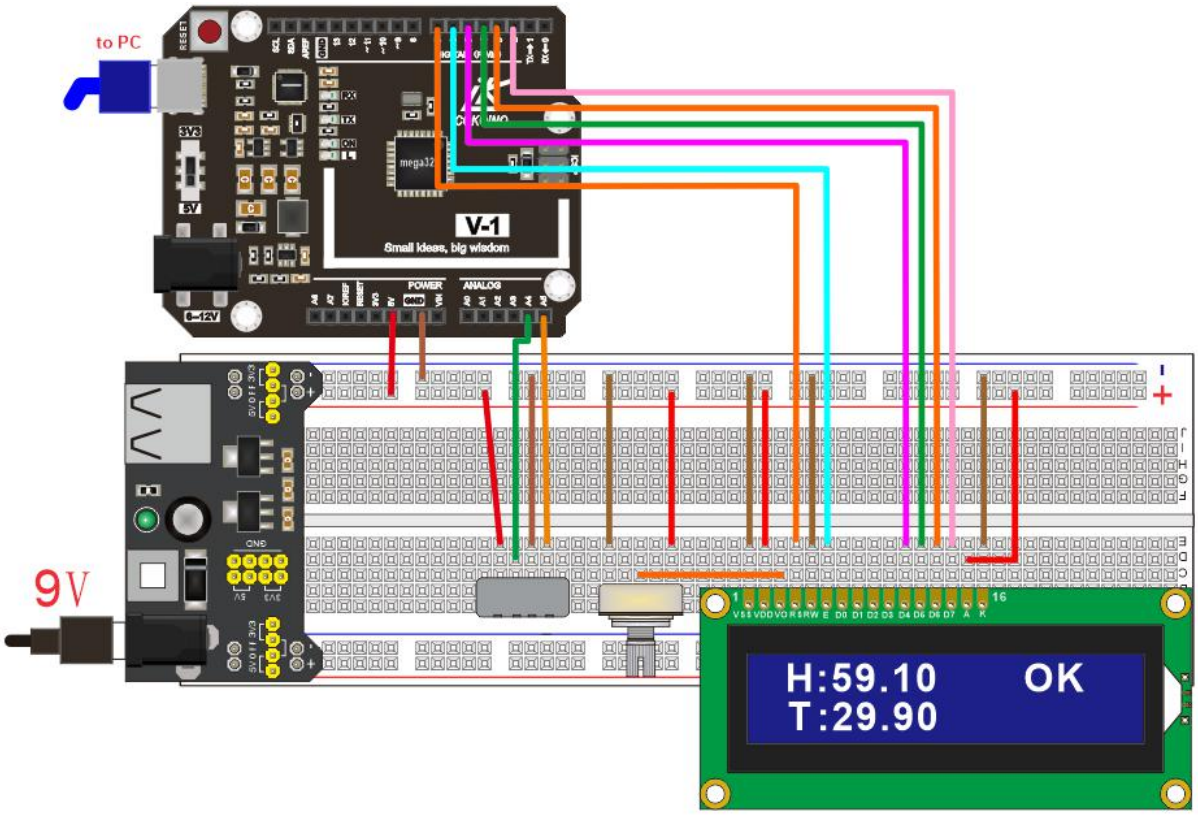
2、Make a hygrothermograph

The experiment is to integrate the knowledge of lesson _ 22 and lesson _ 24, and then we use the hardware above to make an electronic display of the temperature and humidity meter, to apply the lessons learned to life.

2.1 Code：

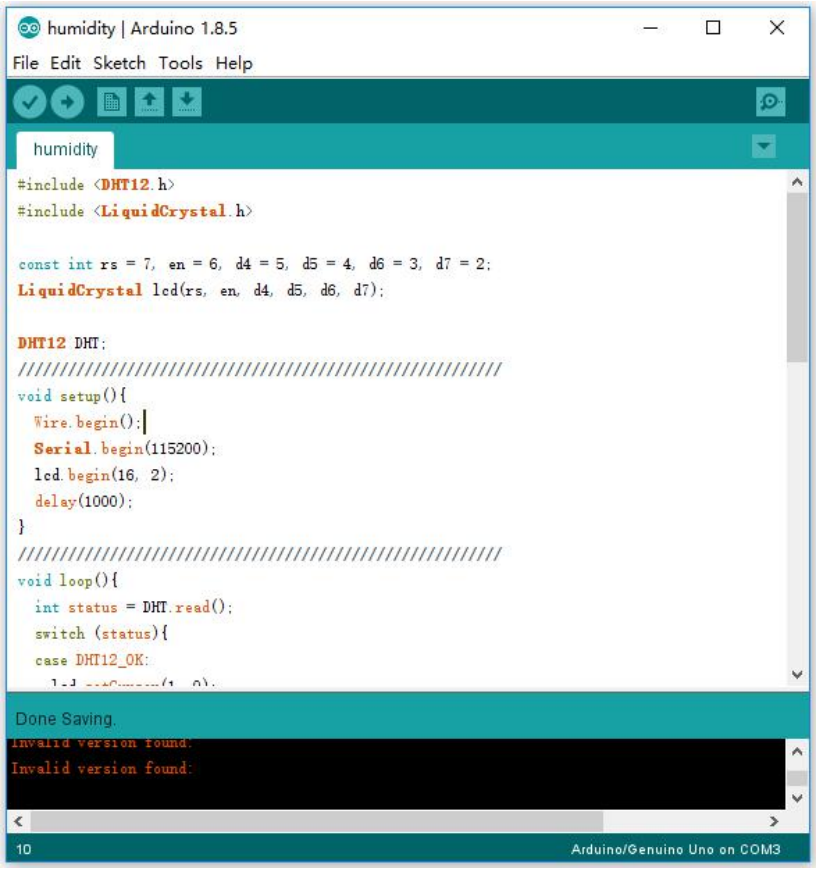
```
#include <DHT10.h>
#include <LiquidCrystal.h>

const int rs = 7, en = 6, d4 = 5, d5 = 4, d6 = 3, d7 = 2;
LiquidCrystal lcd(rs, en, d4, d5, d6, d7);

DHT10 DHT;
//////////////////////////////////////////////////////////
void setup(){
   Wire.begin();
   Serial.begin(115200);
   lcd.begin(16, 2);
   lcd.setCursor(1, 0);
   lcd.print("hello cokoino!");
   delay(1000);
   lcd.clear();
}
//////////////////////////////////////////////////////////
void loop(){
   int status = DHT.read();
   if(status == DHT10_OK){
      lcd.setCursor(1, 0);
      lcd.print("H:");
      lcd.print(DHT.humidity);
      lcd.print("      OK      ");
      lcd.setCursor(1, 1);
      lcd.print("T:");
      lcd.print(DHT.temperature);
   }
   delay(2000);    //recommend delay 2 second
}
```

2.2、Connections diagram

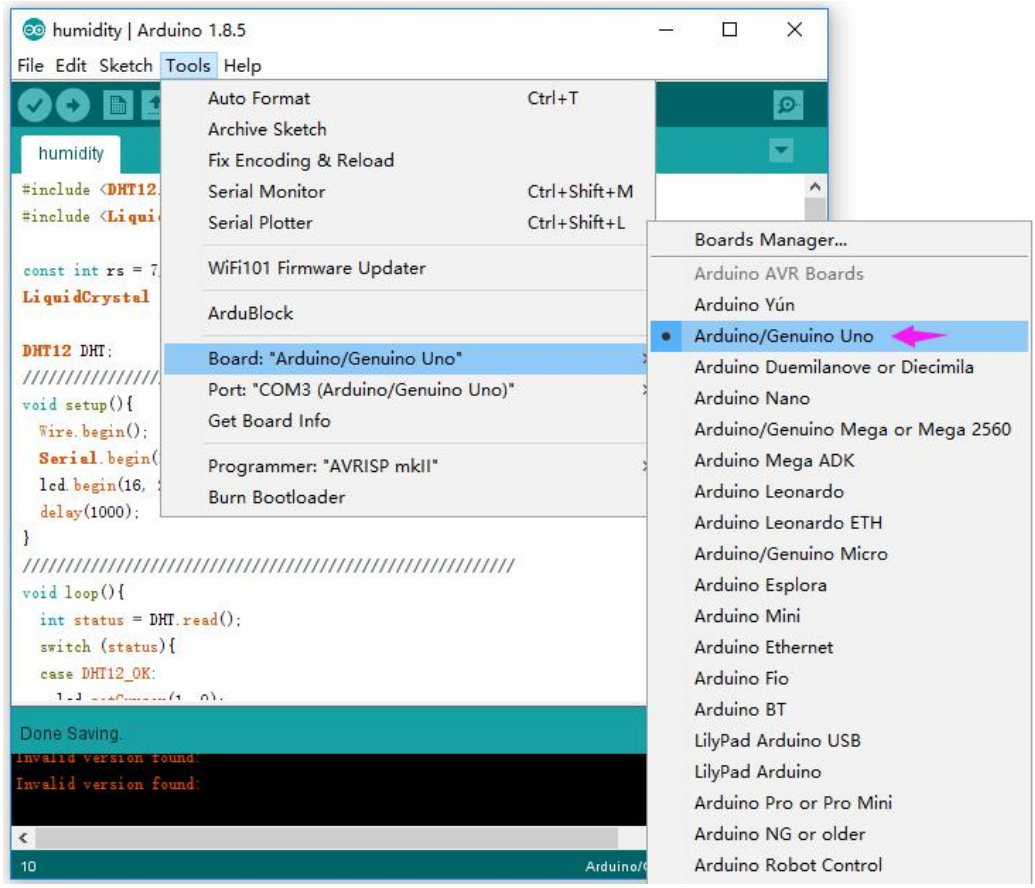


2.3、Compile and upload

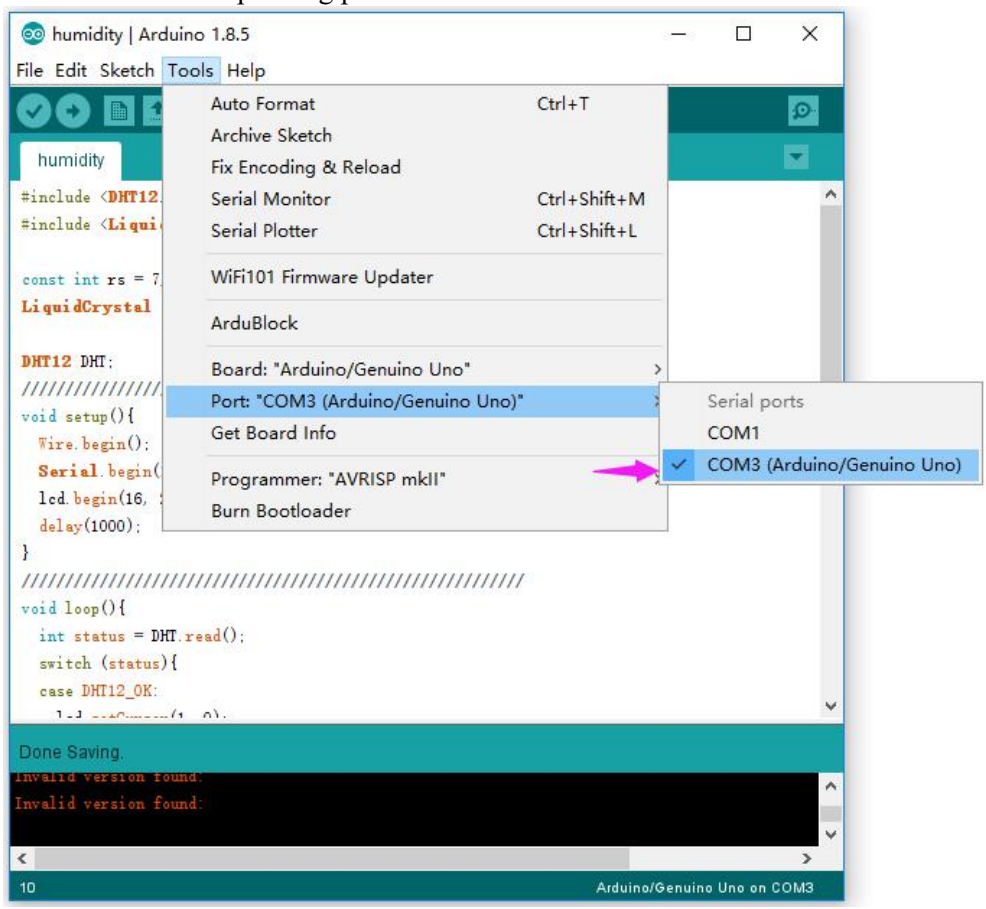
2.3.1、Using USB cable to connect computer to V-1 board，Open the Arduino IDE，copy the above code into the IDE：



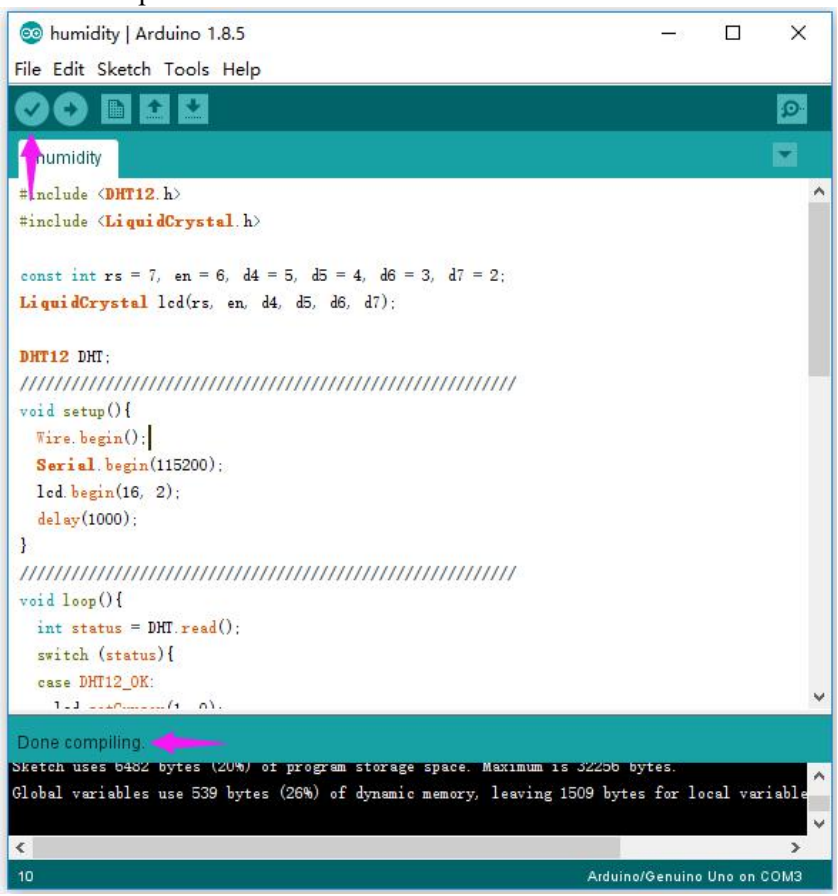
2.3.2、select corresponding board type



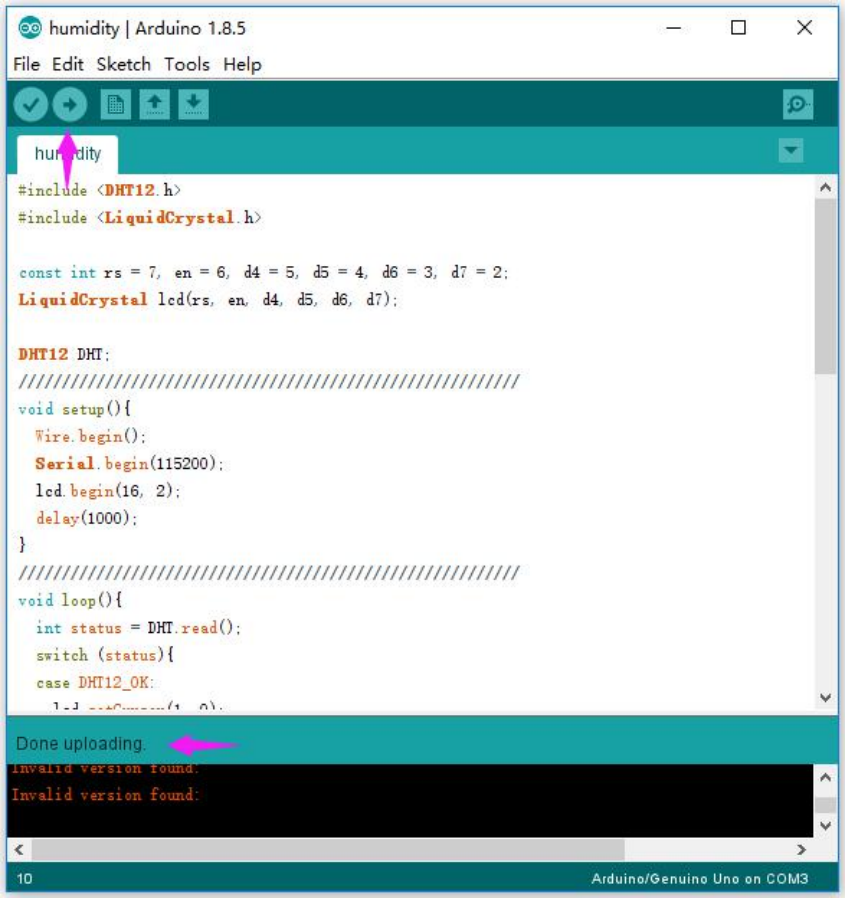
2.3.3、select corresponding port



2.3.4、compile this sketch



2.3.5、simply click the “Upload” button in the environment



2.3.6、Unplug the USB cable from the V-1 board, then connect the power module with the external power supply and turn on the power switch，1602LCD will show the humidity and temperature of the current environment, H for humidity and T for temperature, as shown in the following figure:：