Course 6 ---Key control

The purpose of the experiment:

In this course, we will learn how to use the input function of I/O port of Arduino，that is, to read the output value of the external device. We use a key and a LED light to complete a combination of the input and output experiments.

List of components required for the experiment:

Arduino UNO board *1
USB cable *1
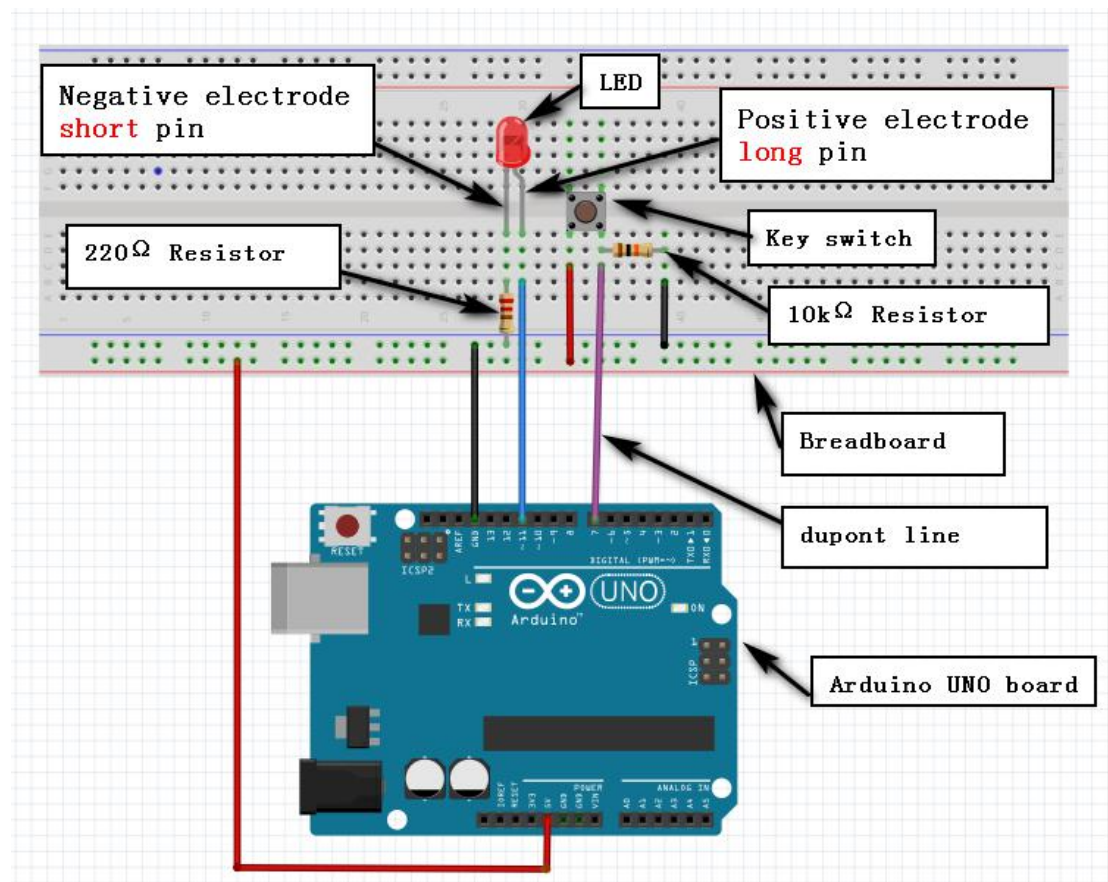LED*1（Color random）
220Ω Resistor *1
10kΩ Resistor *1
Key switch *1
Breadboard *1
Dupont line *1 bunch

Actual object connection diagram:

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

Experimental code analysis:

int ledpin=11;//Defining the digital port 11

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int inpin=7;//Defining the digital port 7
int val;//Defining variable
void setup()
{
   pinMode(ledpin,OUTPUT);//Defining the light port for the output port
   pinMode(inpin,INPUT);//Defining the key port for the input port
}
void loop()
{
   val=digitalRead(inpin);//Read the value of the 7 port level to the val
   if(val==LOW)//Check whether the button is pressed or not. When the button is
pressed, the light will turn on.
      digitalWrite(ledpin,LOW);
   else
      digitalWrite(ledpin,HIGH);
}
```
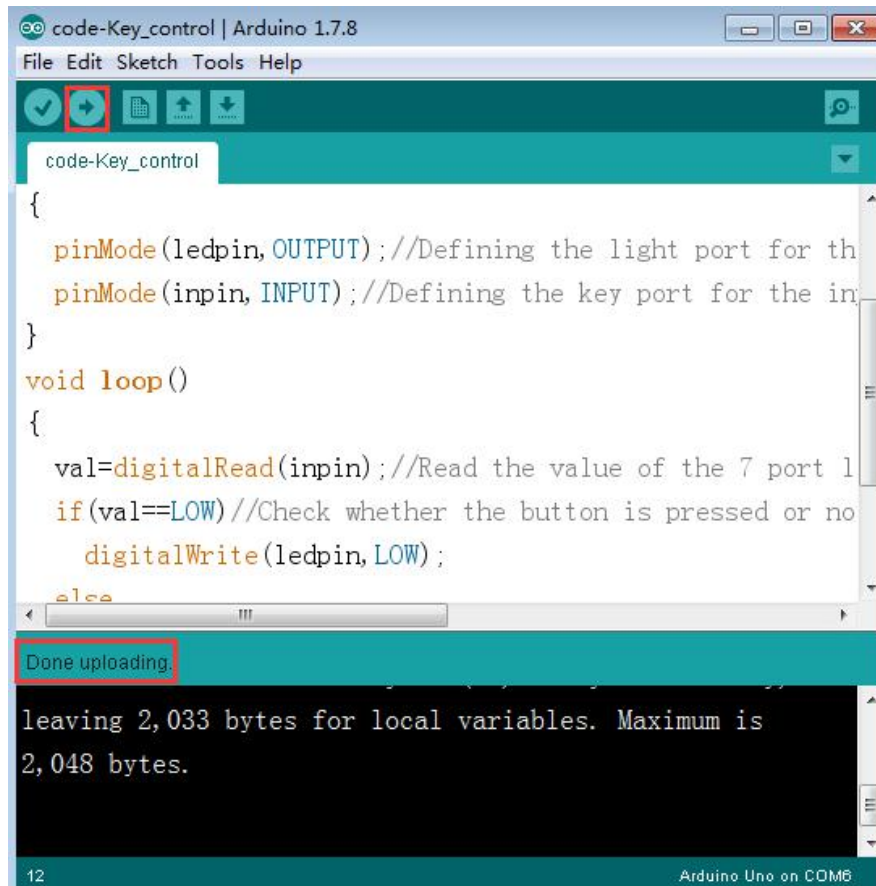
Experimental steps:

1. We need to open the code of this experiment: **code-Key control.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.
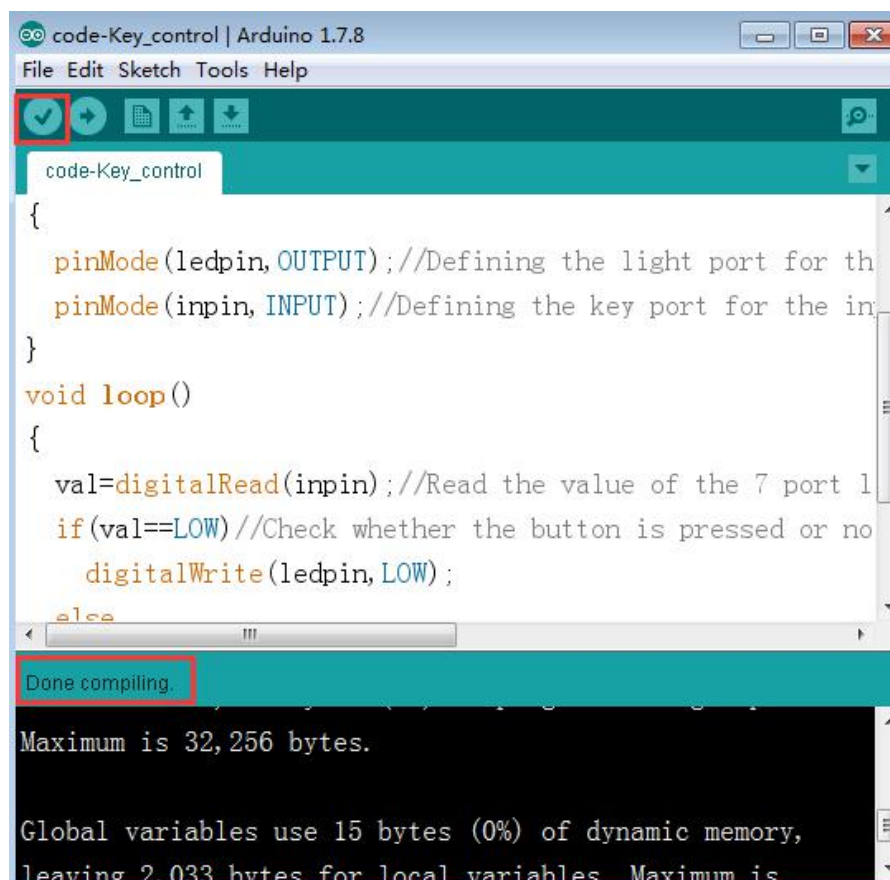
