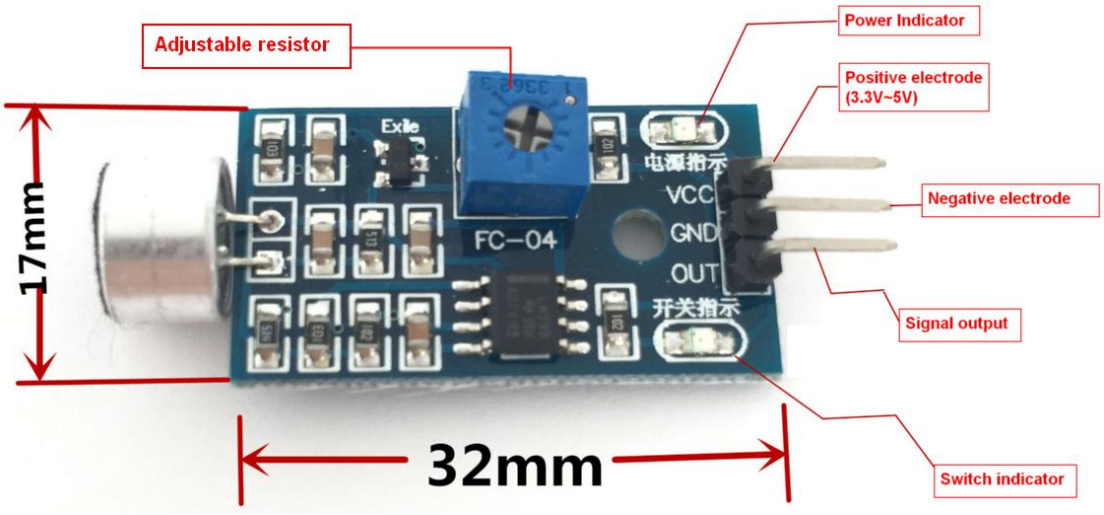
Course 25 ----Sound sensor

The purpose of the experiment:

In this course we mainly study the use of Sound sensors.

Introduction of Sound sensors：

The actual object is shown below.

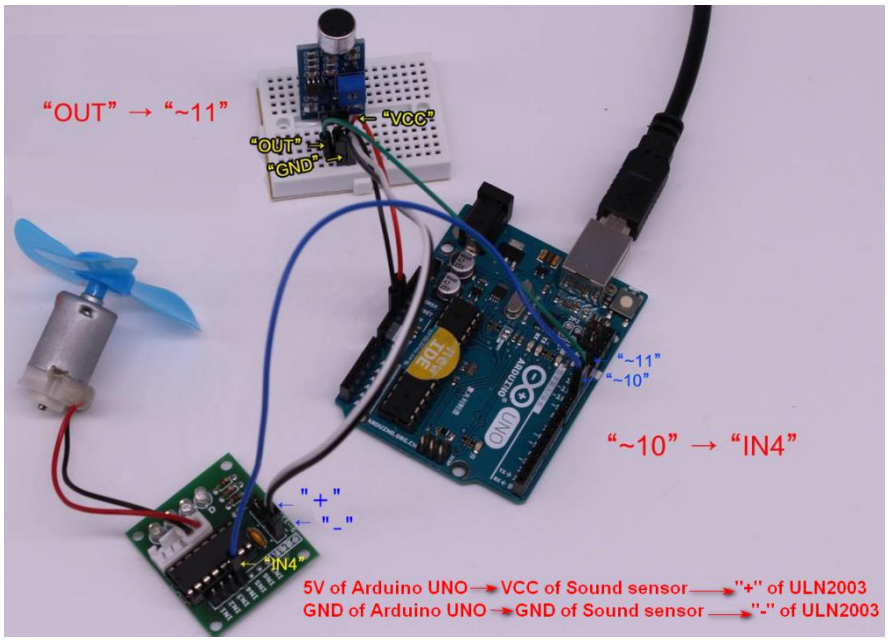


List of components required for the experiment:

Arduino UNO board *1
USB cable *1
DC motor with mini fan *1
ULN2003 *1
Sound sensor *1
Dupont line *1 bunch

Actual object connection diagram：

We need to connect the circuit as shown in the figure below.



Experimental code analysis:

int motor = 10; //The negative pole of the motor is connected to the drive plate in4, and the in4 is connected to the port 10 of Arduino UNO
int voice = 11;

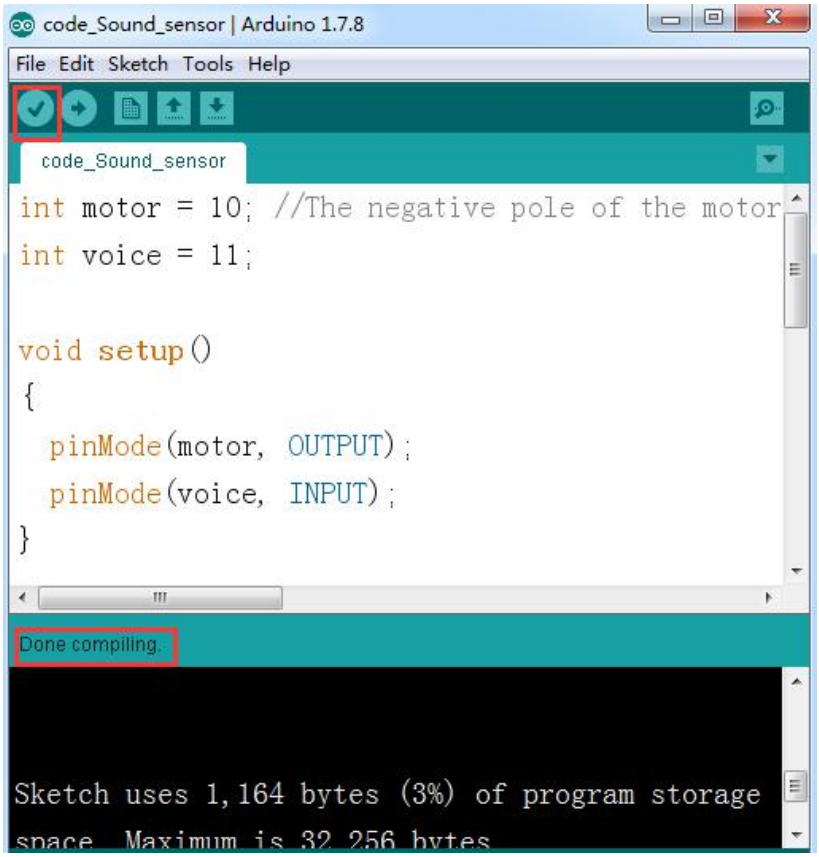
```
void setup()
{
  pinMode(motor, OUTPUT);
  pinMode(voice, INPUT);
}

void loop()
{
  if (!digitalRead(voice)) //Determines whether the received data values conform to the range
  {
    digitalWrite(motor, HIGH);
   delay(10);
  }
  else
  {
    digitalWrite(motor, LOW);
  }
}
```

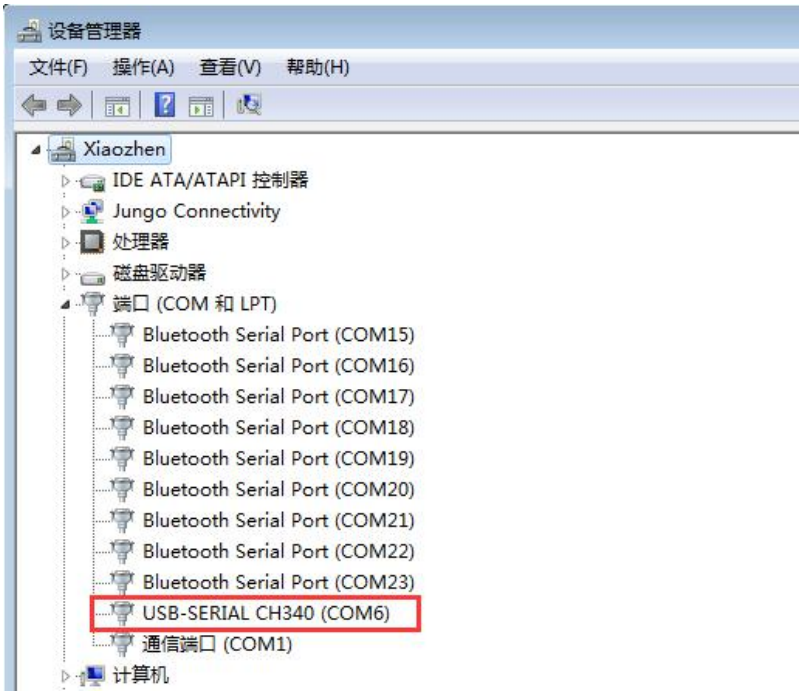
Experimental steps:

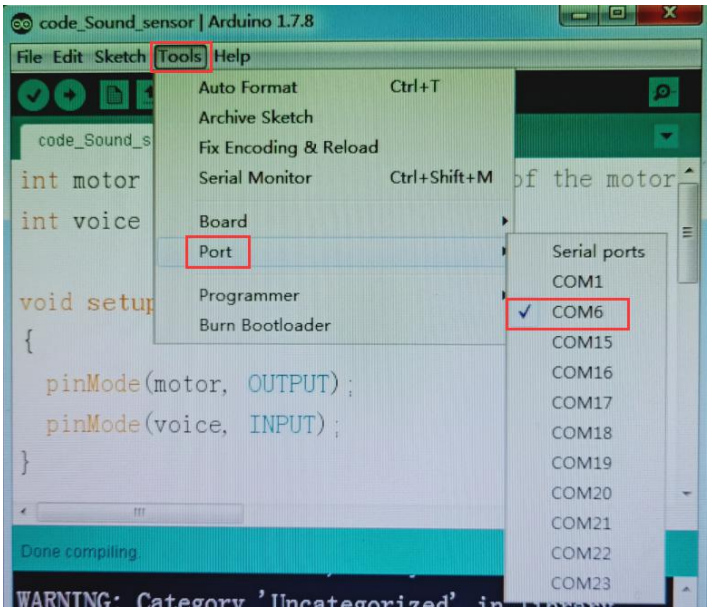
1. We need to open the program for this experiment:

code_Sound_sensor .ino, click "√"under the menu bar,compile the program, and wait for the words of **Done compiling** in the lower left corner, as shown in the following figure.

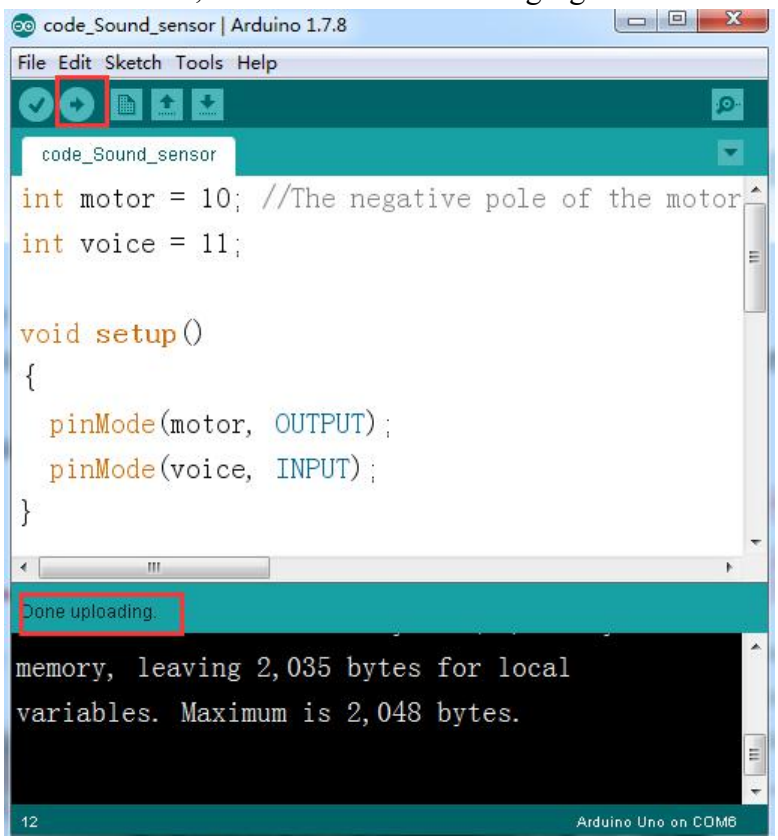


2. In the menu bar of Arduino IDE，you need to select the【Tools】---【Port】--- select the port that the serial number displayed by the device manager just now.for example:COM6,as shown in the following figure.





3. After the selection is completed, you need to click "→"under the menu bar,and upload the program to the Arduino UNO board, when appears to **Done uploading** on the lower left corner , that means that the program has been successfully uploaded to the Arduino UNO board, as shown in the following figure.



4.After the program is uploaded, the small fan will turn when we make a sound to the sound sensor.

(Note: You need to rotate the adjustable resistor on the sound sensor to change the sensitivity of the sound sensor for better experimental results)