Hello Arduino !

Introduce to Arduino

A programmer loves calligraphy after retirement, one day, he is suddenly in aesthetic mood after meal, so he prepares "the Four Treasures of Study",writing brush, ink stick, ink slab and paper, grinds ink, spreads paper and lights a good sandal, quite a Wang Xizhi demeanor and Yan Zhenqing manner. Composed for a moment, then he splashed ink, Earnestly writes down the words: "hello world!". Why programmers are so keen on this words? The inception of "Hello world" dates back to 1972, Bell Laboratory's famous researcher Brian Kernighan firstly used it(program) when he was writing "B Language tutorials and guidance (Tutorial the Introduction to the Language B)" , this is the earliest known record at present when "hello" and "world" are used together in a computer work . Then, in 1978, he used this sentence pattern "hello, world" again in C Language bible "The C Programming Language" , co-authored with Dennis Ritchie, as the first program in the opening ceremory . In this program, the output of the "hello, world" are all lower-case, without an exclamation point, a comma followed by a space. Although the initial form almost failed to survive after that, from then on, "hello, world" became a tradition of the program world to greet the outside. "Hello Arduino!", without exception, also became the first program in the tutorial.

Hardware Connection

There is a Atmega16u2 USB serial port on Arduino uno board , so the first program doesn't need to connect to other equipments, only requires Arduino UNO to connect PC with a USB cable directly.

Code

```
void setup() {
   // put your setup code here, to run once:
   Serial.begin(9600);
}
void loop() {
   // put your main code here, to run repeatedly:
   Serial.println("Hello Arduino !");
   delay(1000);
}
```

Run the program and observe the experimental results

1. Connect Arduino UNO to the computer through USB;

2. Open the Arduino IDE, and click "file -- open -- select helloarduino.ino -- open", as shown in figure 3.1.1.
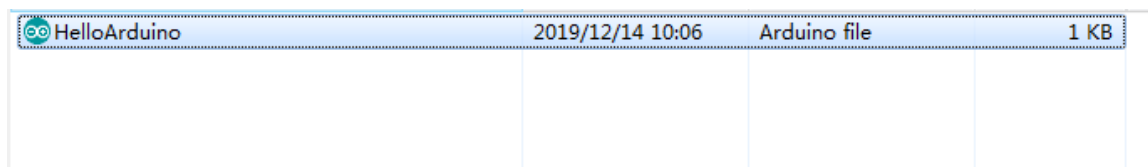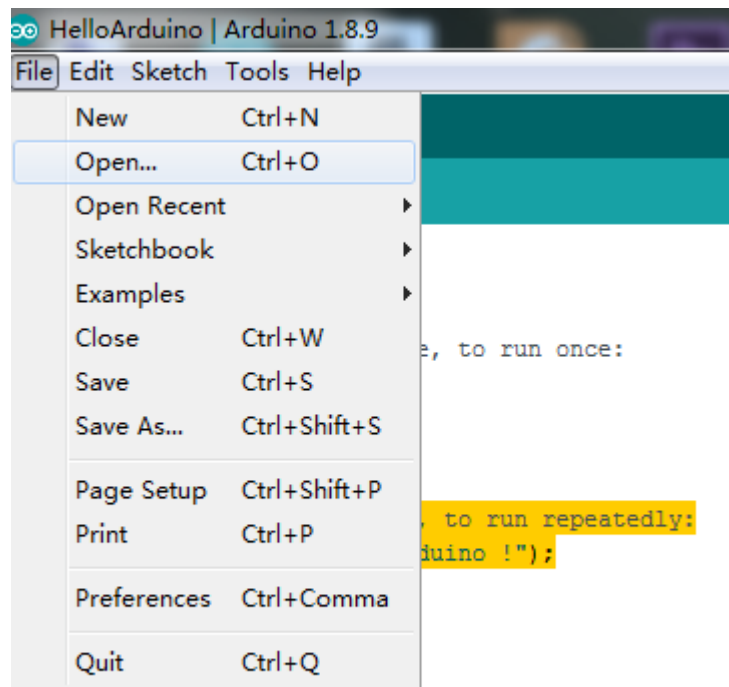

Figure 3.1.1 select file diagram

1) open the Arduino IDE and click "tools -- port – COM80(different board have different board number)", as shown in figure 3.1.2
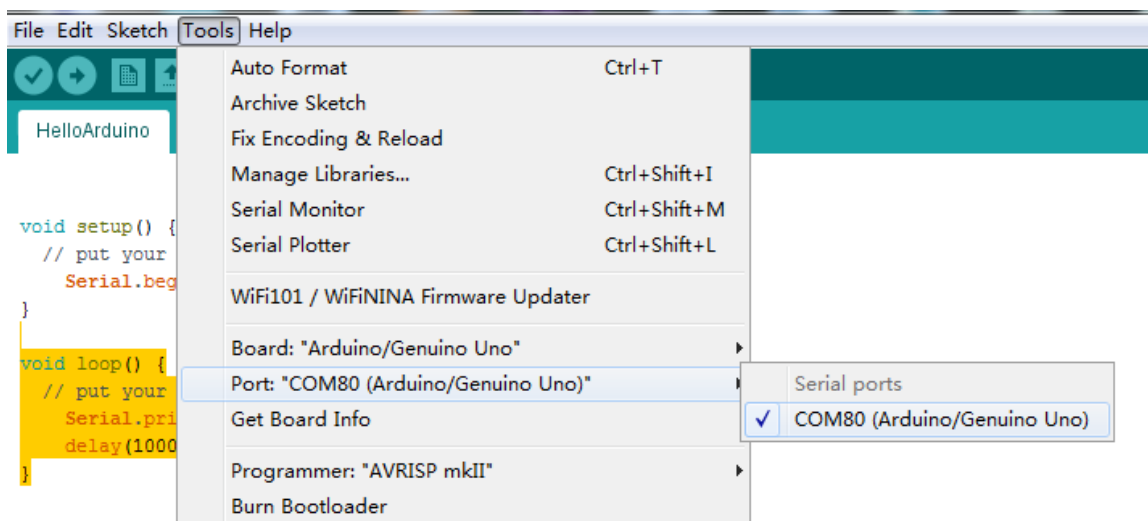

Figure 3.1.2 port selection

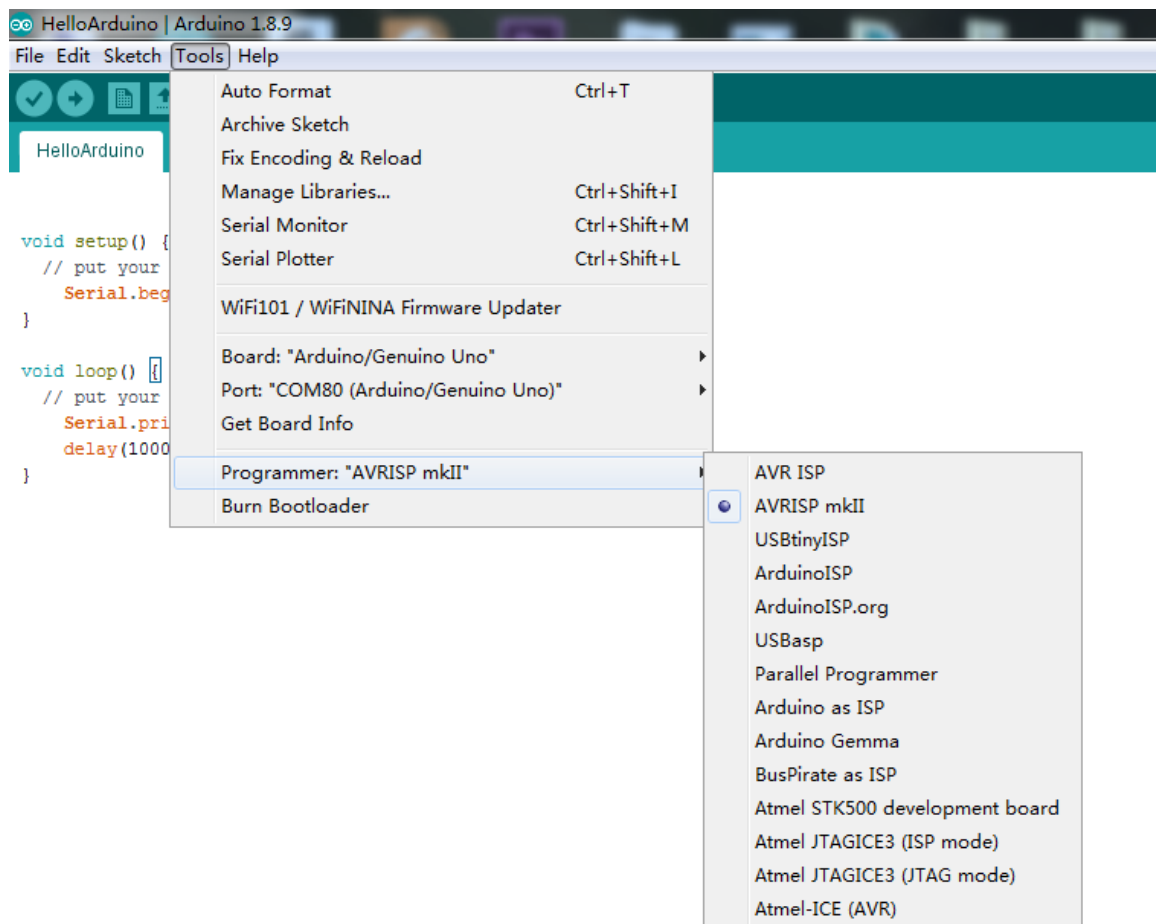2) click on "tools -- programming –AVRISP mkII"

Figure 3.1.3 programmer selection

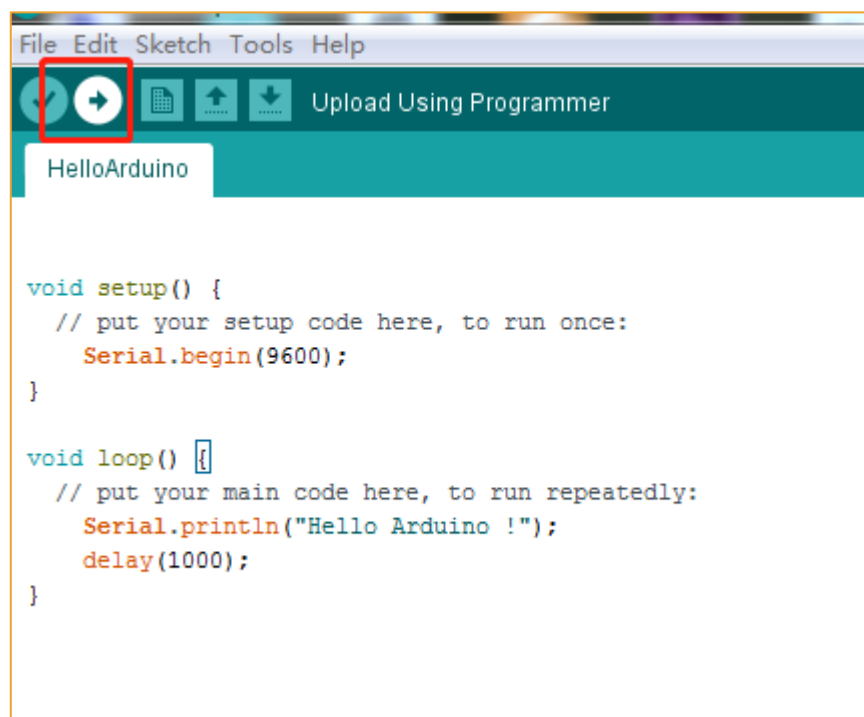3) click "upload button" to start the upload program

Figure 3.1.4 upload program

4) start uploading the program, wait for a while, and there will be a prompt of "successful uploading" in the lower left corner, showing that the program has been successfully recorded.See figure 3.1.6.
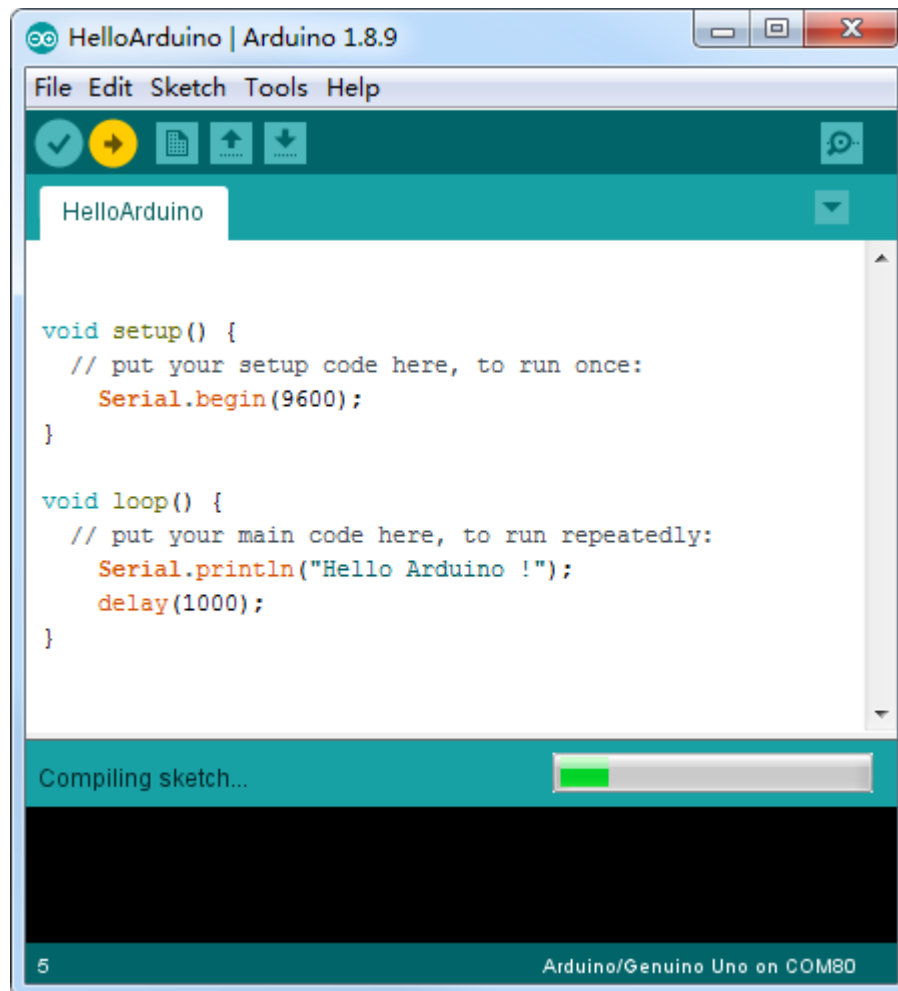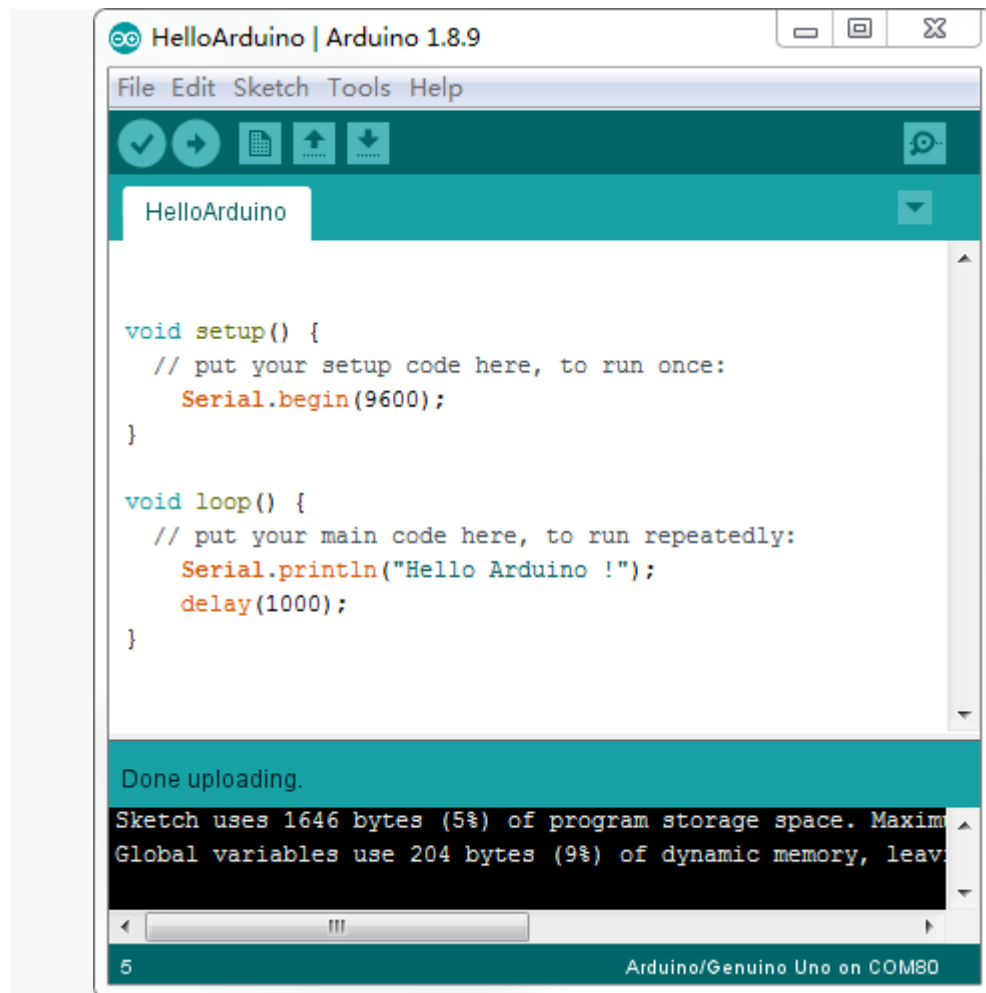

Figure 3.1.5 burning

figure 3.1.6 burning is completed

5) open the serial port monitor, as shown in figure 3.1.7 and figure 3.1.8, and set the baud rate to 9600 (the baud rate should be consistent with the code,Otherwise, the printing contents will appear garbled code), and you will see the serial port end continuously print "Hello Arduino!
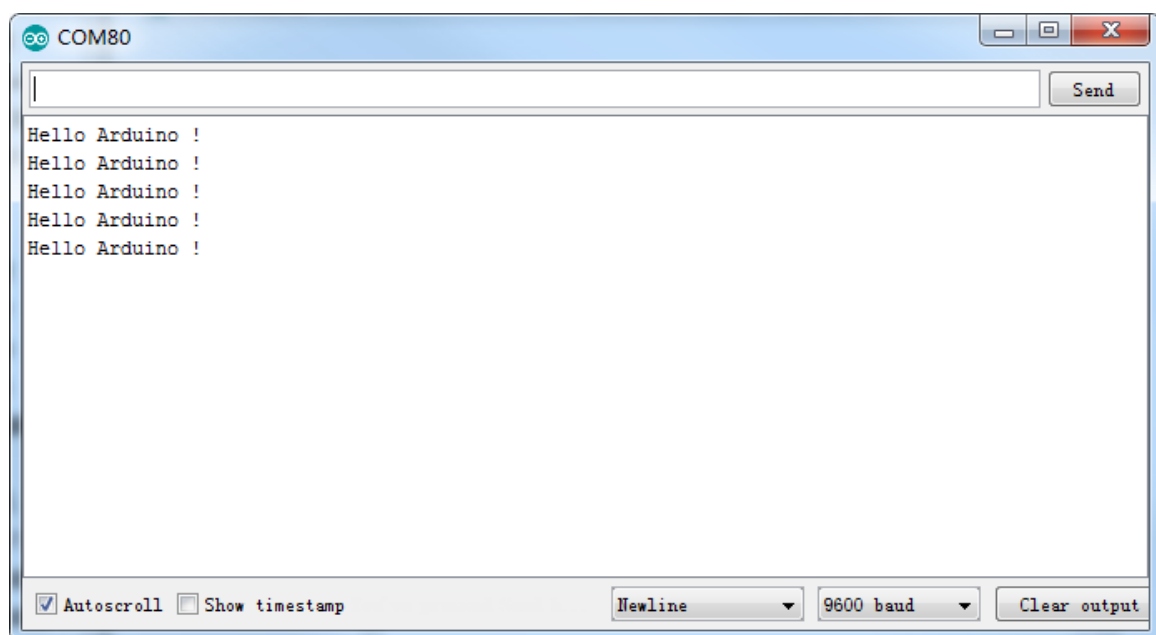
Figure 3.1.7 serial monitor switch

Figure 3.1.8 serial port printing interface

Mblock graphical programming program

Programming a serial port print Hello Arduino with mBlock!The program is shown in the following figure:
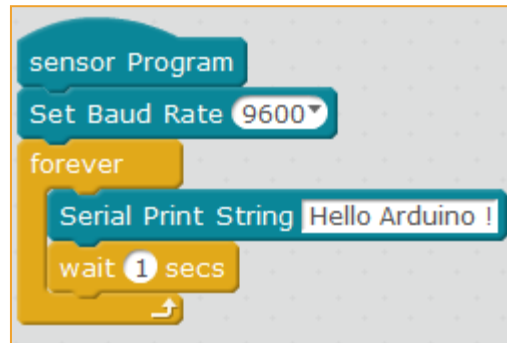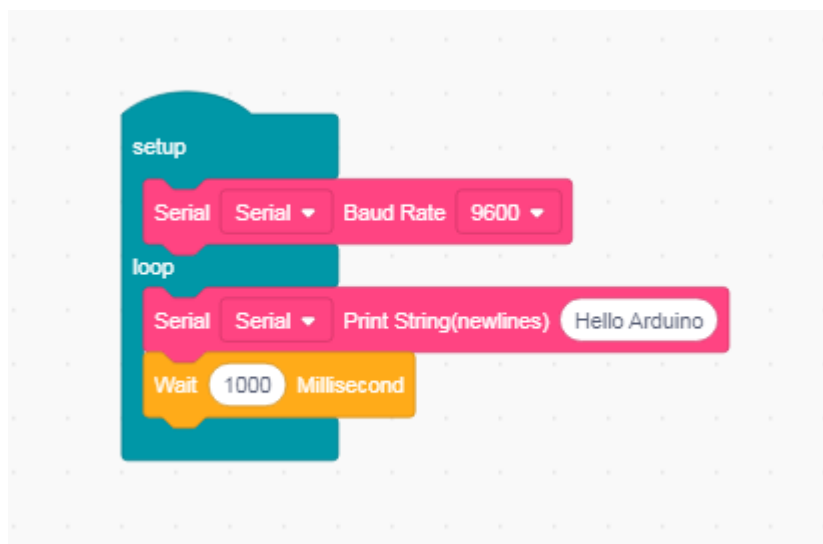

Figure 4.1.1

MagicBlock graphical programming program

Mixly graphical programming program