2. In the menu bar of Arduino IDE, we need to select 【Tools】---【Port】--- selecting the port that the serial number displayed by the device manager just now, as shown in the figure below. for example:COM6,as shown in the following figure.
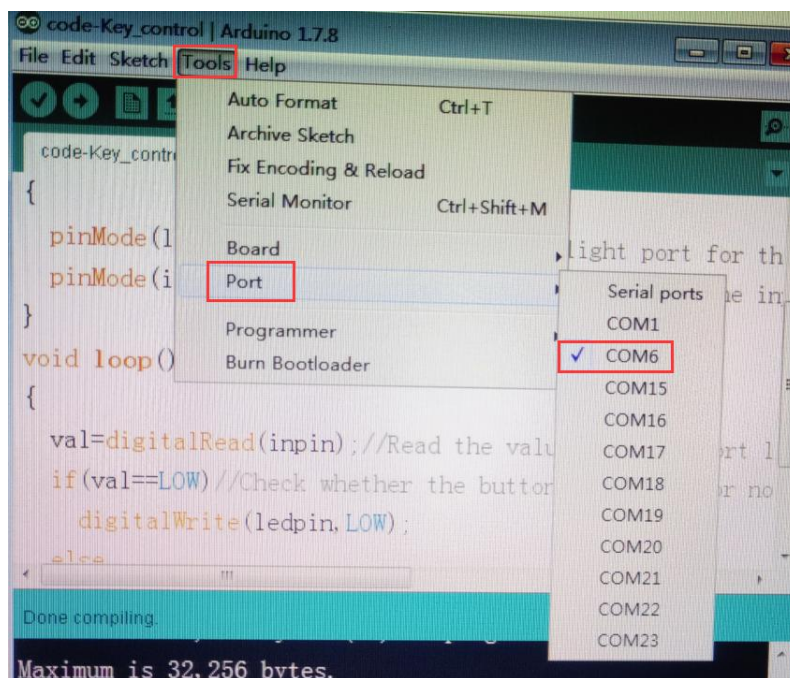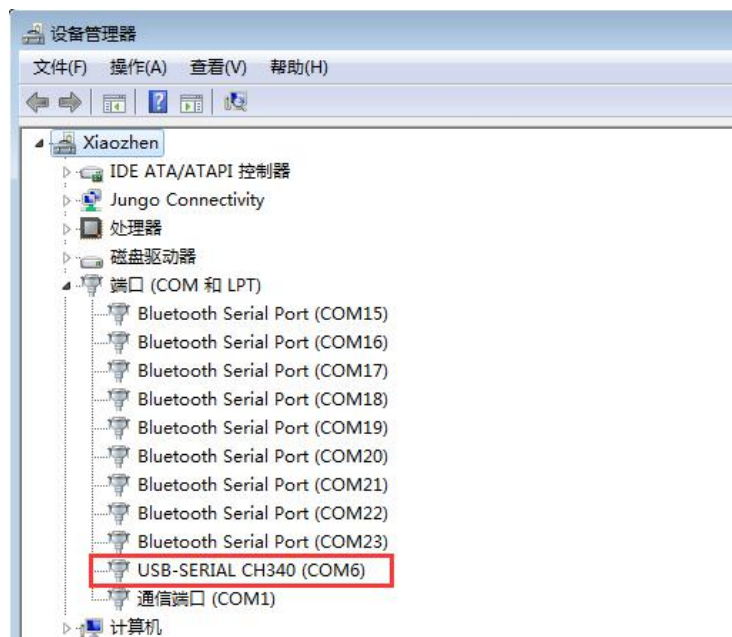
3. After the selection is completed, you need to click "→"under the menu bar to upload the code to the Arduino UNO board. When the word "**Done uploading**" appears in the lower left corner, the code has been successfully uploaded to the Arduino UNO board, as shown in the figure below.
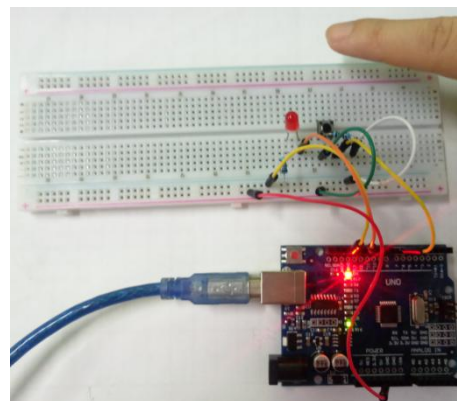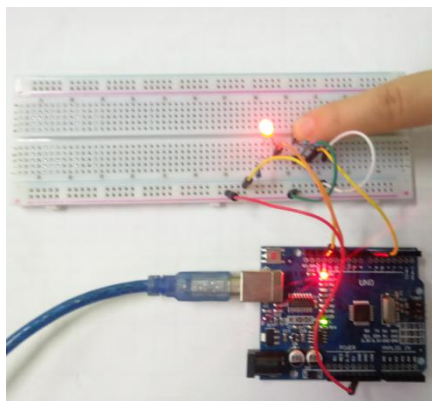
4. After the code is uploaded, when the button is pressed, the LED light will be on, and the LED light will be off when the button is released, as shown in the figure below.

The code of the experiment: