

## 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.

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\* About Elecrow:

\* 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 or suggestions, please feel free to contact our support staff via email at [keen@elecrow.com](mailto:keen@elecrow.com)

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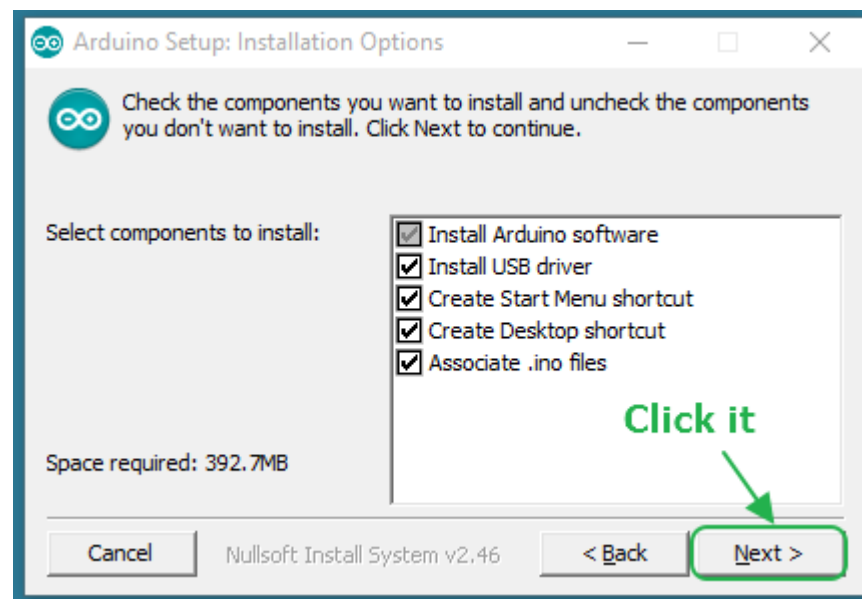
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### Operation demo

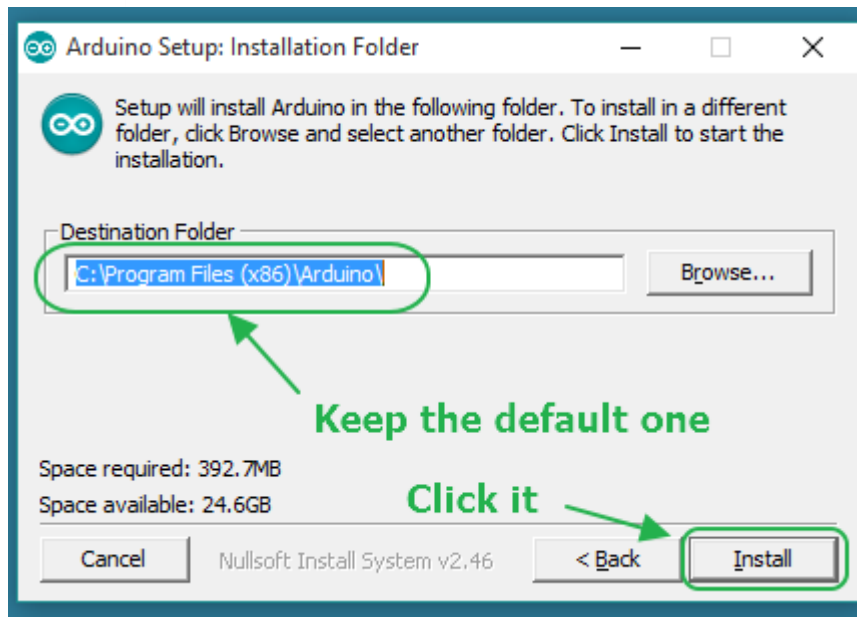
#### Step 1: Install the Arduino Software (IDE)

Download the latest version from this page: <http://arduino.cc/en/Main/Software>

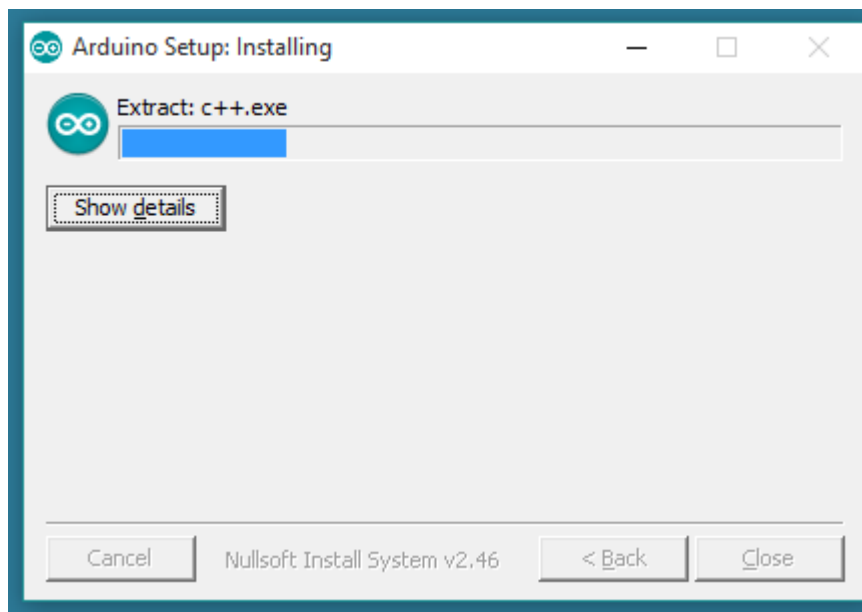
Next, proceed with the installation and please allow the driver installation process.



Choose the components to install and click “next” button.



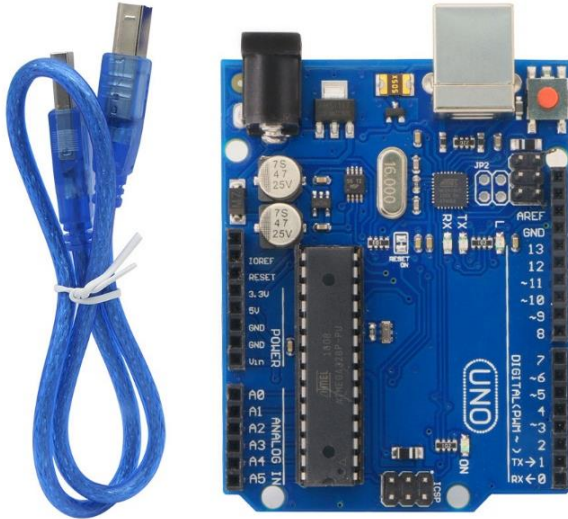
Choose the installation directory.



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

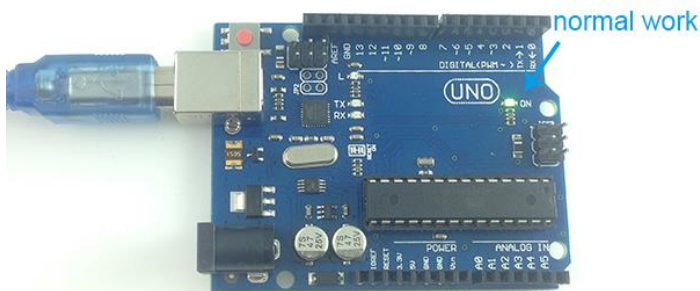
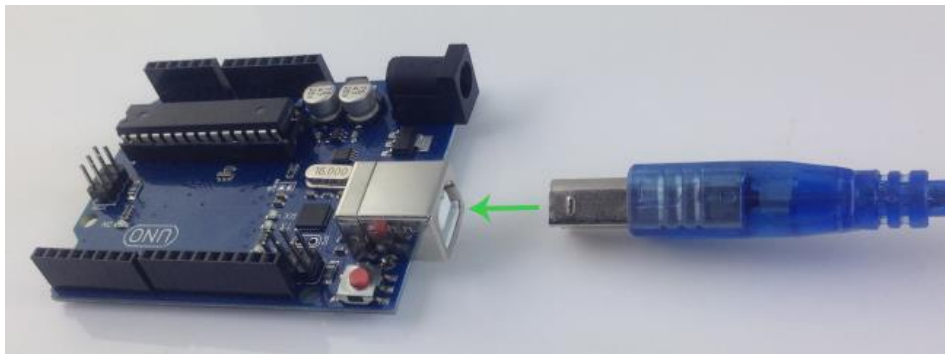
## Step 2: Get an Uno R3 and USB cable

