Arduino IDE

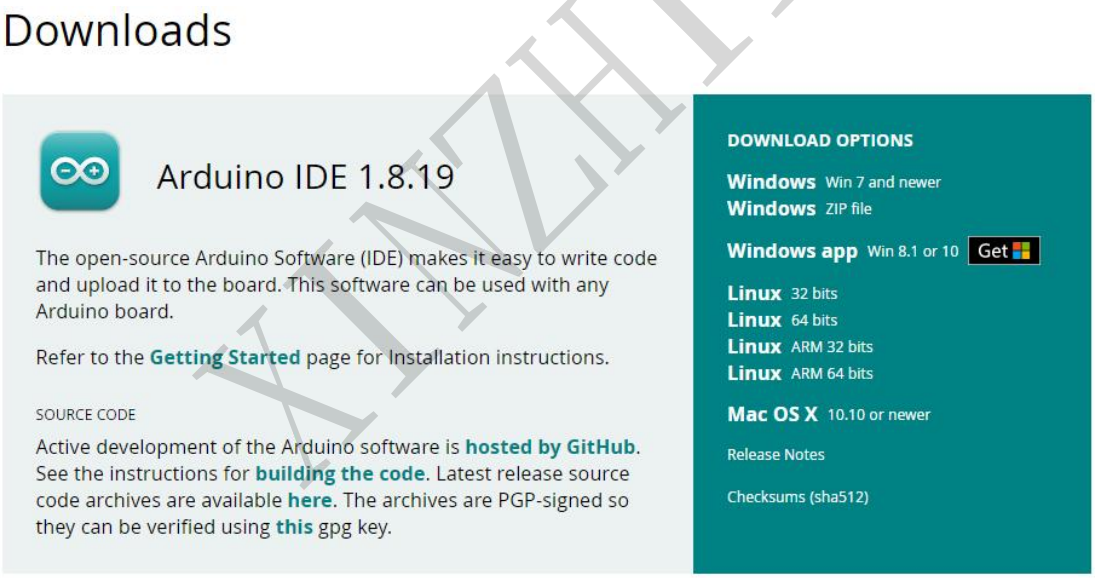
Arduino IDE, as an open source software, is developed based on the Processing IDE and is an integrated development environment officially launched by Arduino

The QuadBot-E kit was programmed and debugged using the Arduino IDE

So, where can we download the arduino IDE?

Step 1:

Go to https://www.arduino.cc/en/Main/Software, you will see the following page. The version provided on this website is usually the latest version, the actual version may be more recent than the version in the picture. Version 1.8.19 is recommended.



Step 2:

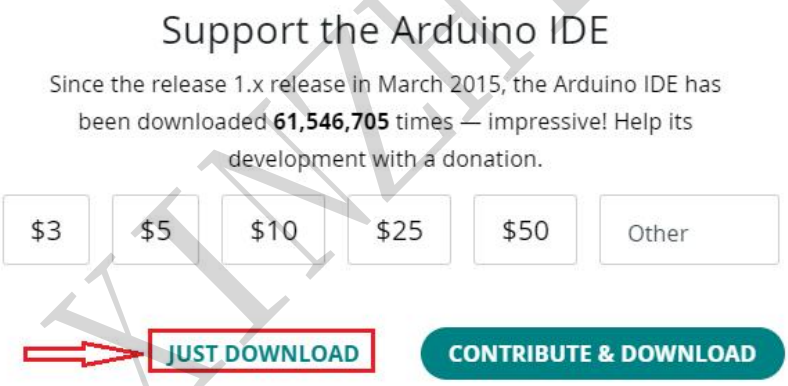
Download development software suitable for your computer's operating system.

Take Windows as an example. If you are a macOS, please pull to the end. You can use the EXE installation package or the green package.

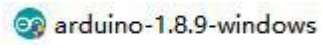
The following is the executable for the installer. Click on "Windows Installer" as shown in the picture below。

Step 3:

The following interface appears. Click the "JUST DOWNLOAD" button to download the software.



