Course 10 ---Light controlled sound

The purpose of the experiment:

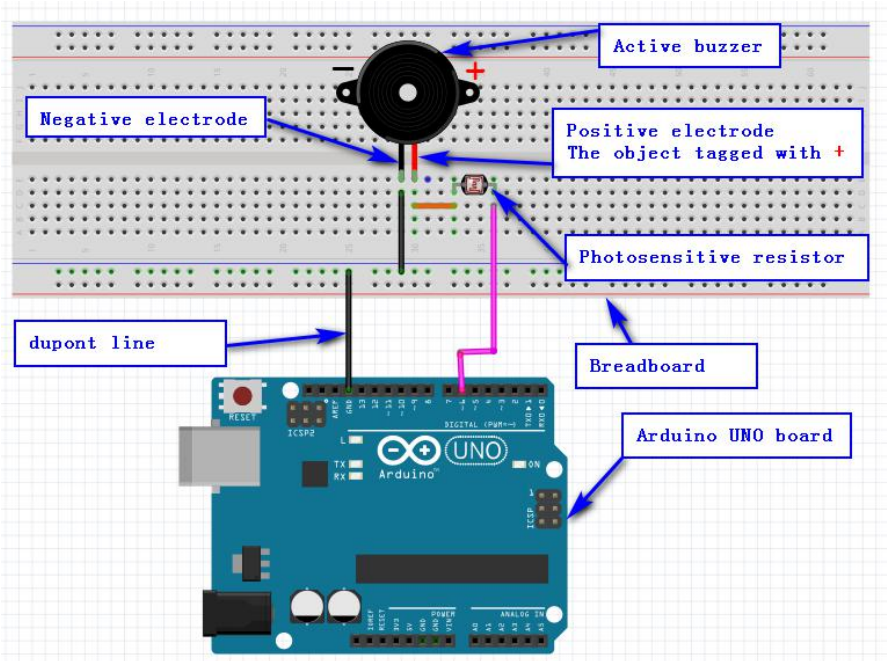
The purpose of this experiment is to make you learn how to use a special resistor --photosensitive resistor. This experimental result is: when the photosensitive resistance is connected in the circuit, the buzzer will make a small sound in the absence of light. In the case of illumination, the resistance of the photosensitive resistor will decrease, which causing the voltage across the buzzer to increase and the buzzer sound to become louder.

List of components required for the experiment:

Arduino UNO board *1
USB cable *1
Photosensitive resistor *1
Active buzzer *1
Breadboard *1
Dupont line *1bunch

Actual object connection diagram:

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



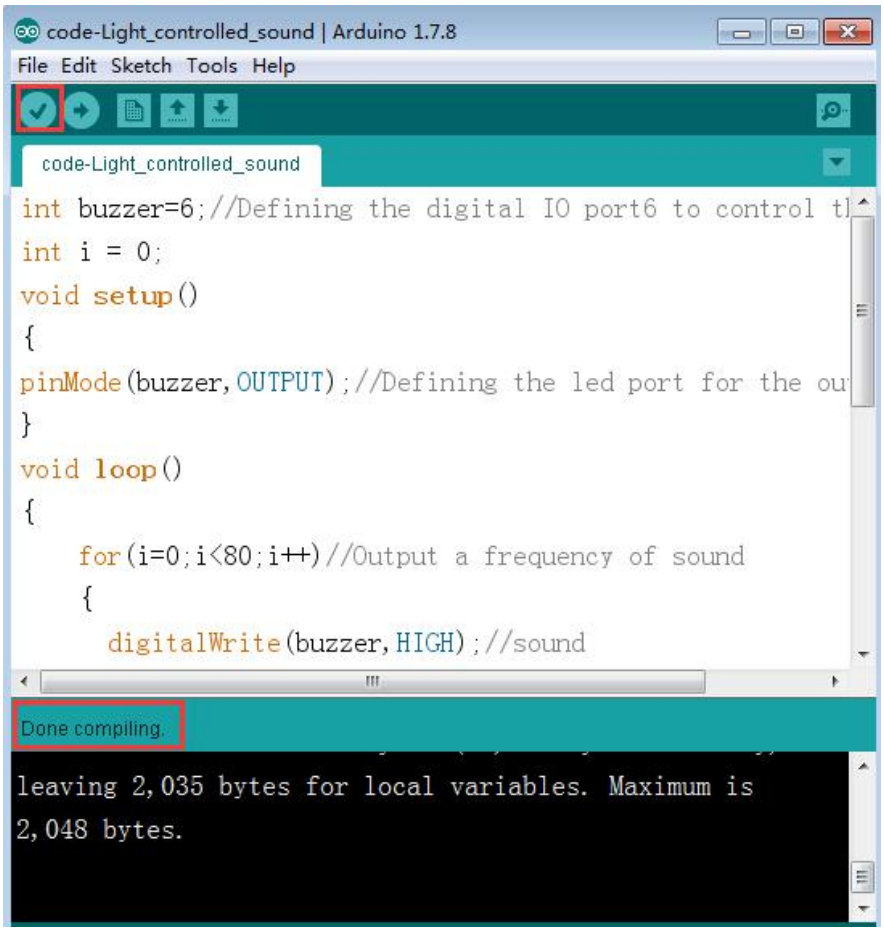
Experimental code analysis:

```
int buzzer=6;//Defining the digital IO port6 to control the buzzer
int i = 0;
void setup()
{
pinMode(buzzer,OUTPUT);//Defining the led port for the output port
}
```

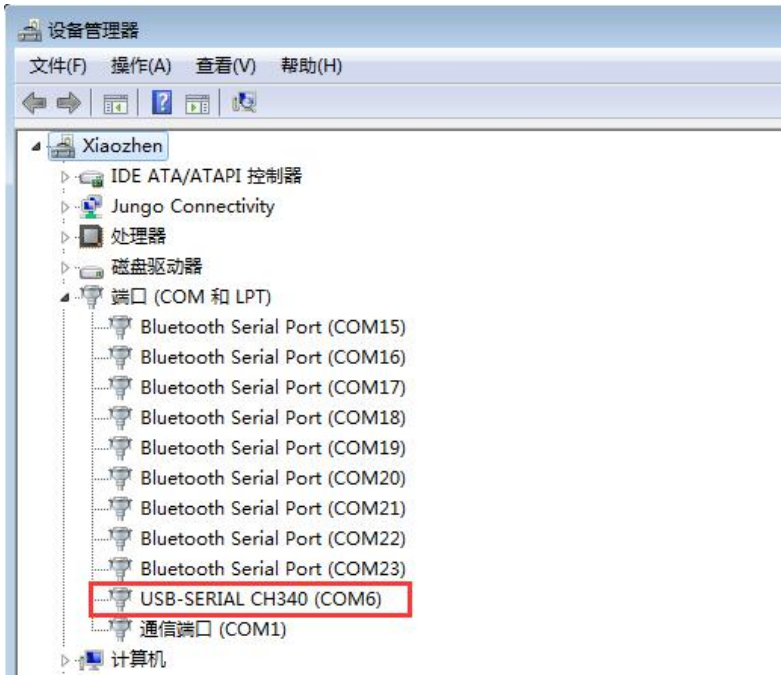
```
void loop()
{
      for(i=0;i<80;i++)//Output a frequency of sound
      {
        digitalWrite(buzzer,HIGH);//sound
        delay(1);
        digitalWrite(buzzer,LOW);//unsound
        delay(1);
      }
      for(i=0;i<100;i++)//Output another frequency of sound
      {
        digitalWrite(buzzer,HIGH);//sound
        delay(2);
        digitalWrite(buzzer,LOW);//unsound
        delay(2);
      }
}
```

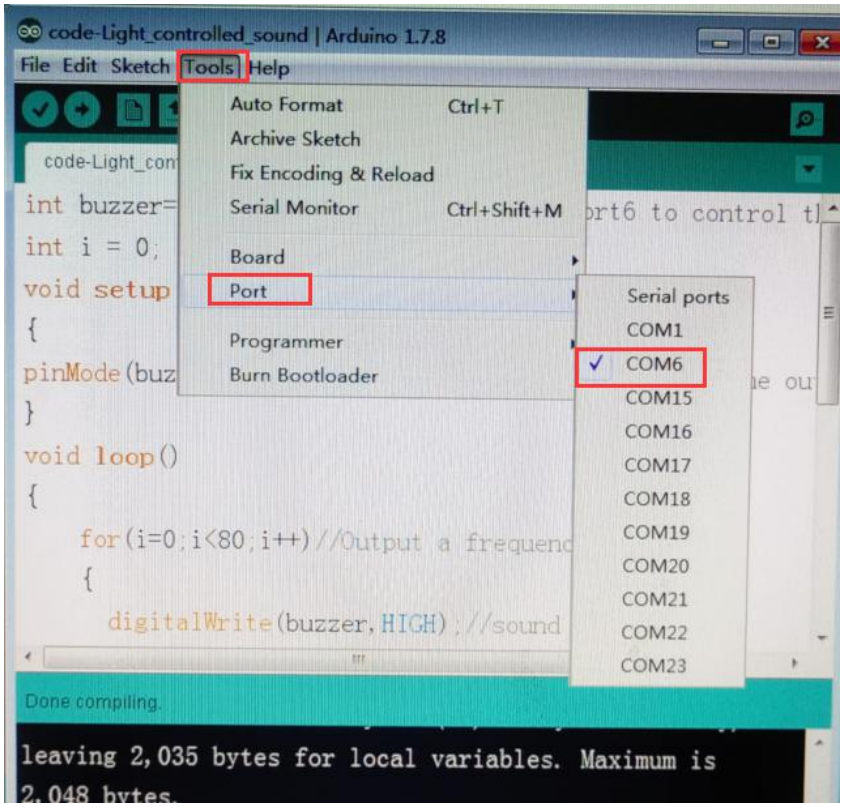
Experimental steps:

1.We need to open the code of this experiment:**code-Light_controlled_sound.ino**, click “ √ ” under the menu bar to compile the code, and wait for the word "**Done compiling** " in the lower right corner, as shown in the figure below.

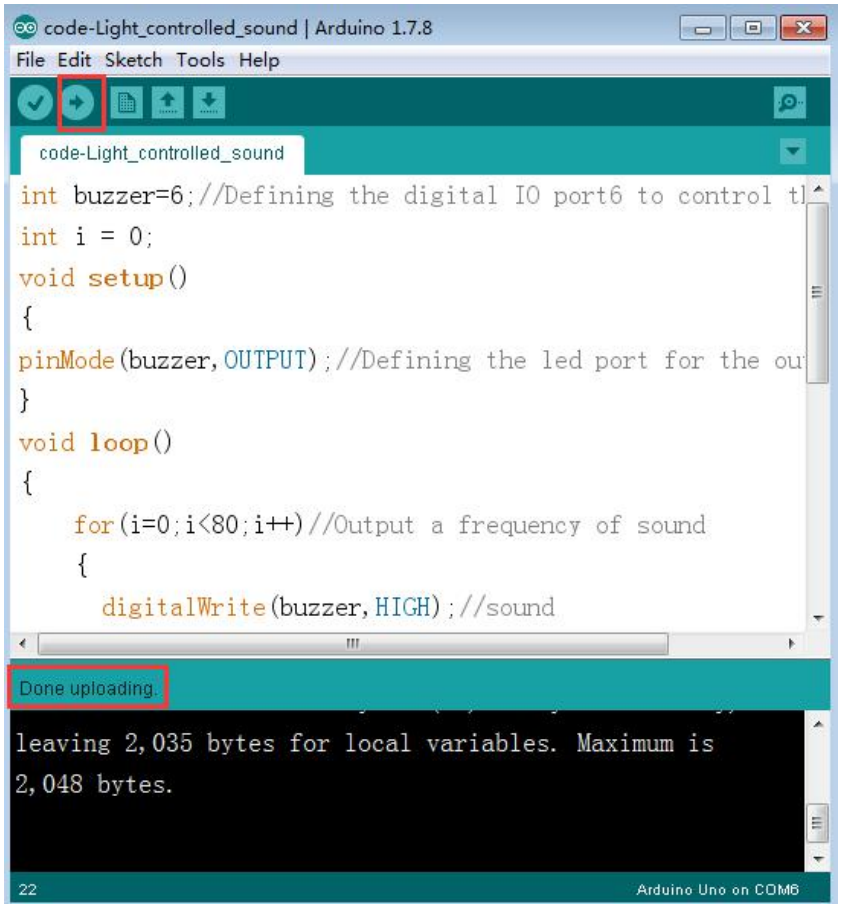


2.In the menu bar of Arduino IDE, we need to select 【Tools】---【Port】--- selecting the port that the serial number displayed by the device manager just now, as shown in the figure below. For example:COM6,as shown in the following figure.





3.After the selection is completed, you need to click "→"under the menu bar to upload the code to the Arduino UNO board. When the word "**Done uploading**" appears in the lower left corner, the code has been successfully uploaded to the Arduino UNO board, as shown in the figure below.



4.We need to give the photosensitive resistor different intensity of illumination, and as the light intensity changes, the size of the sound of the buzzer will also change. As shown in the figure below.

The code of the experiment: