Arduino IDE installation and configuration guide

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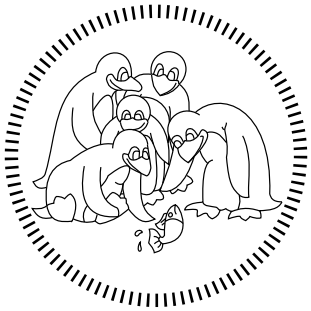

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Chapter 1

Introduction

1.1 Notes

In the following sections you'll find guides for Windows, MacOS and most of the well-known GNU/Linux distros (we recommend it).

You can start with Ubuntu, it's a pretty easy and accessible one; the only hard thing about the switch is getting used to the new OS.

You will need the following things to get started:

- Preparing a USB stick: Create a bootable USB stick on Windows
- Installing Ubuntu: Installation guide

1.2 Synopsis

In this guide you'll understand how to install Arduino IDE, an open source platform used to develop and load programs on compatible boards.

We'll use the **Arduino Uno** board during this workshop.

Chapter 2

GNU/Linux

2.1 Installation based on distro

Arduino IDE requires some dependencies in order to be installed, these are the commands needed in order to install them:

Note: always say "yes" to every prompt that comes up during the installation procedure

Debian-based (Ubuntu, Pop!_OS, Debian, Linux Mint, etc.)

```
sudo apt update
sudo apt install python3
sudo pip install pyserial
sudo apt install arduino
```

Arch-based (Arch Linux, Manjaro)

```
sudo pacman -Syu python
sudo pip install pyserial
sudo pacman -S arduino
```

Fedora

```
sudo dnf install python3
sudo pip install pyserial
sudo dnf install arduino
```

CentOS

```
yum install centos-release-scl
yum install rh-python36
scl enable rh-python36 bash
sudo yum install epel-release
sudo yum install snapd
# Reboot the system to make sure that snap is correctly installed
sudo pip install pyserial
sudo snap install arduino
```

Red Hat

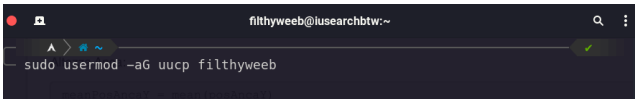
```
sudo rpm -ivh https://dl.fedoraproject.org/pub/epel/epel-release-latest7.noarch.rpm
sudo subscription-manager repos --enable "rhel-*-optional-rpms"
    --enable "rhel-*-extras-rpms"
sudo yum update
sudo yum install snapd
# Reboot the system to make sure that snap is correctly installed
yum install centos-release-scl
yum install rh-python36
scl enable rh-python36 bash
sudo pip install pyserial
sudo snap install arduino
```

2.2 Serial communication permissions

Debian-based (Ubuntu, Pop!_OS, Debian, Linux Mint, etc.)

Arch-based (Arch Linux, Manjaro)

```
sudo usermod -aG uucp [username]
# Replace [username] with your username
```

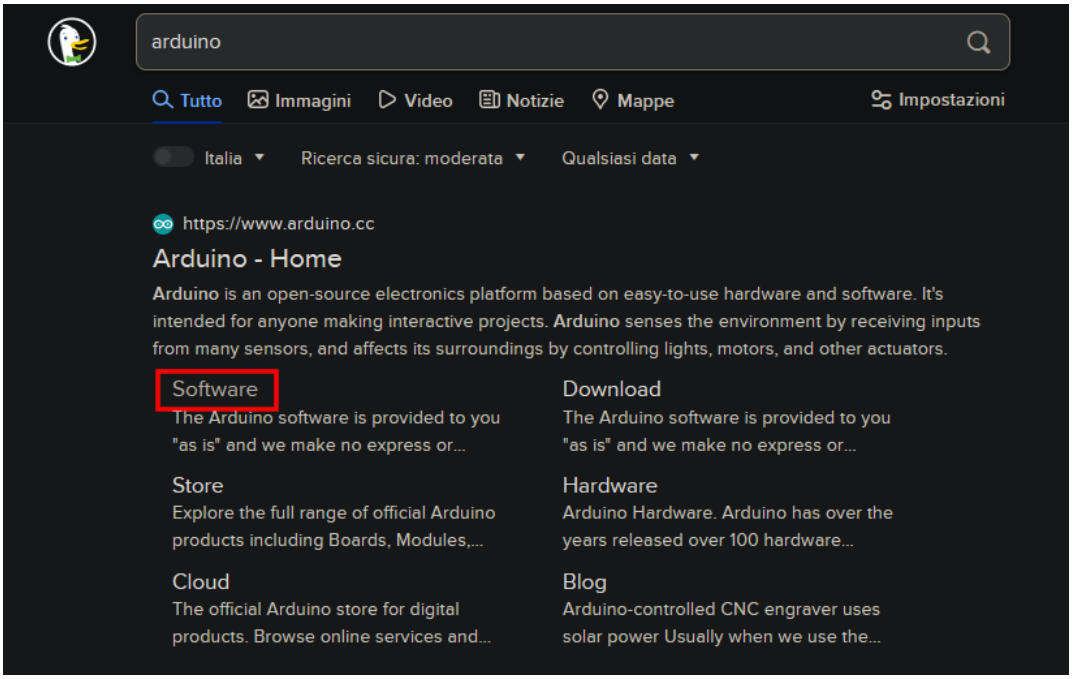


Chapter 3

Windows & MacOS

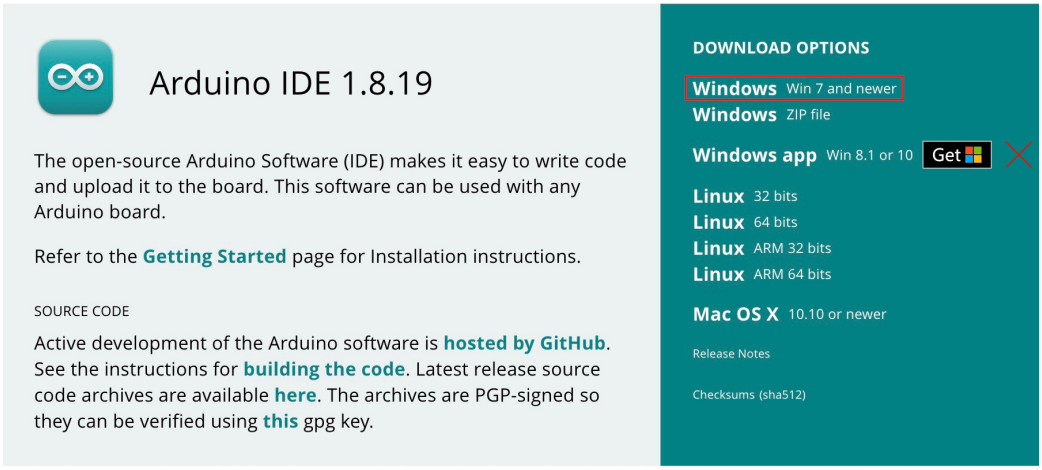
3.1 Download

Use your browser to search for the term `"Arduino"` and, in the first result, select the `Software` section; alternatively you can go directly to https://www.arduino.cc/en/software.



Windows

In the `Downloads` section of the web page, choose the *Windows 7 and newer* option for the Arduino IDE 1.x.x version as shown in the image. **DO NOT** select *Windows 8.1 or 10* even if you are currently using one of those Windows versions.

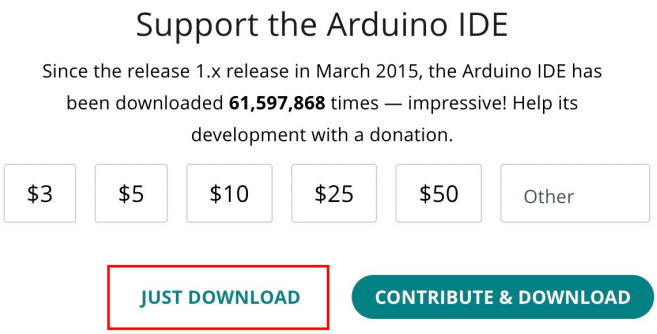


MacOS

In the `Downloads` section of the web page, choose the *Mac OS X* option for the Arduino IDE 1.x.x version as shown in the image.

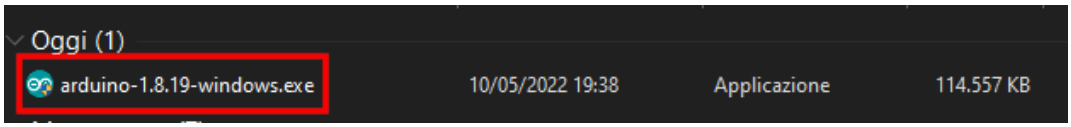
Support

The website will prompt you with the choice for a donation, if you don't want to support the project you can just continue with the option `Just Download`.

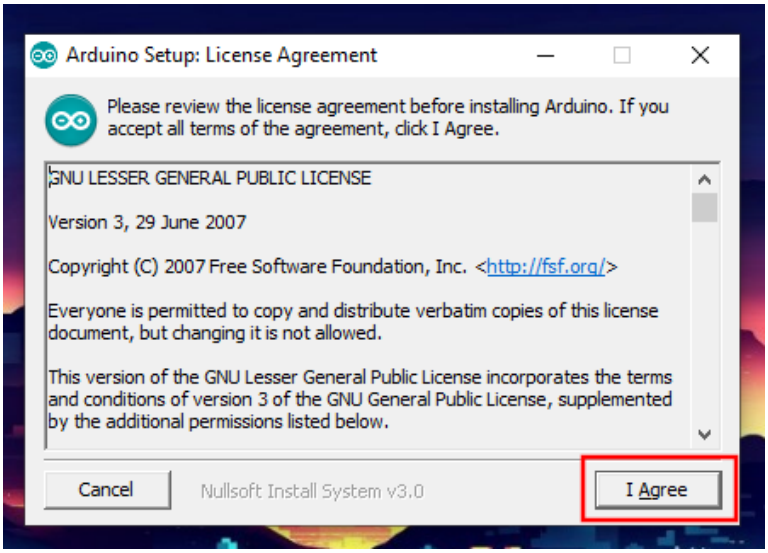


3.2 Windows installation

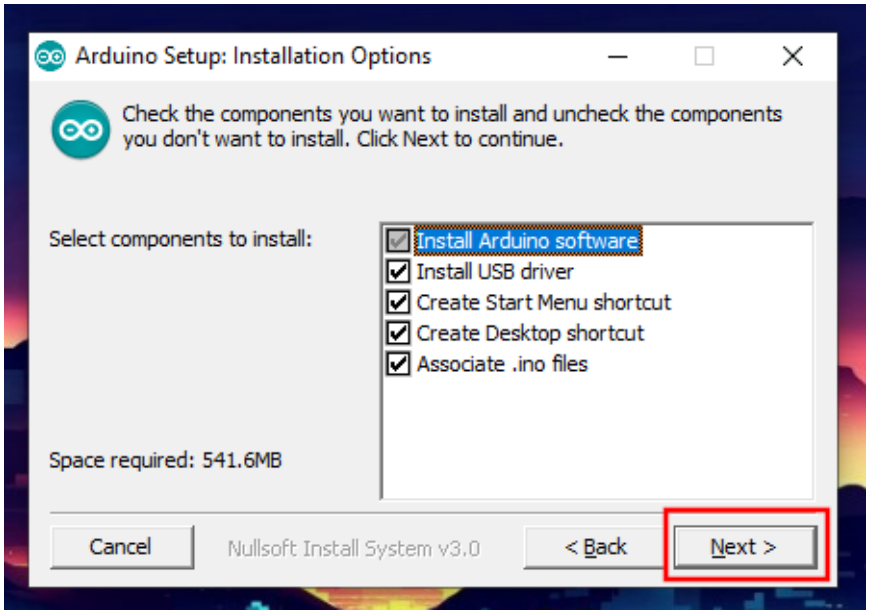
When downloading, if the browser asks for it, select the download folder (if you don't know where the folder is click `Win+R` and type `"C:\Users\[username]\Downloads"`, where `[username]` is your Windows username) and open the executable file shown in the picture.



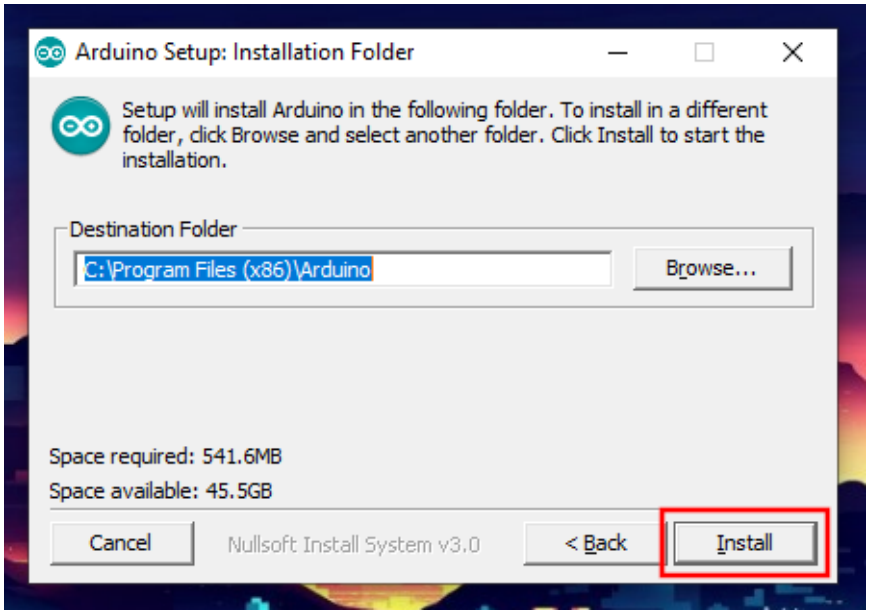
Now the installation procedure has started.
The first thing to do is to accept the terms & conditions by clicking on `I Agree`.



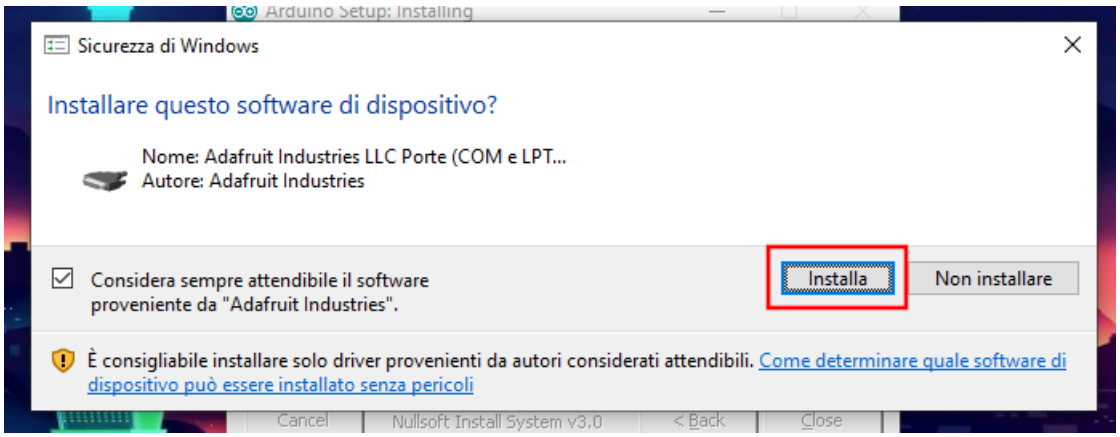
After that, select the installation options by making sure that all the boxes are ticked and then click on `Next`:



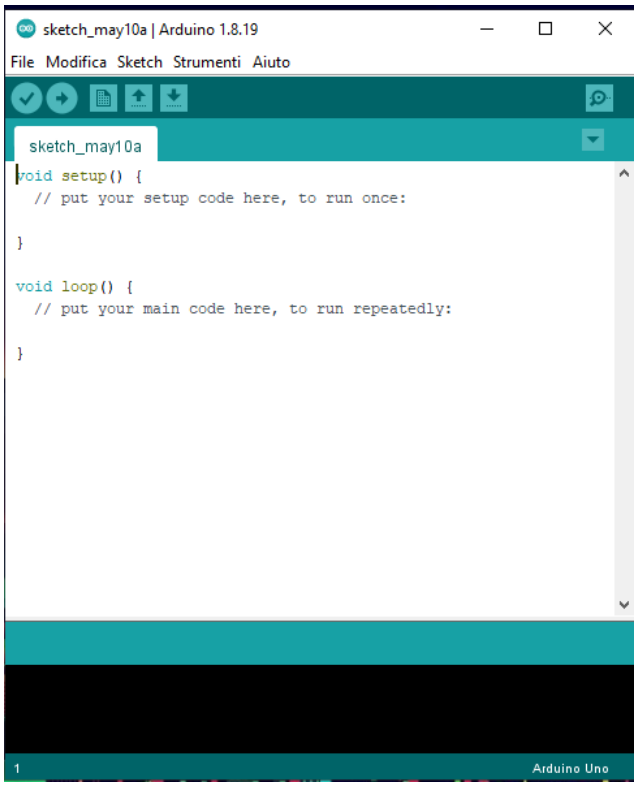
The installer gives you the possibility of choosing the installation path (keep the default one if you don't know what you are doing).
Finally, click on `Install` and wait for the program to end.



If you get the prompt shown in the next picture, you can continue the installation by pressing the `Install` button.

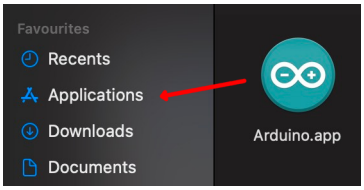


Now you should have a shortcut of Arduino IDE on your desktop, and by clicking it you can open the Arduino IDE.



3.3 MacOS installation

Once the file has been downloaded, unzip it using the appropriate tools and drag it inside the `Applications` folder in order to install it.



Now you can access the Arduino IDE.