

Getting Start Guide

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Arduino IDE (Integrated Development Environment)

Introduction

The Arduino Software (IDE) is easy-to-use for beginners, yet flexible enough for advanced users to take advantage of as well. For teachers, it's conveniently based on the Processing programming environment, so students learning to program in that environment will be familiar with how the Arduino IDE works.

- * We are a leading manufacturer of electronic components for Arduino and Raspberry Pi.
- * We have a professional engineering team dedicated to providing tutorials and support to help you get started.
- * If you have any technical questions, please feel free to contact our support staff via email at support@smraza.com

Install the Arduino Software (IDE)

Introduction

The following method is based on the windows PC installation environment.

If it is the other system, please refer to this link:

<https://www.arduino.cc/en/Guide/HomePage>



Download the Arduino Software

Select Operating System



ARDUINO 1.6.12

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. It runs on Windows, Mac OS X, and Linux. The environment is written in Java and based on Processing and other open-source software. This software can be used with any Arduino board. Refer to the [Getting Started](#) page for installation instructions.

Windows Installer
Windows ZIP file for non-admin install

Mac OS X 10.7 Lion or newer

Linux 32 bits
Linux 64 bits
Linux ARM (experimental)

[Release Notes](#)
[Source Code](#)
[Checksums \(sha512\)](#)

Support the Arduino Software

Consider supporting the Arduino Software by contributing to its development. (US tax payers, please note this contribution is not tax deductible). [Learn more on how your contribution will be used.](#)



SINCE MARCH 2015, THE ARDUINO IDE HAS BEEN DOWNLOADED **10,248,239** TIMES (IMPRESSIVE!) NO LONGER JUST FOR ARDUINO AND GENUINO BOARDS, HUNDREDS OF COMPANIES AROUND THE WORLD ARE USING THE IDE TO PROGRAM THEIR DEVICES, INCLUDING COMPATIBLES, CLONES, AND EVEN COUNTERFEITS. HELP ACCELERATE ITS DEVELOPMENT WITH A SMALL CONTRIBUTION! REMEMBER: OPEN-SOURCE IS LOVE!

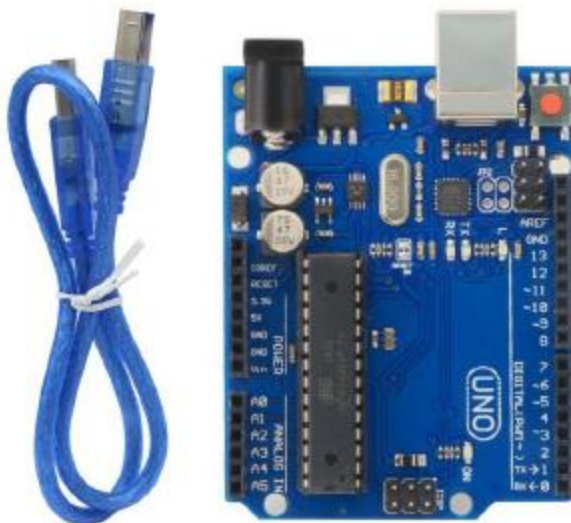
\$3 \$5 \$10 \$25 \$50 OTHER

Click it

JUST DOWNLOAD CONTRIBUTE & DOWNLOAD

Step 1: Get an Uno R3 and USB cable

In this tutorial, you're using an Uno R3. You also need a standard USB cable (A plug to B plug): the kind you would connect to a USB printer, for example.

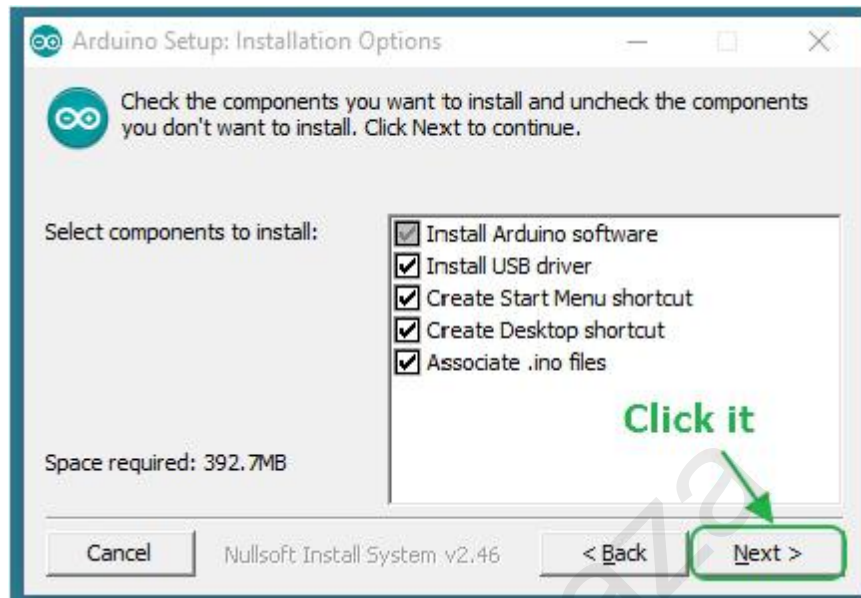


Step 2: Install the Arduino Software (IDE)

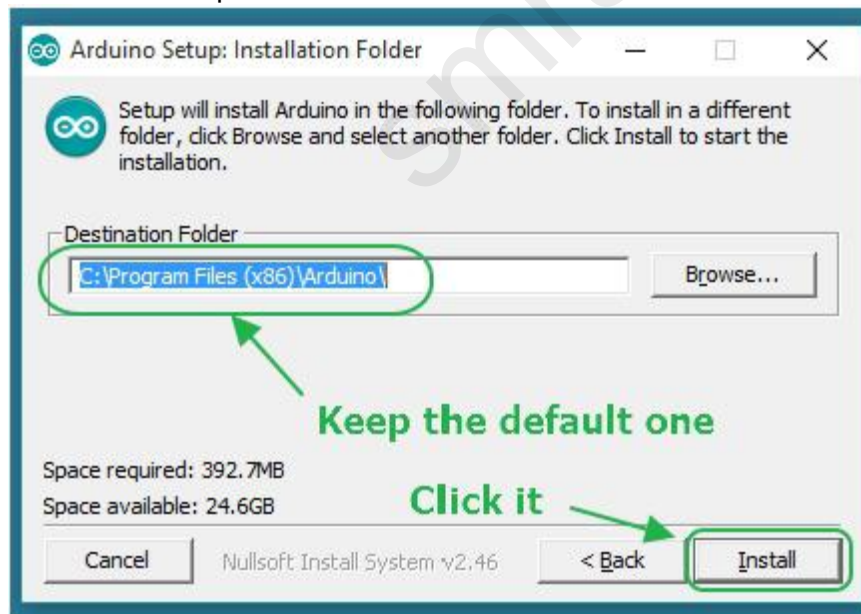
You need to open **Public_materials File -> Software File** and Double-click the arduino-1.6.9-windows.exe or you can direct download the latest version from this page:

<http://arduino.cc/en/Main/Software>

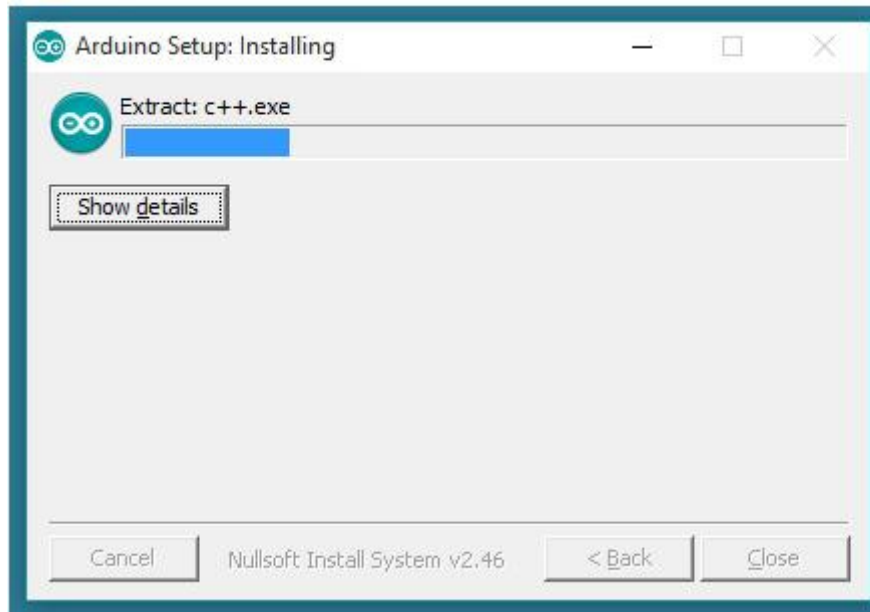
Next, proceed with the installation and please allow the driver installation process.



Choose the components to install and click "next" button.



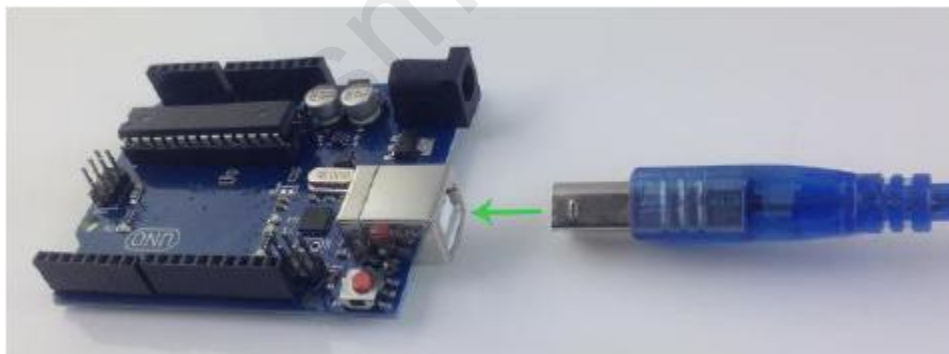
Choose the installation directory (**we suggest to keep the default one**)



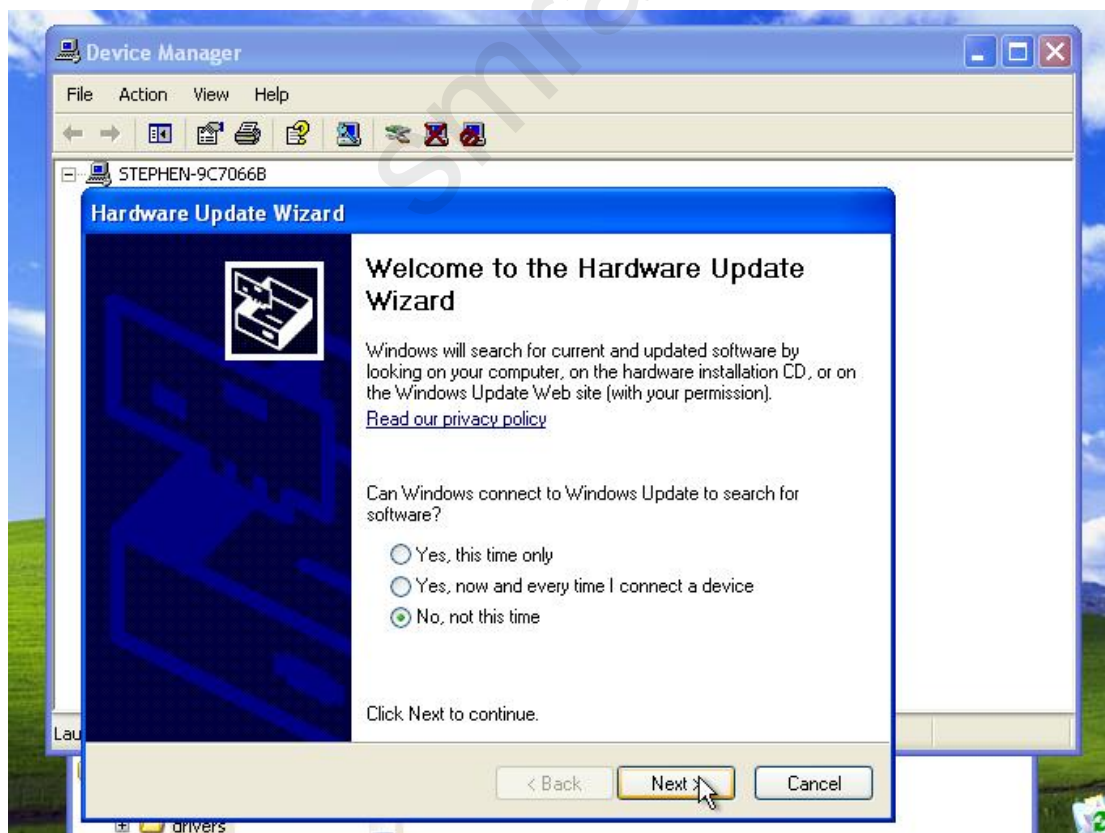
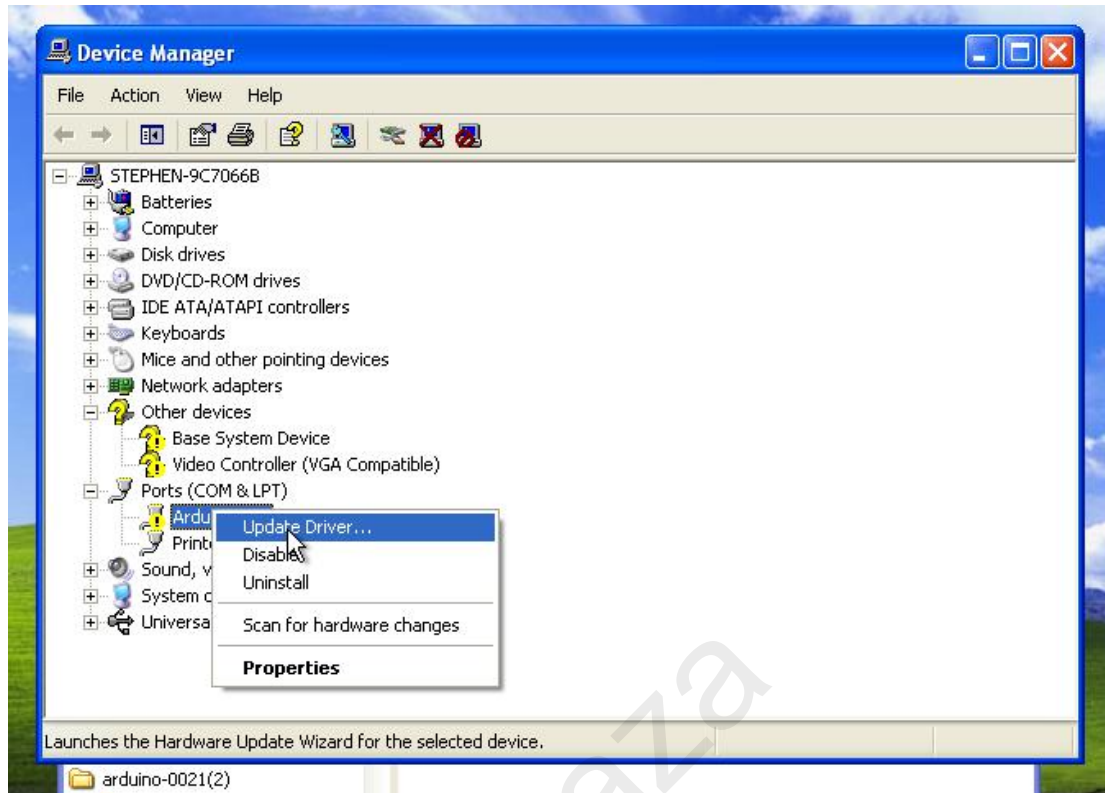
The process will extract and install all the required files to execute properly the Arduino Software (IDE)

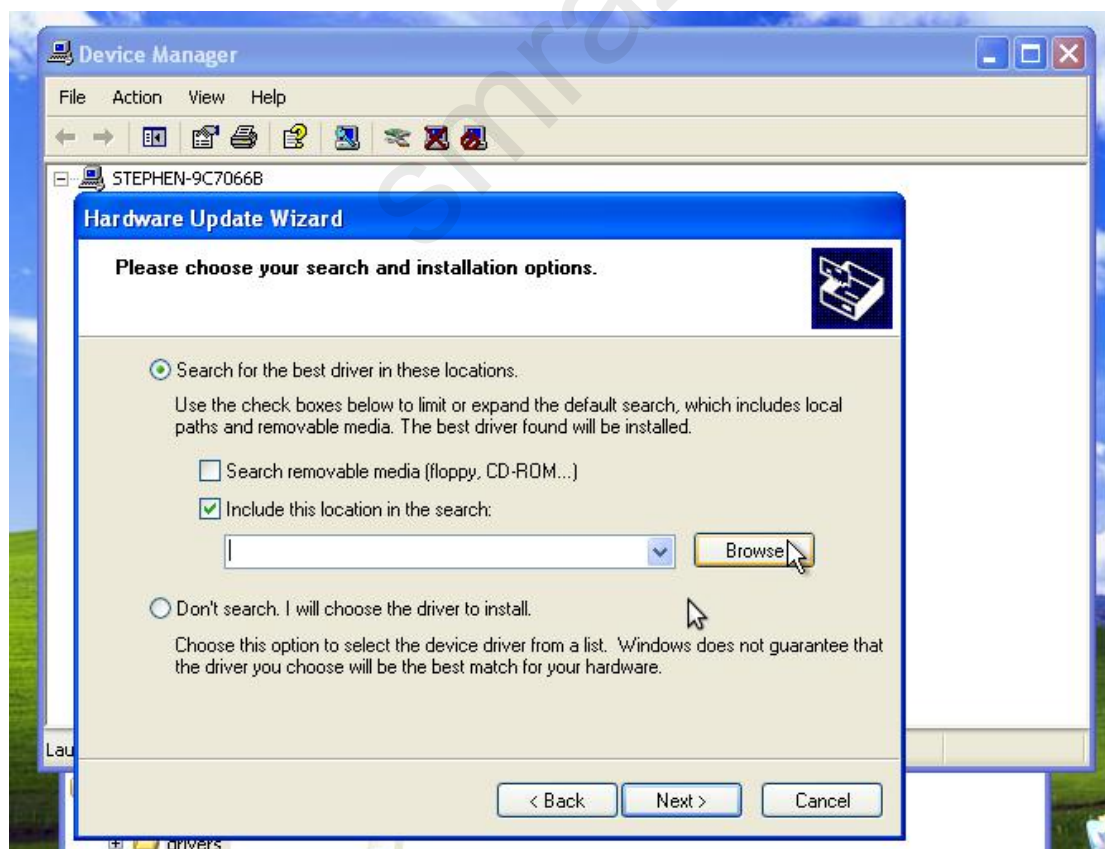
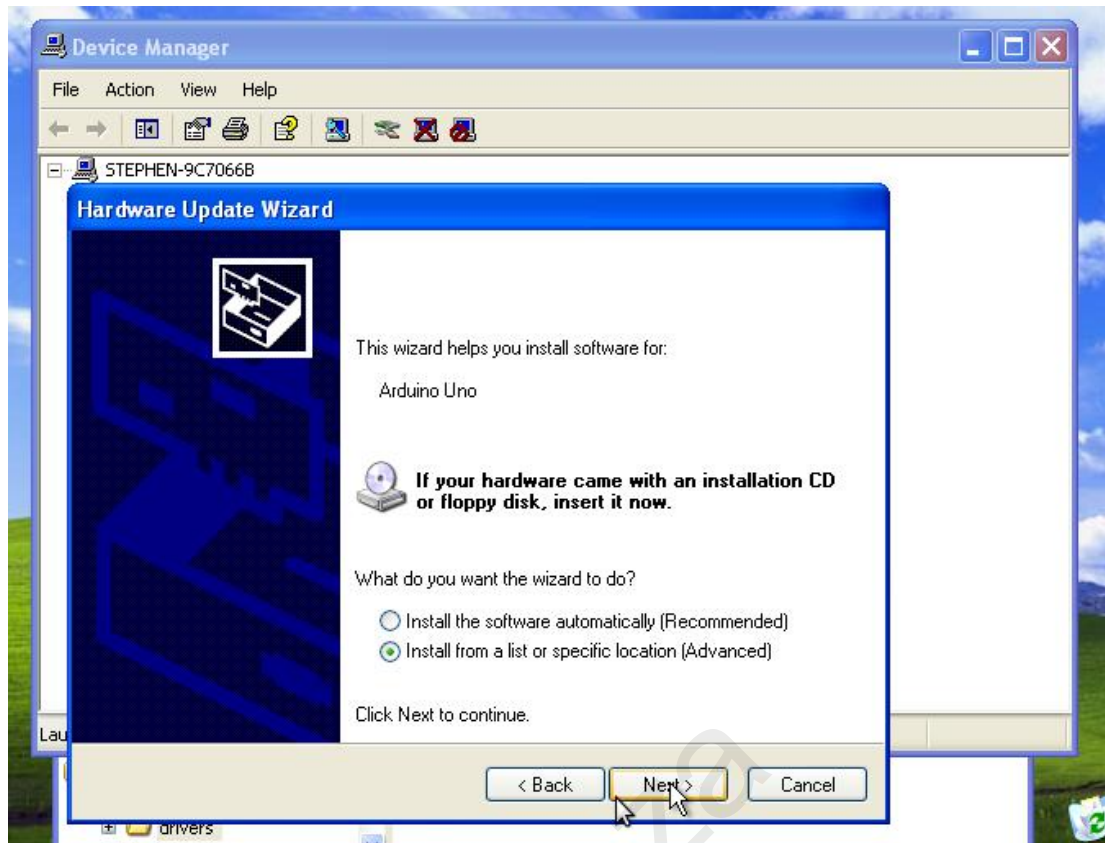
Step 3: Connect the board

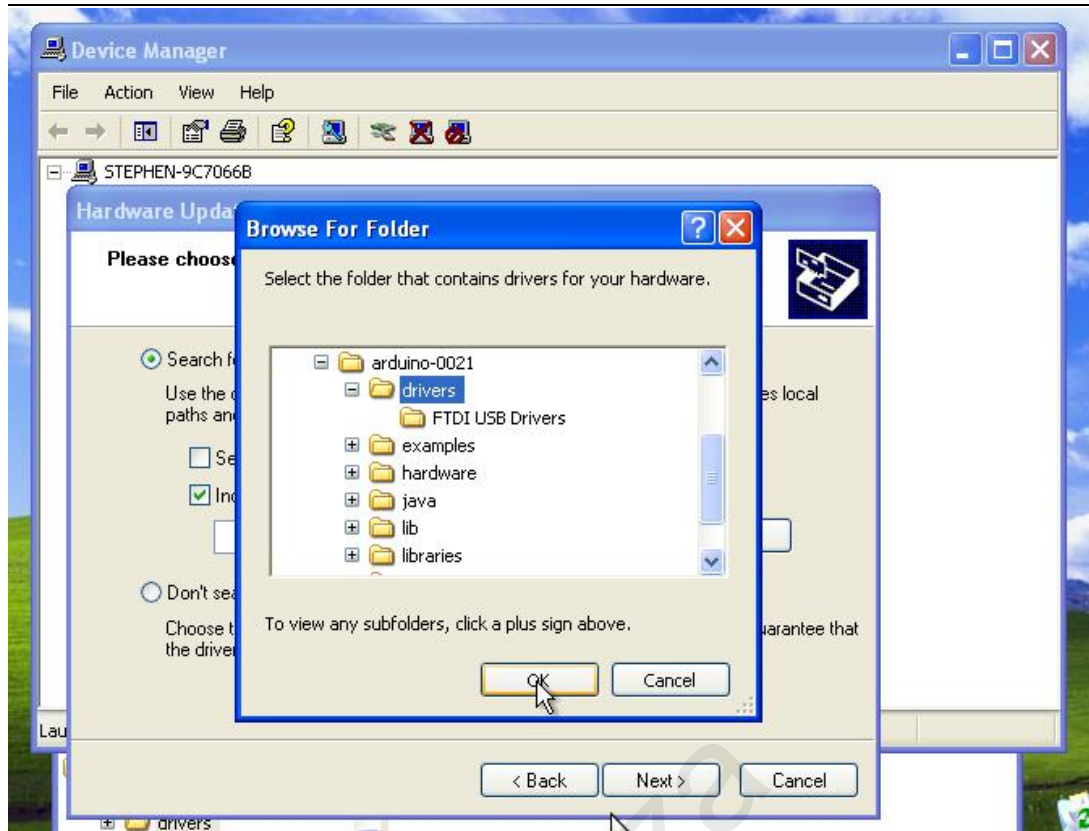
The USB connection with the PC is necessary to program the board and not just to power it up. The Uno and Mega automatically draw power from either the USB or an external power supply. Connect the board to your computer using the USB cable. **The green power LED (labelled PWR) should go on.**

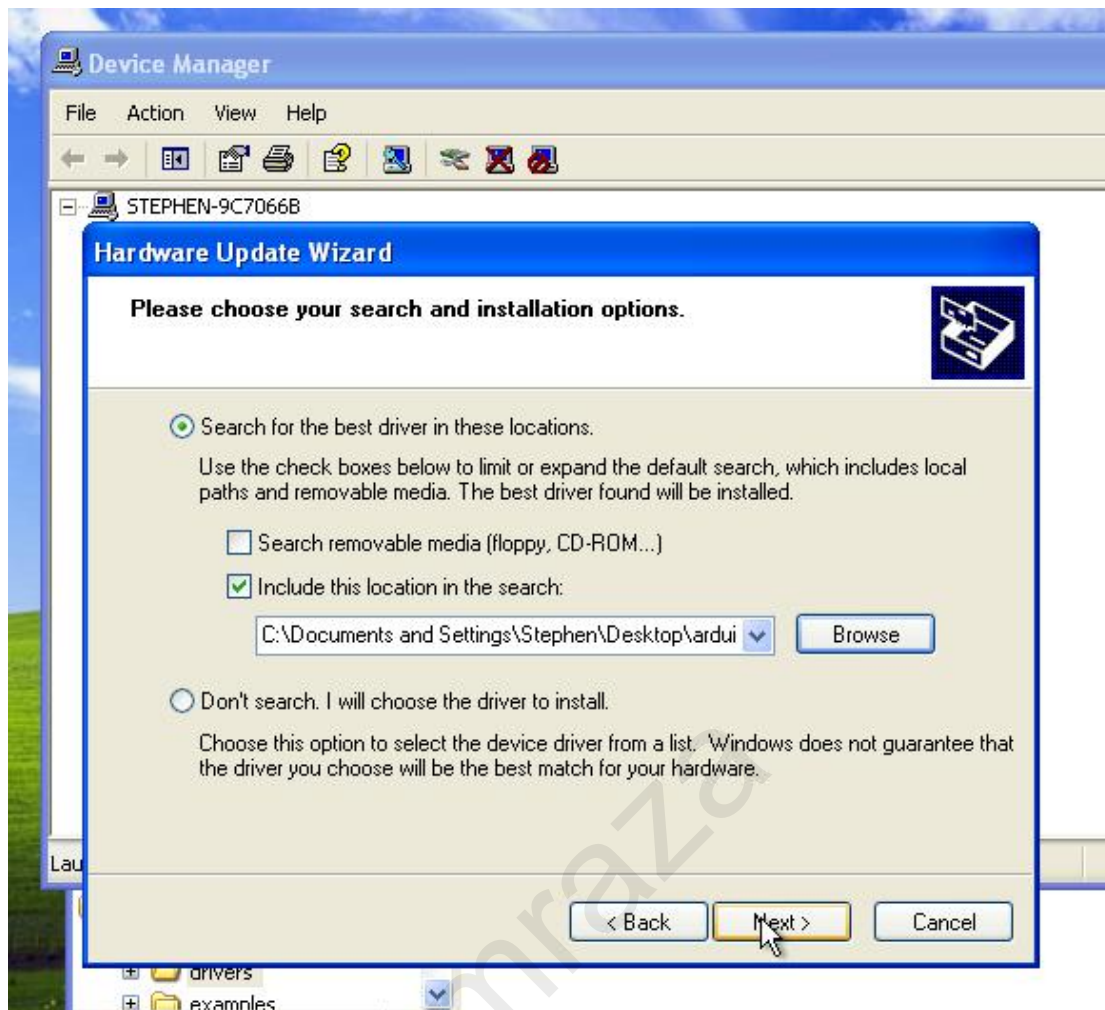


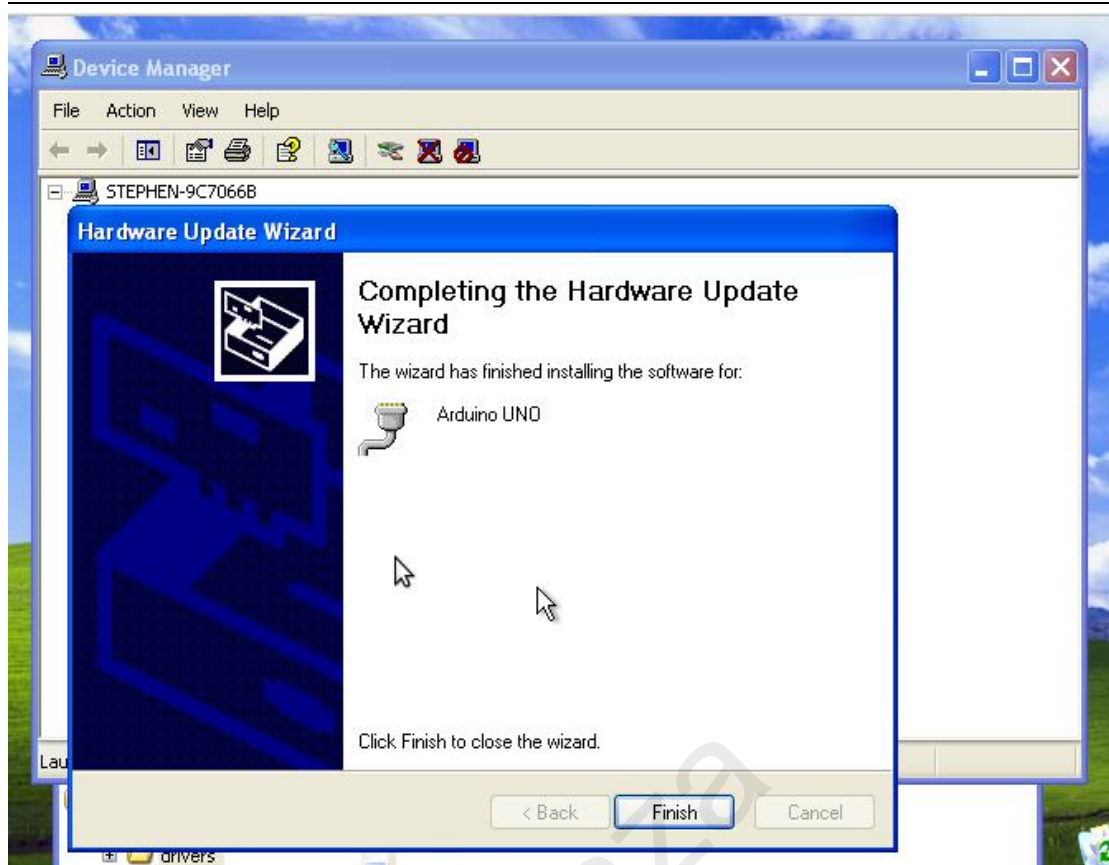
Step 4: Installing the Arduino drivers under Windows system











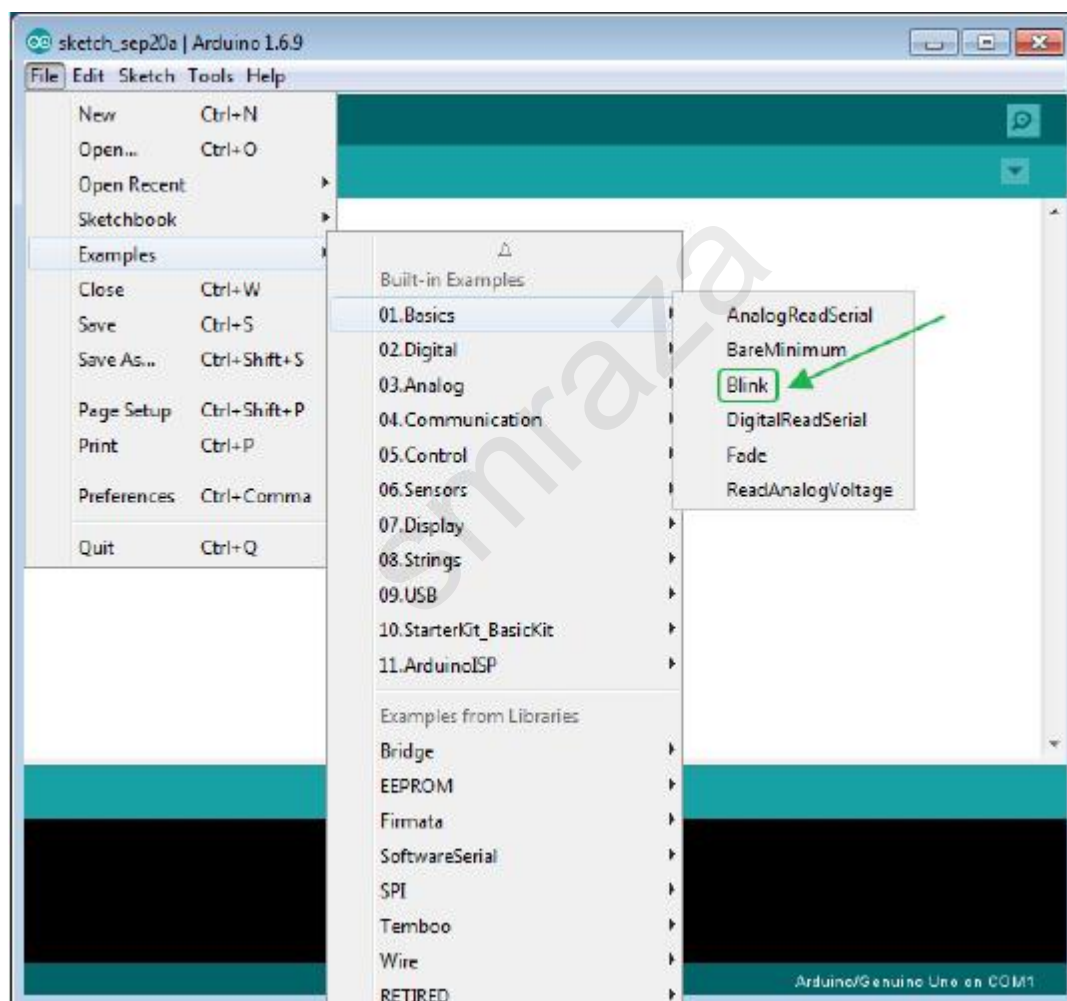
Step 5: Launch the Arduino Software (IDE)

Double-click the Arduino icon (arduino.exe) created by the installation process.



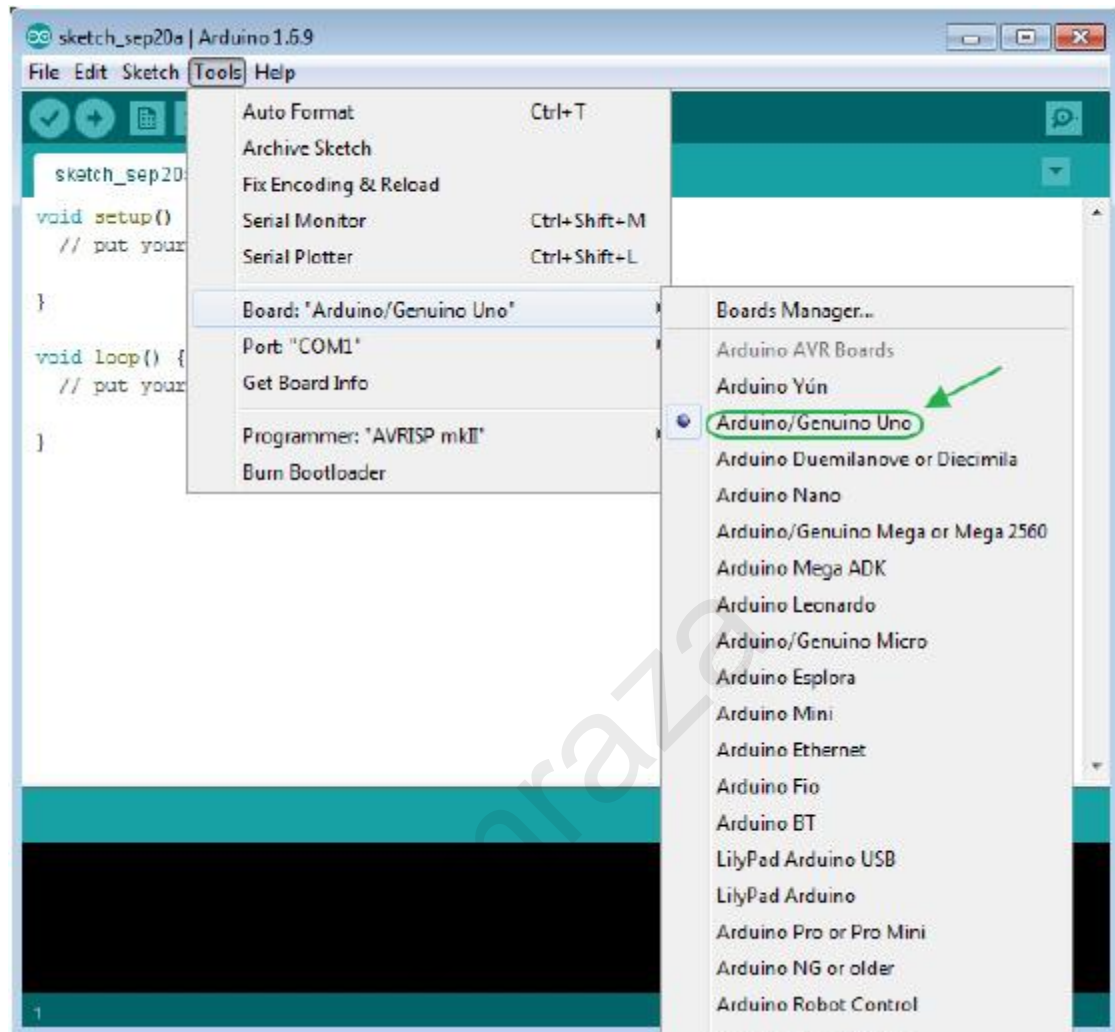
Step 6: Open the blink example

Open the LED blink example sketch: File > Examples > 01.Basics > Blink.



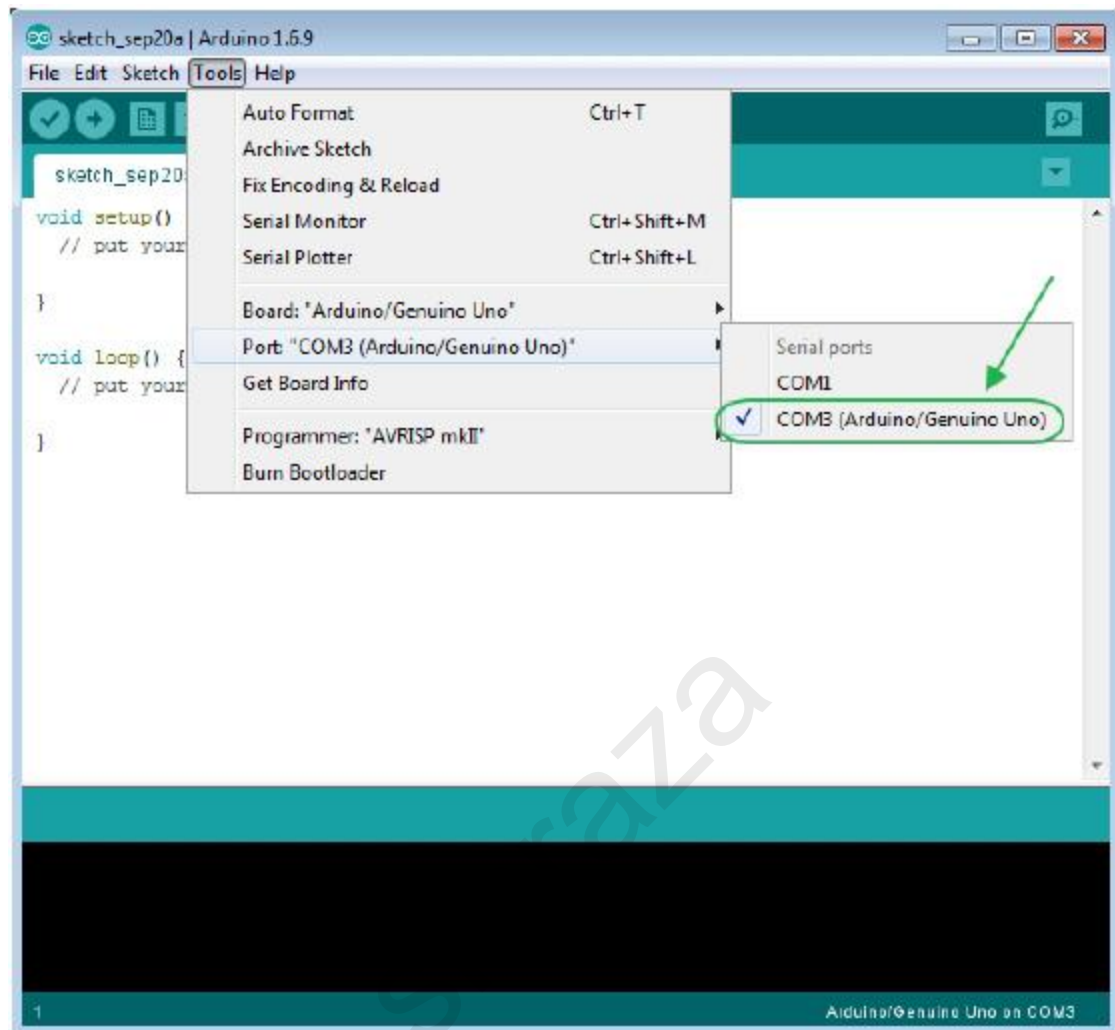
Step 7: Select your board

You'll need to select the entry in the Tools > Board menu that corresponds to your Arduino board.



Selecting an Arduino/Genuino Uno.

Step 8: Select your serial port



Select the serial device of the board from the Tools | Serial Port menu. This is likely to be COM3 or higher (COM1 and COM2 are usually reserved for hardware serial ports). To find out, you can disconnect your board and re-open the menu; the entry that disappears should be the Arduino board. Reconnect the board and select that serial port.

Step 9: Upload the program

Now, simply click the "Upload" button in the environment. Wait a few seconds - you should see the RX and TX leds on the board flashing. If the upload is successful, the message "Done uploading." will appear in the status bar.



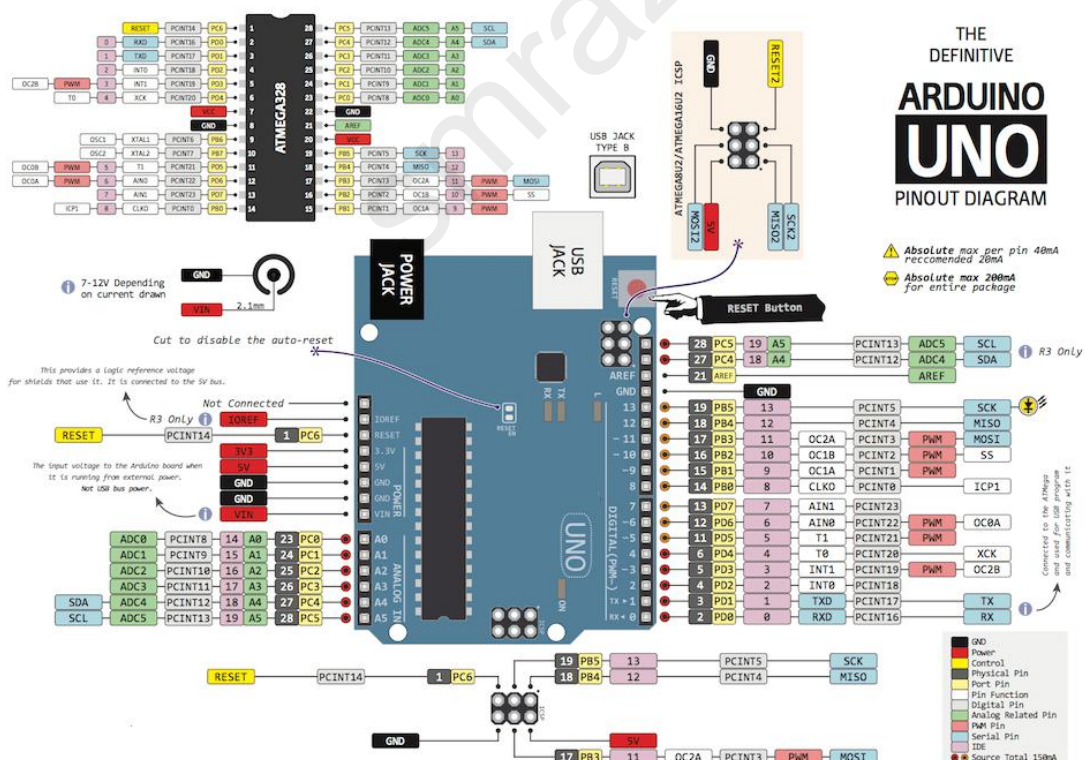
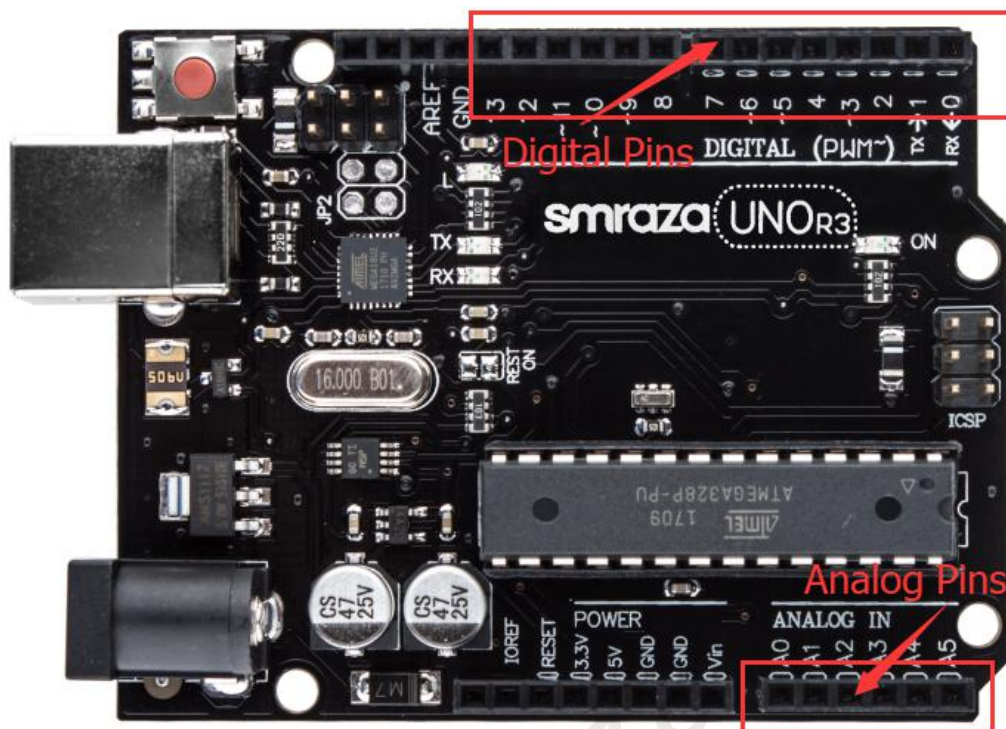
Step 10: Result

A few seconds after the upload finishes, you should see the pin 13 (L) LED on the board start to blink (in orange). If it does, congratulations! You've gotten Arduino up-and-running.

Arduino interface introduction
























Arduino UNO R3 hardware introduction



Learning materials

Lessons

 Lesson1-LED blink	24/09/2016 16:29	File folder
 Lesson2-LED trailing effects	24/09/2016 16:30	File folder
 Lesson3-Traffic light	24/09/2016 16:30	File folder
 Lesson4-Analog Input	27/09/2016 17:14	File folder
 Lesson5-Fading	24/09/2016 16:31	File folder
 Lesson6-Button	24/09/2016 16:31	File folder
 Lesson7-Responder experiment	24/09/2016 16:31	File folder
 Lesson8-Active buzzer	24/09/2016 16:32	File folder
 Lesson9-Passive buzzer	22/09/2016 17:21	File folder
 Lesson10-RGB LED	24/09/2016 16:32	File folder
 Lesson11-Making Sounds	26/09/2016 19:52	File folder
 Lesson12-Analog temperature	24/09/2016 16:33	File folder
 Lesson13-Tilt switch	24/09/2016 16:33	File folder
 Lesson14-Eight LEDs and a Shift Register	26/09/2016 15:46	File folder
 Lesson15-4 digit LED Segment Displays	26/09/2016 15:02	File folder
 Lesson16-Heart-shaped display experime...	26/09/2016 20:34	File folder
 Lesson17-Sweep	26/09/2016 19:51	File folder
 Lesson18-Knob	26/09/2016 20:15	File folder
 Lesson19-DHT11	27/09/2016 18:49	File folder
 Lesson20-LCD1602	27/09/2016 18:07	File folder
 Lesson21-Temperature and humidity mo...	27/09/2016 18:21	File folder

Introduction

We will provide you not only the all involved courses about this kit but also to analyze each course. We sincerely hope that you can learn from the first course to the last course because it will lead you start with Arduino step by step, and it also let you jump from a newbie to a higher level for developing your own independent projects.

Learning Websites

introduction

If you think these learning projects boring or not vivid enough, don't worry about that. We will continue to collect some Arduino websites, forums and video courses. At the same time, we are also building our own website, forums and video courses which can lead you into the Arduino funny world better.

Projects or Lessons:

<http://forum.arduino.cc/>

<https://www.arduino.cc/en/Tutorial/HomePage/>

<http://www.toptechboy.com/arduino-lessons/>

<https://create.arduino.cc/projecthub/>

Video tutorials:

https://www.youtube.com/watch?v=fCxzA9_kg6s&list=PLA567CE235D39FA84

https://www.youtube.com/watch?v=d8_xXNcGYgo&list=PLGs0VKk2DiYx6CMdOQR_hmJ2Nbb4mZQn-

Language Reference:

<https://www.arduino.cc/en/Reference/HomePage/>

<http://wiring.org.co/reference/>