

Course 2 ----Led Twinkle

The purpose of the experiment:

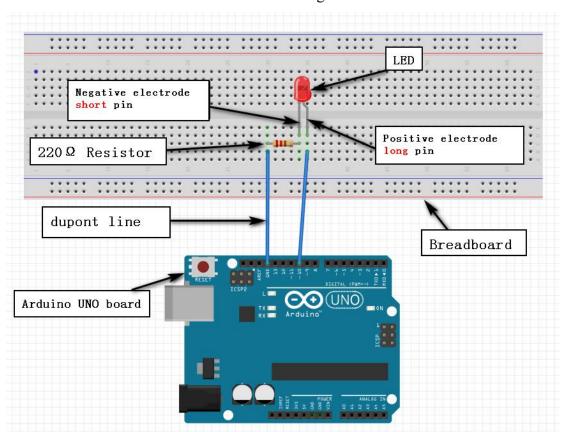
This course is to use the I/O port on the Arduino UNO board and an external LED light to complete the experiment. The experiment is to make the LED light to twinkle, lights up for 1 second and turns off for 1 second.

List of components required for the experiment:

```
Arduino UNO board *1
USB cable *1
LED*1 (Color random)
220Ω Resistor *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:

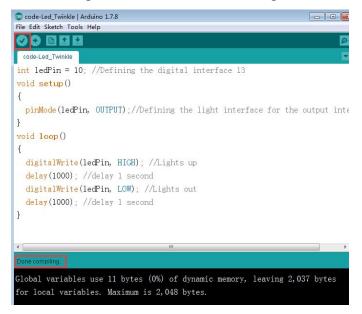
```
int ledPin = 10;  //Defining the digital port 10
void setup()
{
   pinMode(ledPin, OUTPUT);  //Defining the light port for the output port
```



```
}
void loop()
{
    digitalWrite(ledPin, HIGH); //Lights up
    delay(1000); //delay 1 second
    digitalWrite(ledPin, LOW); //Lights out
    delay(1000); //delay 1 second
}
```

Experimental steps:

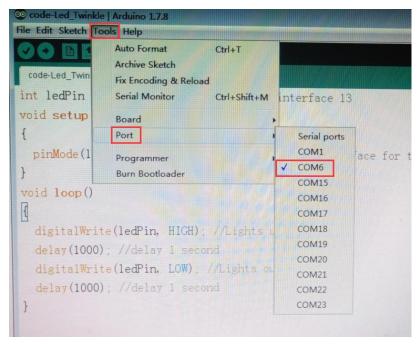
1. We need to open the code of this experiment: **code-Led_Twinkle.ino**, click " \checkmark " under the menu bar to compile the code, and wait for the word "**Done compiling**" in the lower right corner, as shown in the figure below.



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.





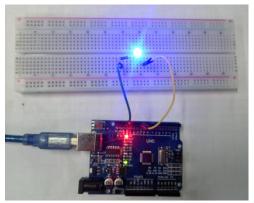


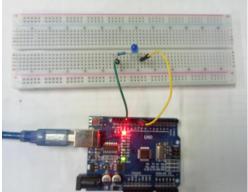
3.After the selection is completed, you need to click "→"under the menu bar to upload the code to the Arduino UNO board. When the word "**Done uploading**" appears in the lower left corner, the code has been successfully uploaded to the Arduino UNO board, as shown in the figure below.

```
code-Analog_value | Arduino 1.7.8
                                                 - - X
File Edit Sketch Tools Help
 code-Analog_value
int val=0;//Declarations of temporary variables
void setup()
  pinMode(ledpin, OUTPUT); //Defining the light port for th
  Serial. begin (9600); // The baud rate is 9600
}
void loop()
  val=analogRead(potpin); //Read the voltage value of the
  Serial.println(val);//Sending Val value by serial port -
Done uploading.
leaving 1,858 bytes for local variables. Maximum is
2,048 bytes.
```



4. After the code is uploaded, we can see LED light twinkle every second, as shown in the picture below.





The code of the experiment: