

## Course 4 ---Advertisement lights

**The purpose of the experiment:**

This course is to use the led lights programming to achieve the effect of the simulated advertising lights.

**List of components required for the experiment:**

Arduino UNO board \*1

USB cable \*1

LED\*6 (Color random)

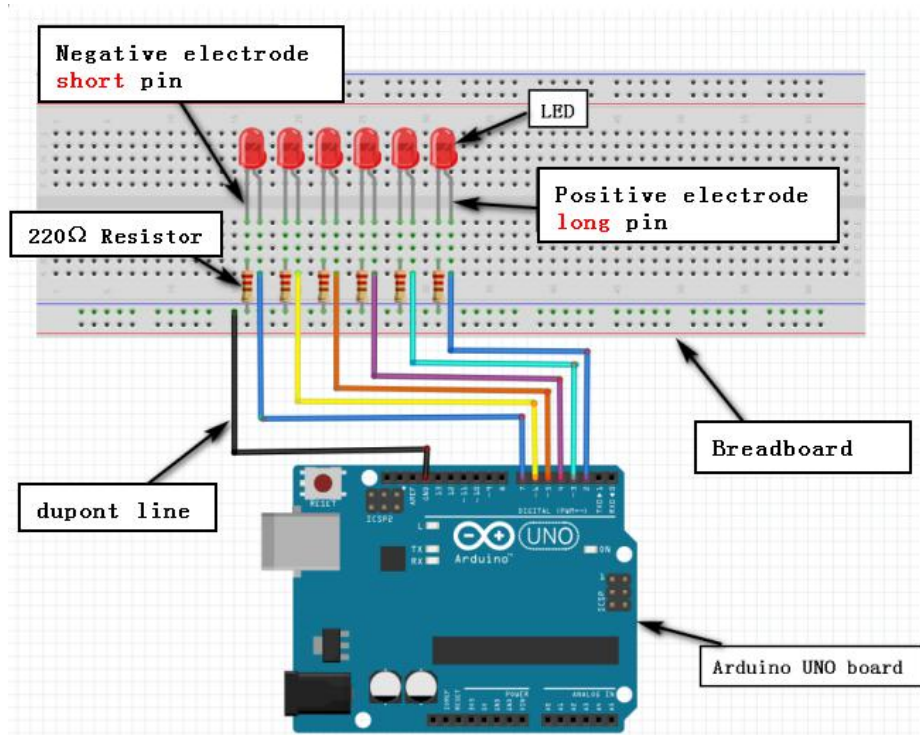
220Ω Resistor \*1

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 BASE = 2 ; //The first LED I/O port
int NUM = 6;   //The total number of LED
int i=0;
void setup()
{
  for (int i = BASE; i < BASE + NUM; i ++ )
  {
    pinMode(i, OUTPUT);    //Defining the digital I/O port for output port
```

```

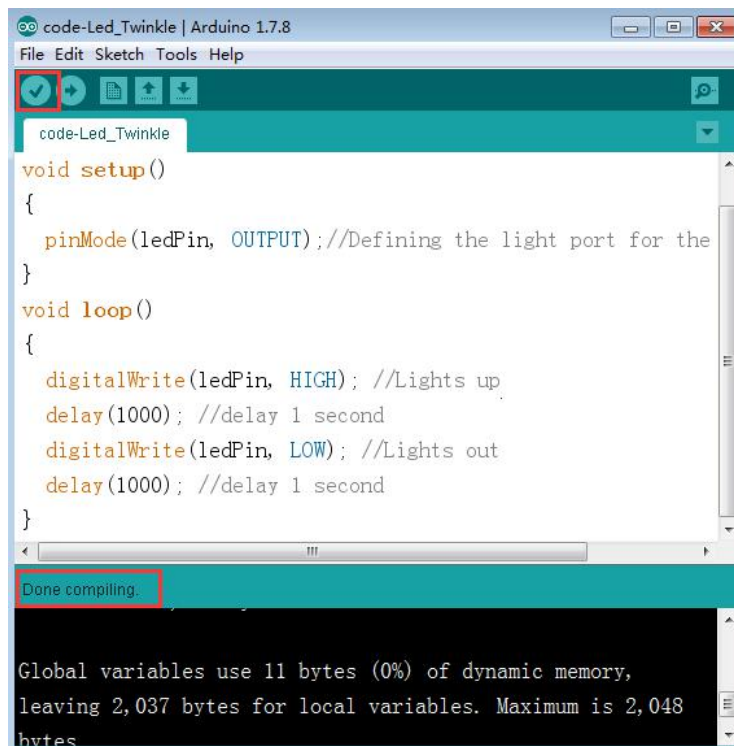
    }
}

void loop()
{
    for (i = BASE; i < BASE + NUM; i++)
    {
        digitalWrite(i, LOW);    //Set the number I/O port to be "LOW", that is, the order is
        extinguished.
        delay(200);
    }
    for (i = BASE; i < BASE + NUM; i++)
    {
        digitalWrite(i, HIGH);  //Set the number I/O foot to be "HIGH", that is, the order is lit.
        delay(200);
    }
}