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 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.**

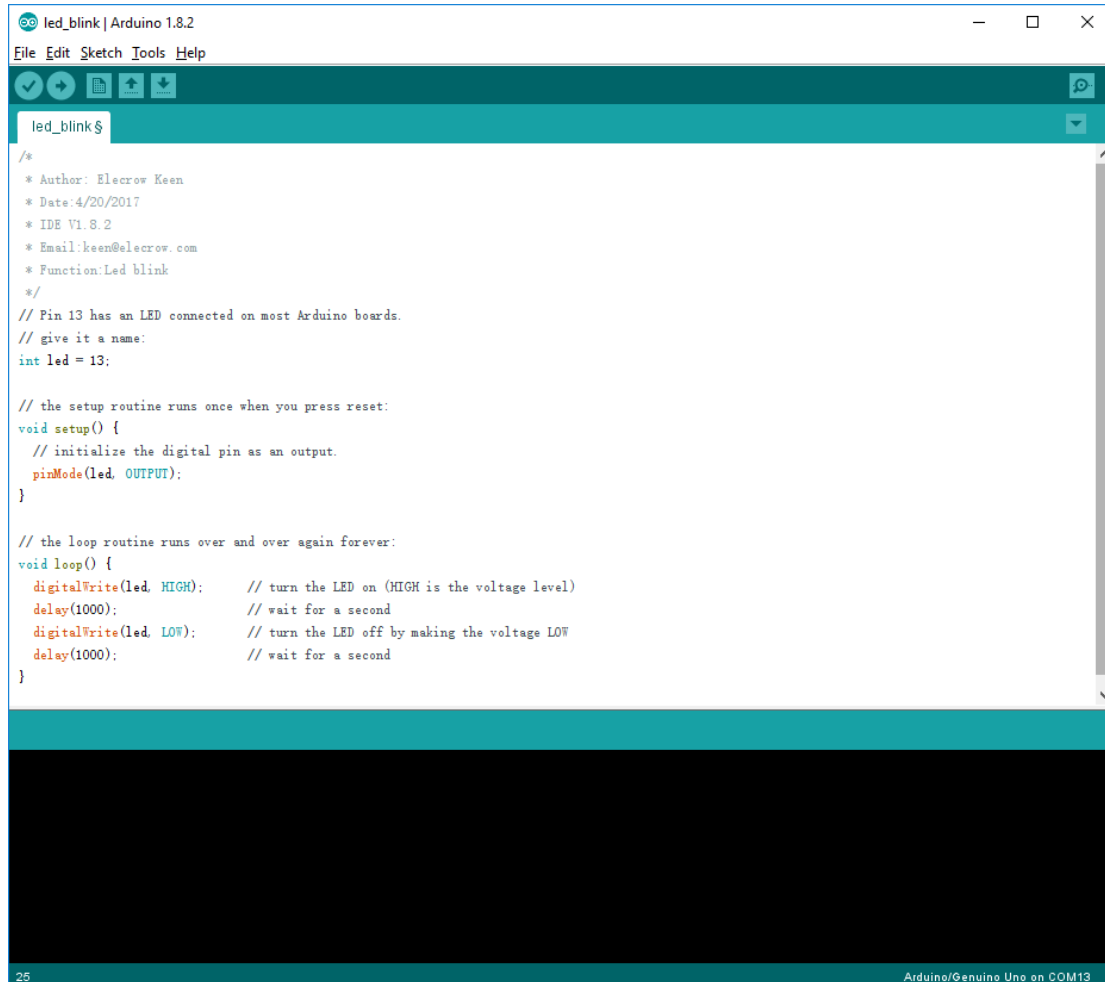


### Step 4: Open Lesson 1: LED blink

Open the LED blink example sketch: CD > For Arduino>Demo Code>Lesson1-LED\_blink>led\_blink.

For Arduino > Demo Code > Lesson1-LED\_blink > led\_blink

Name	Date modified	Type	Size
 led_blink.ino	9/27/2016 7:36 PM	Arduino file	1 KB



```

/*
 * Author: Elecrow Keen
 * Date: 4/20/2017
 * IDE V1.8.2
 * Email: keen@elecrow.com
 * Function: Led blink
 */
// Pin 13 has an LED connected on most Arduino boards.
// give it a name:
int led = 13;

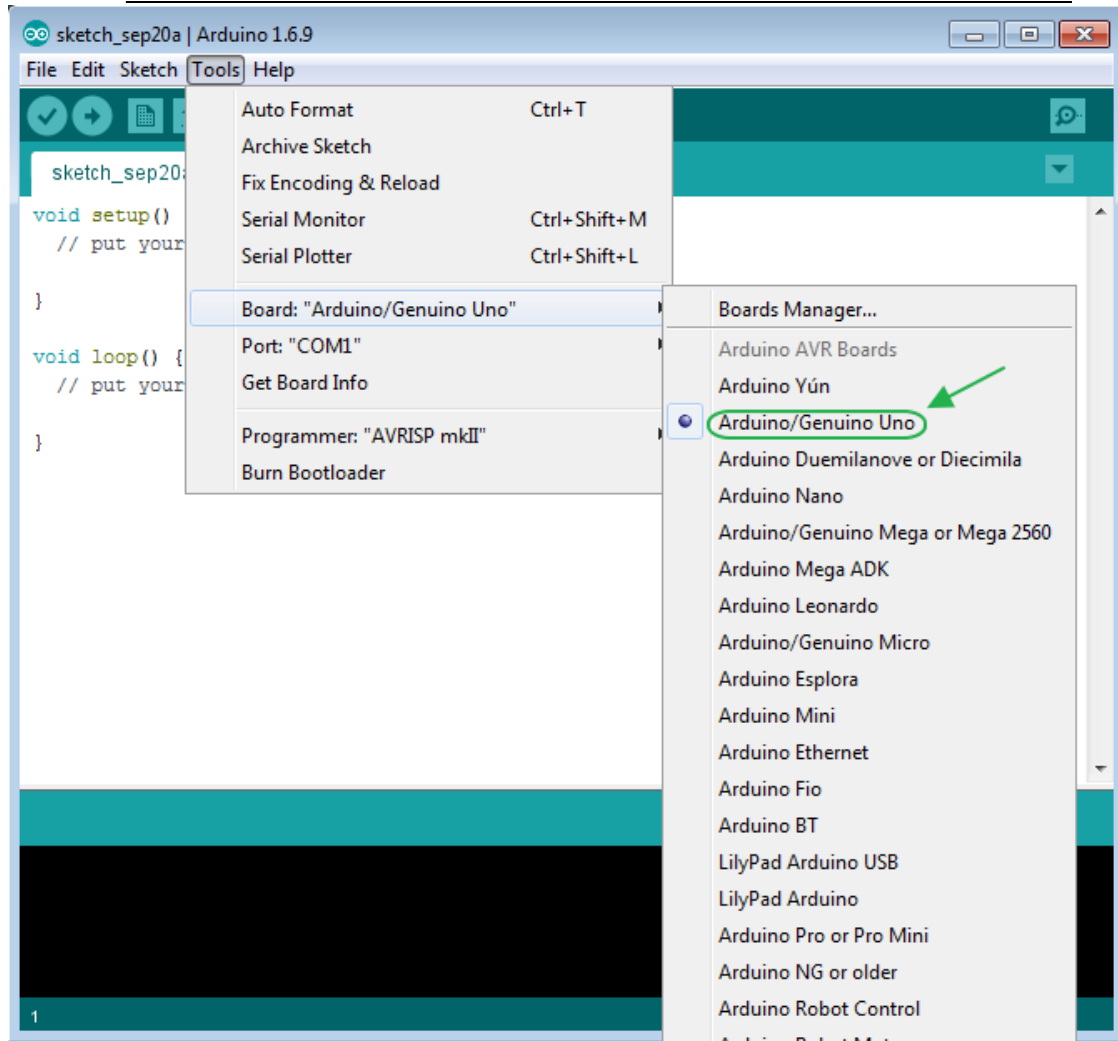
// the setup routine runs once when you press reset:
void setup() {
  // initialize the digital pin as an output.
  pinMode(led, OUTPUT);
}

// the loop routine runs over and over again forever:
void loop() {
  digitalWrite(led, HIGH);    // turn the LED on (HIGH is the voltage level)
  delay(1000);               // wait for a second
  digitalWrite(led, LOW);    // turn the LED off by making the voltage LOW
  delay(1000);               // wait for a second
}

```

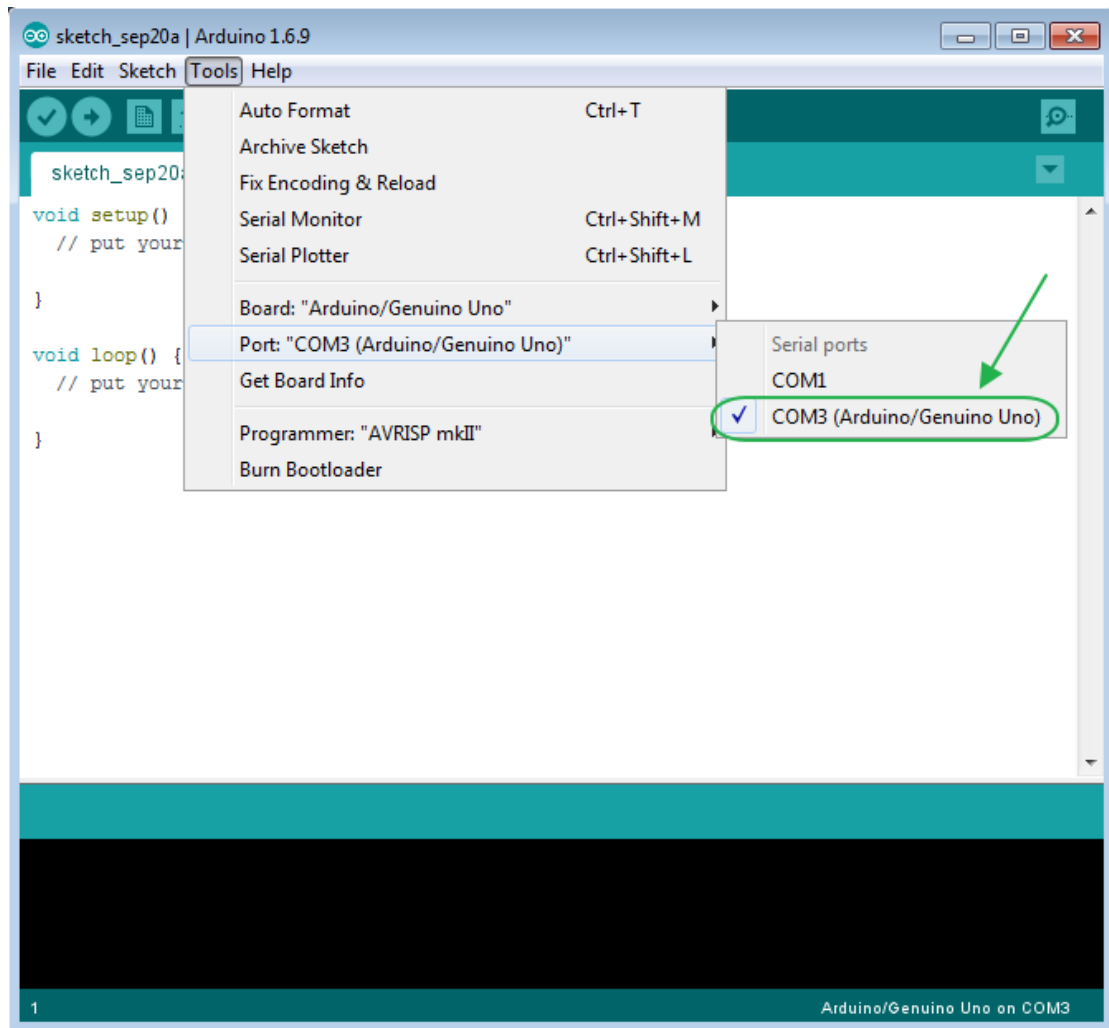
## Step 5: Select your board

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



**Selecting an Arduino/Genuino Uno.**

## Step 6: 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 7: Upload the program

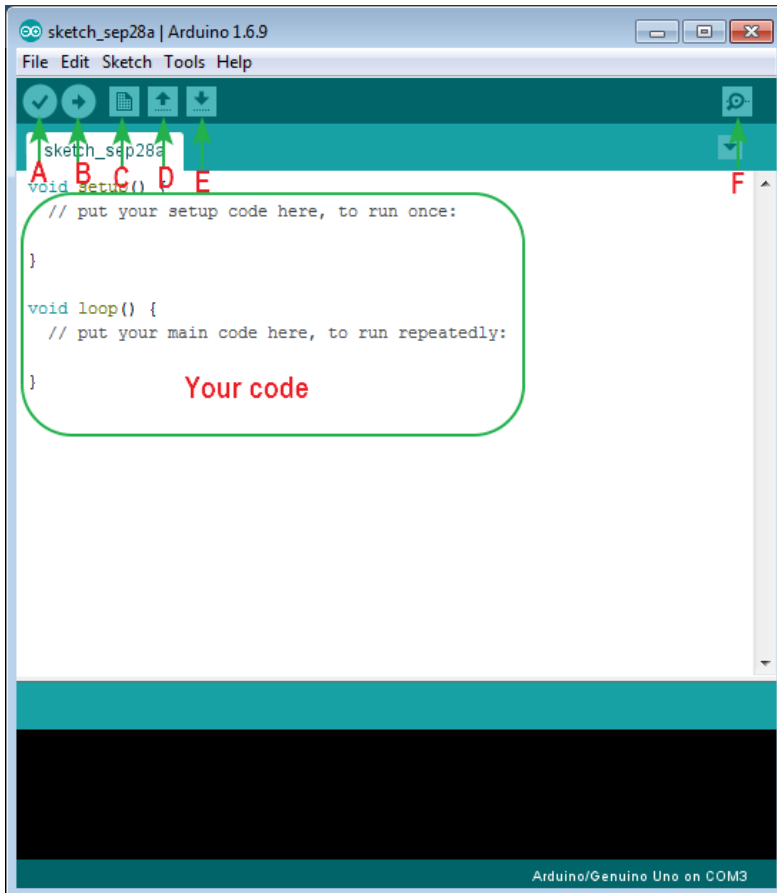
Now, simply click the "Upload" button in the environment. Wait a few seconds - you should see the RX and TX leds on the board flashing. If the upload is successful, the message "Done uploading." will appear in the status bar.



## Step 8: 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



- A ->Compile
- B ->Upload
- C ->New
- D ->Open
- E ->Save
- F ->Serial monitor