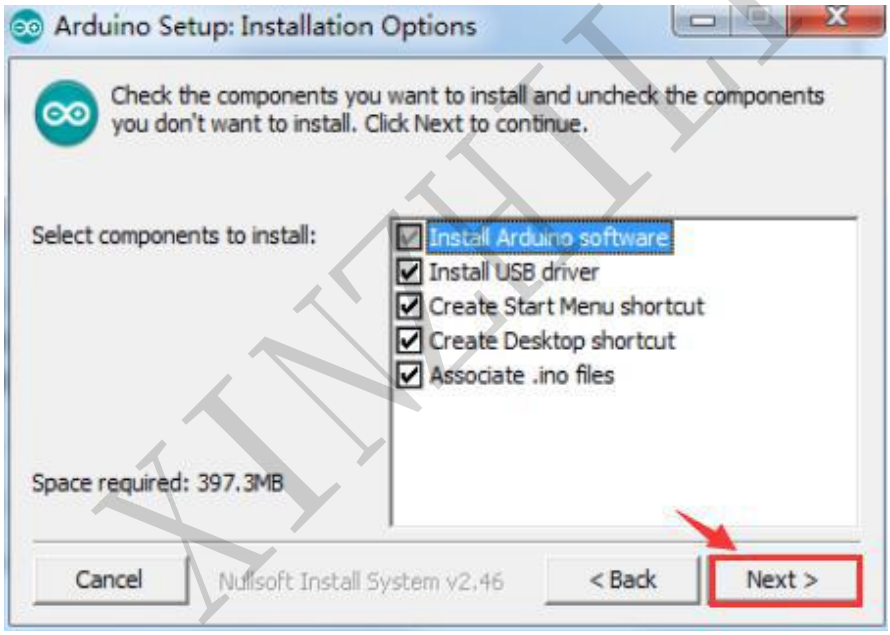
Download file:



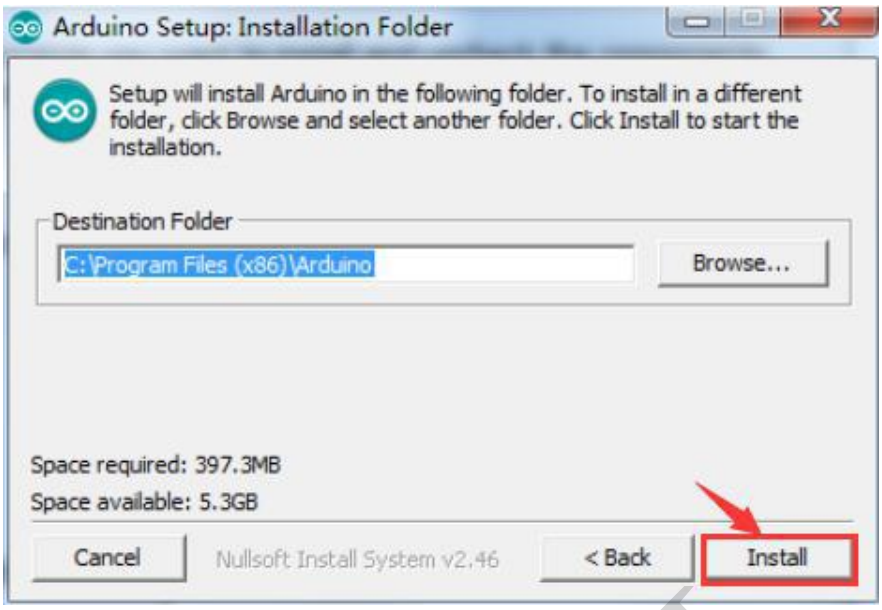
Step 4:

These are available from the tutorials we provide, and the version we provide is the most recent at the time this course was produced. Double-click the exe file. The following interface appears. Select "I Agree".

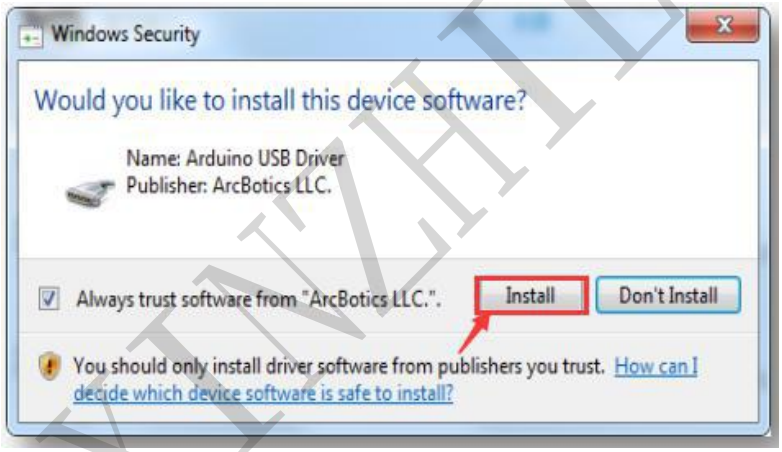
You can see the following interface, select "Next"。



The following interface appears and press "Install" to start the installation。



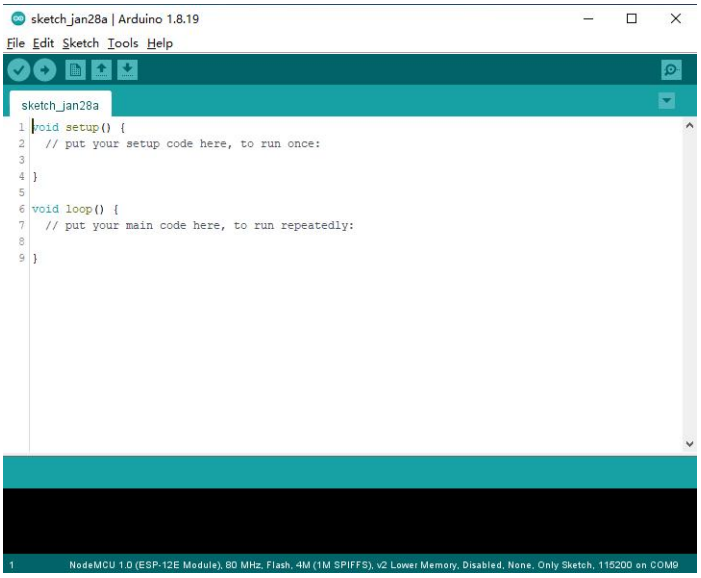
Finally, the following interface appears. Please select "Install" to ensure the correctness of the development environment installation。



Step 5:

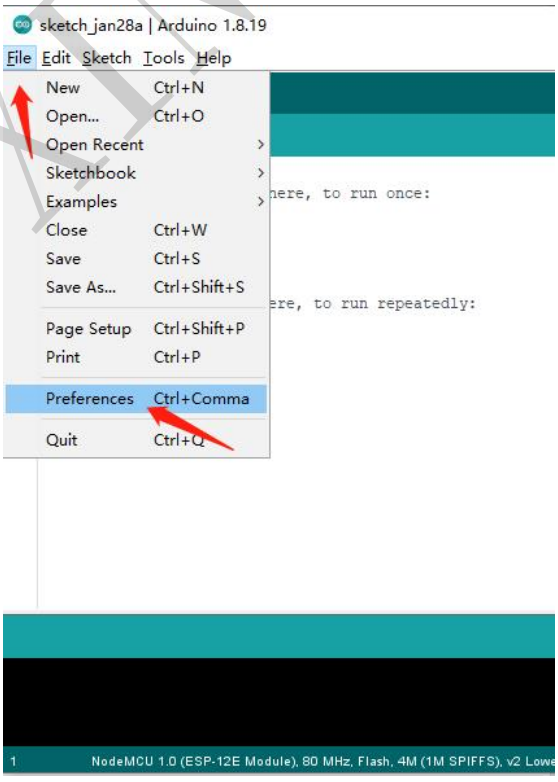
Next, the following icons will appear on the desktop。

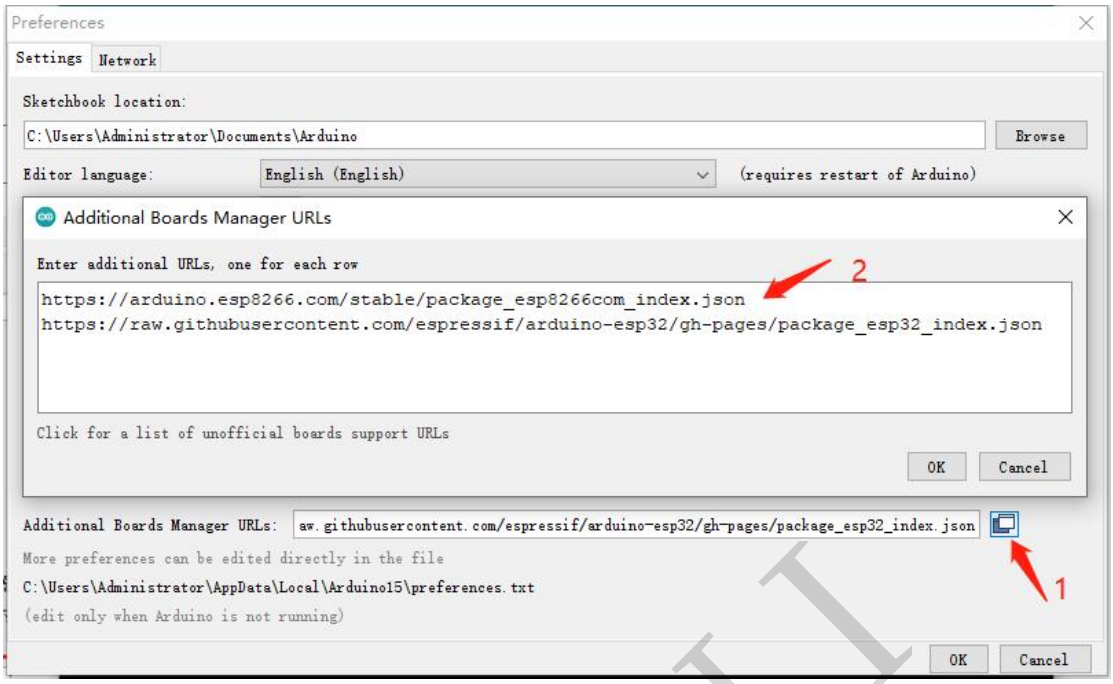
Double-click the icon to enter the development environment。



Step 6:

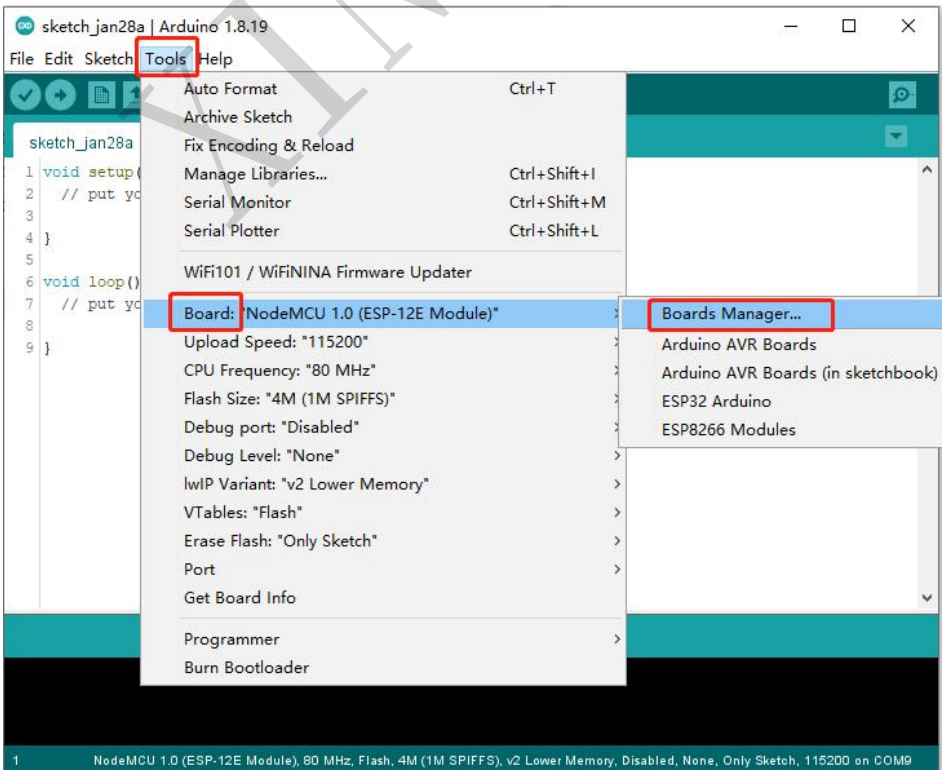
The main controller we use here is ESP32-WROOM-32, so you need to install the ESP32 plug-in, in the Arduino IDE opened in the previous step, find "File ->Preferences"。Add the following web address to the "Add-on Board Manager web address:" **https://raw.githubusercontent.com/espressif/arduino-esp32/gh-pages/package_esp32_index.json**, as shown in the figure below。



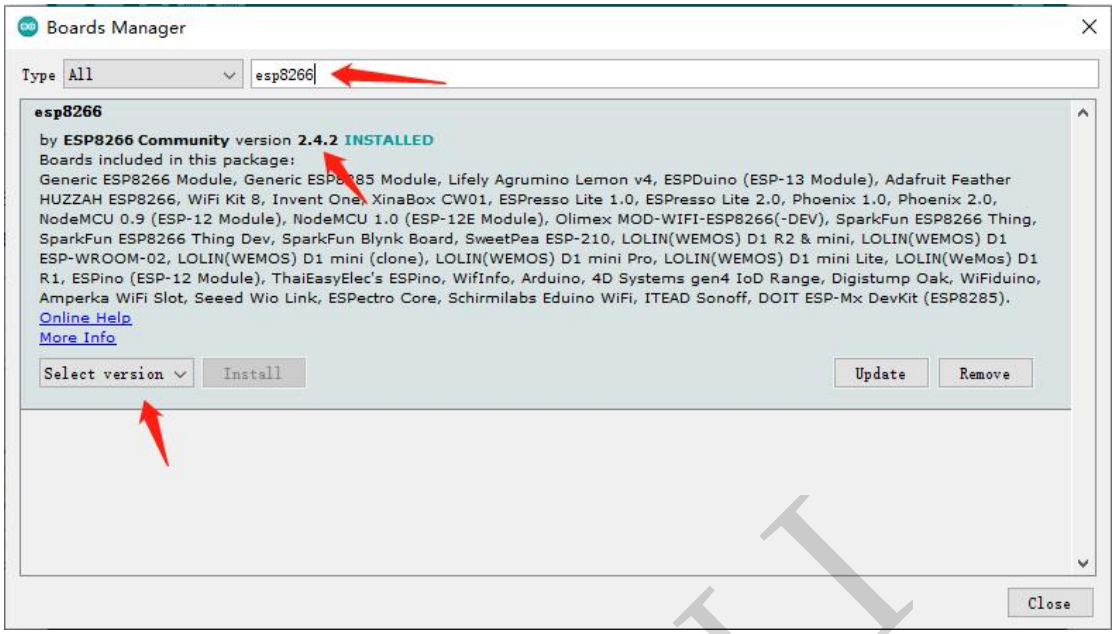


Step 7:

Install the ESP32 development board, open the menu → Tools → Board → Boards Manager...:



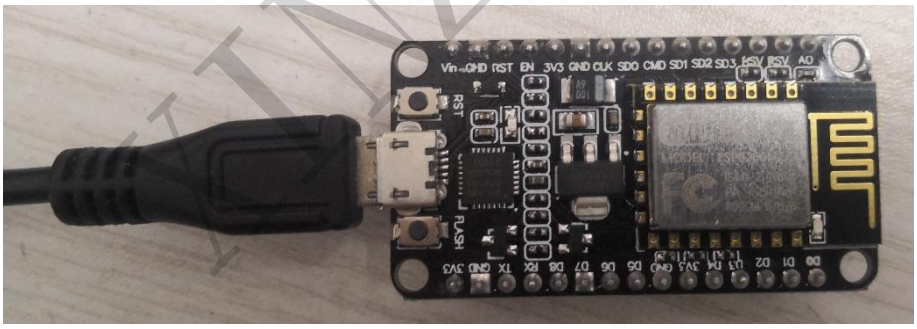
Enter esp8266 in the boards manager to search for the esp8266 development board, and then click Install, as shown in the following figure (**Note: Select version 2.4.2 or 2.6.3**)



Restart Arduino IDE after successful installation.

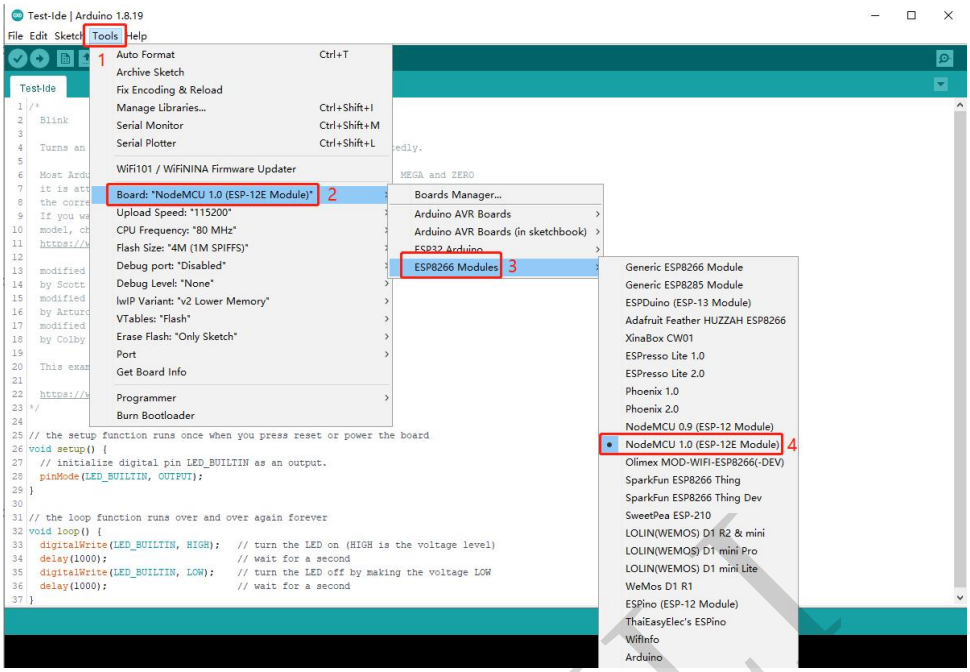
Step 8:

Connect the development board and computer with USB data cable.



Step 9:

After installing the IDE software, you need to test whether the software is installed successfully. Locate the package provided by us, open the directory of **"03 Tutorial & Code →Arduino → Lesson0 Setting Development Enviornment → Test-Ide"**, and double-click to open **Test-Ide.ino**. Select NodeMCU1.0 (ESP-12E Module) in Tools ->Development Board, and select COM9 in Tools ->Port. (On the same computer in Arduino 1.8.9, each NodeMcu board has a different COM number. You should select the COM number actually displayed.)


Test-Ide | Arduino 1.8.19
File Edit Sketch Tools Help
1
Auto Format Ctrl+T
Archive Sketch
Fix Encoding & Reload
Manage Libraries... Ctrl+Shift+I
Serial Monitor Ctrl+Shift+M
Serial Plotter Ctrl+Shift+L
WiFi101 / WiFiNINA Firmware Updater
Board: "NodeMCU 1.0 (ESP-12E Module)" 2
Upload Speed: "115200"
CPU Frequency: "80 MHz"
Flash Size: "4M (1M SPIFFS)"
Debug port: "Disabled"
Debug Level: "None"
lwIP Variant: "v2 Lower Memory"
VTables: "Flash"
Erase Flash: "Only Sketch"
Port
Get Board Info
Programmer
Burn Bootloader
Boards Manager...
Arduino AVR Boards
Arduino AVR Boards (in sketchbook)
ESP32 Arduino
ESP8266 Modules 3
Generic ESP8266 Module
Generic ESP8285 Module
ESPDuino (ESP-13 Module)
Adafruit Feather HUZZAH ESP8266
XinaBox CW01
ESPresso Lite 1.0
ESPresso Lite 2.0
Phoenix 1.0
Phoenix 2.0
NodeMCU 0.9 (ESP-12 Module)
NodeMCU 1.0 (ESP-12E Module) 4
Olimex MOD-WIFI-ESP8266(-DEV)
SparkFun ESP8266 Thing
SparkFun ESP8266 Thing Dev
SweetPea ESP-210
LOLIN(WEMOS) D1 R2 & mini
LOLIN(WEMOS) D1 mini Pro
LOLIN(WEMOS) D1 mini Lite
WeMos D1 R1
ESPino (ESP-12 Module)
ThaiEasyElec's ESPino
WifInfo
Arduino
Test-Ide
// the setup function runs once when you press reset or power the board
void setup() {
// initialize digital pin LED_BUILTIN as an output.
pinMode(LED_BUILTIN, OUTPUT);
}
// the loop function runs over and over again forever
void loop() {
digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the voltage level)
delay(1000); // wait for a second
digitalWrite(LED_BUILTIN, LOW); // turn the LED off by making the voltage LOW
delay(1000); // wait for a second
}


Test-Ide | Arduino 1.8.19
File Edit Sketch Tools Help
1
Auto Format Ctrl+T
Archive Sketch
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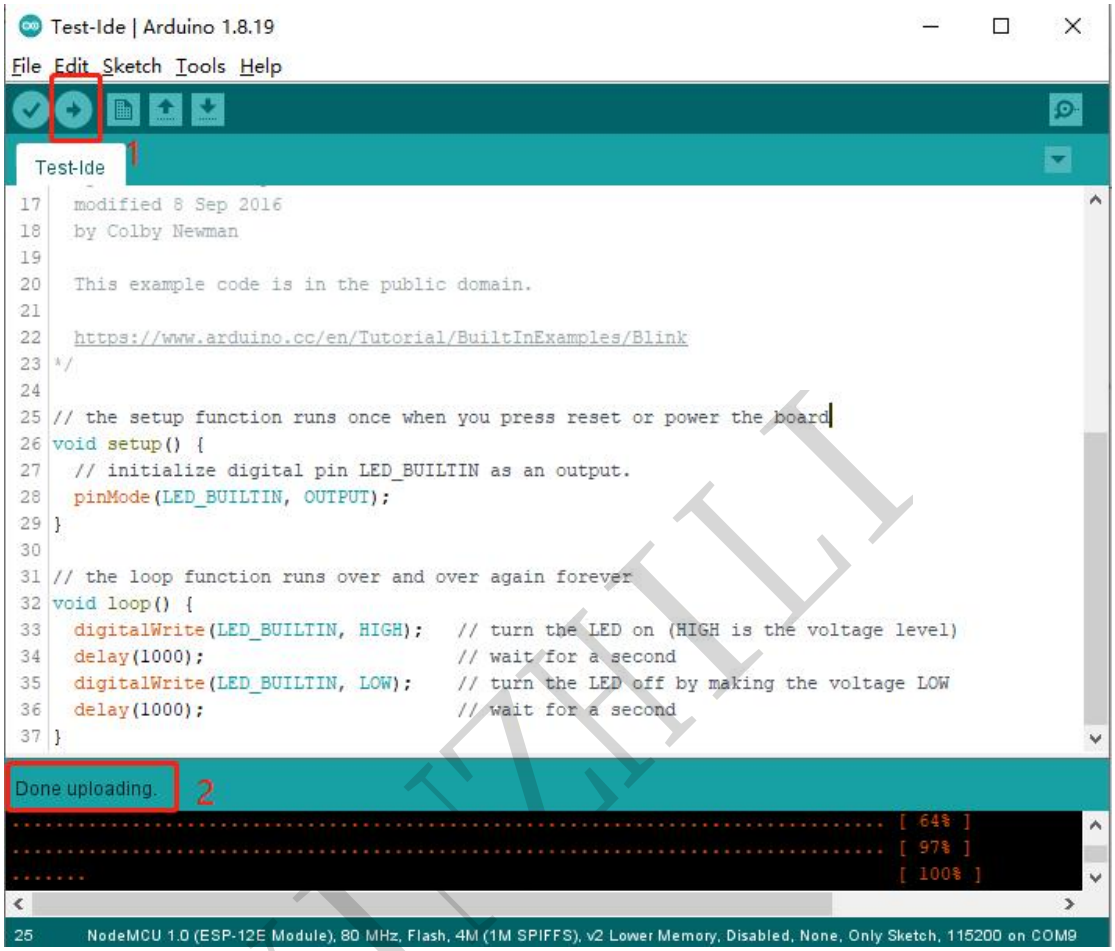
delay(1000); // wait for a second
}

第 10 步：Step 10:

Click the upload button to download the program to the NodeMcu in the development board. As shown in the figure below.



When you see the prompt "Upload succeeded" in prompt 2, the download is completed. Normally, you can see the blue LED on the development board flashing at 1 second intervals. So far, the Arduino IDE software has been successfully installed.