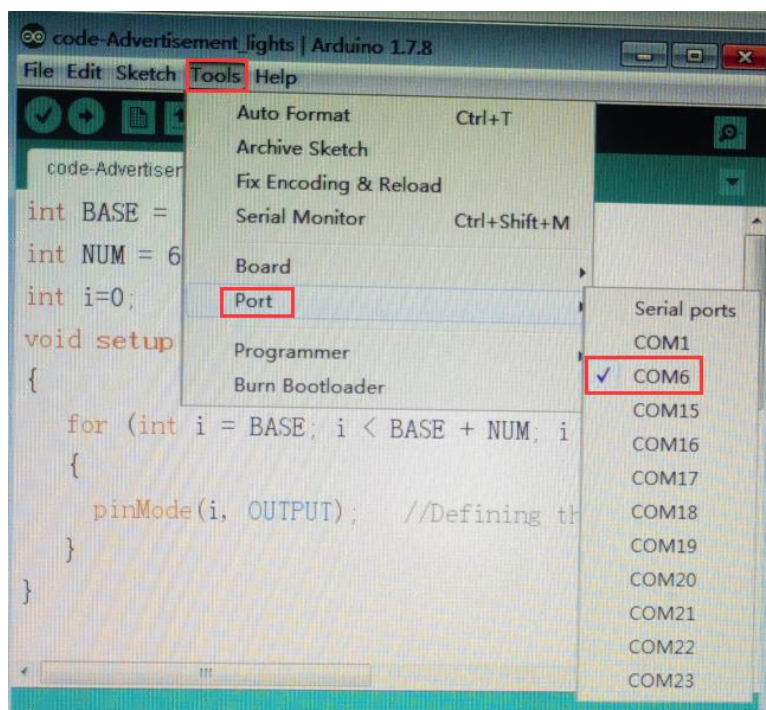
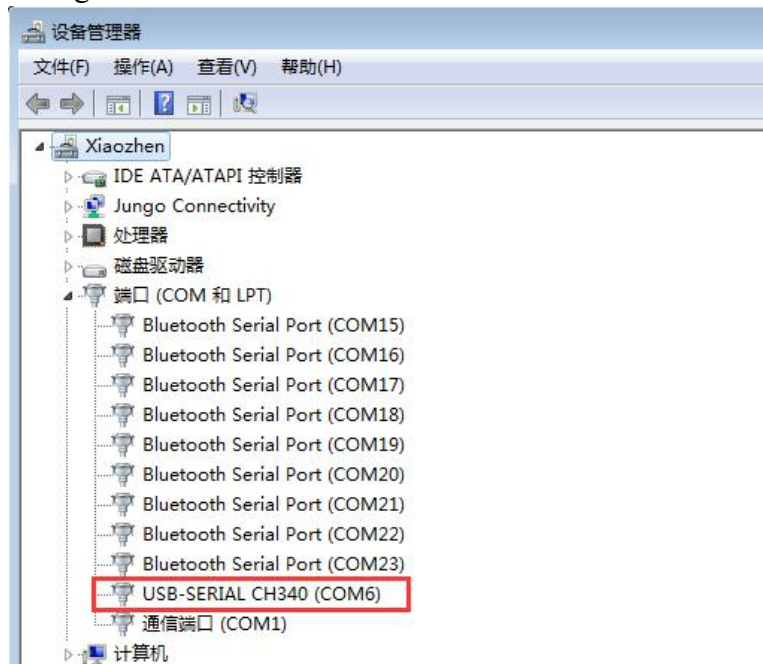
```

### Experimental steps:

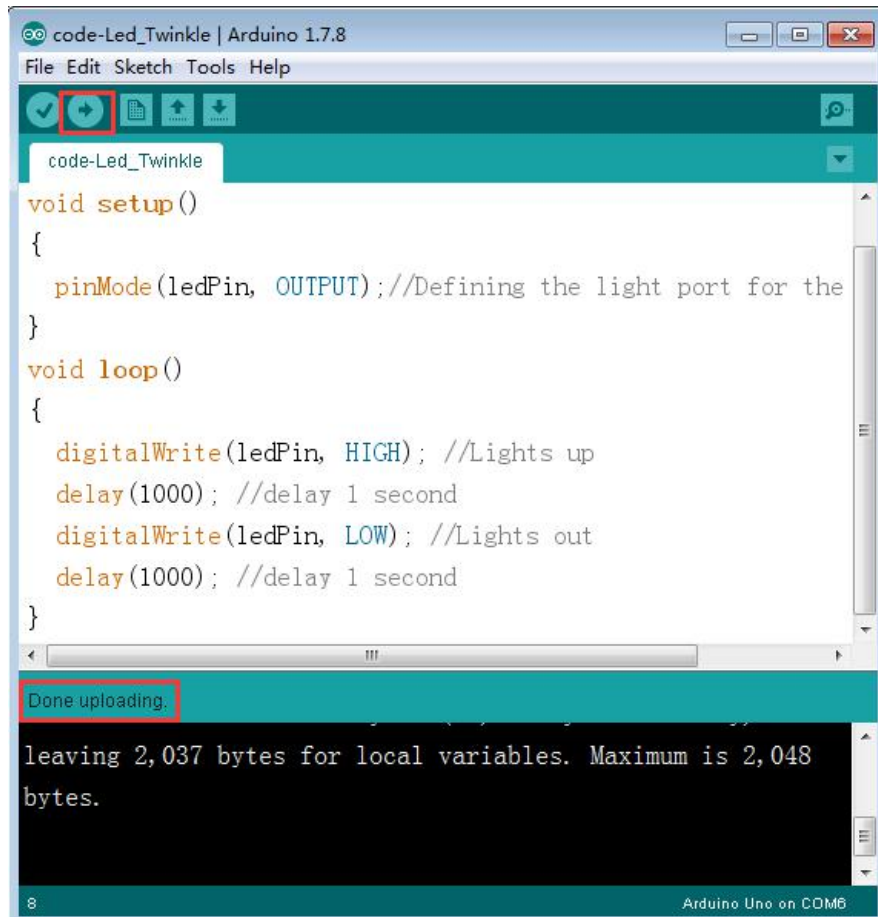
1. We need to open the code of this experiment: **code-Advertisement\_lights.ino**, click “ ✓ ” under the menu bar to compile the code, and wait for the word "**Done compiling**" in the lower right corner, as shown in the figure below.



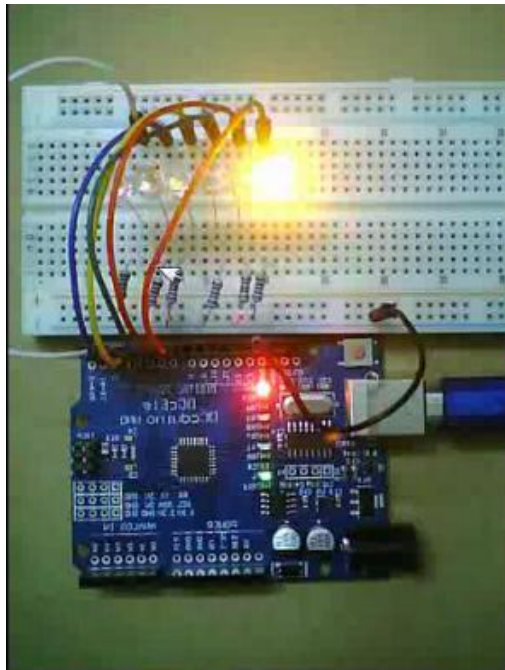
2. In the menu bar of Arduino IDE, we need to select **【Tools】**---**【Port】**--- selecting the port that the serial number displayed by the device manager just now, as shown in the figure below.



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, we can see that 6 LED lights are turned on successively and then turned off successively, as shown in the figure below.



The code of the experiment: