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What are Libraries?

Using the Library Manager Importing a .zip Library

Manual Installation

Arduino IDE 1 > Installing Libraries

Installing Libraries

Learn how to install additional libraries in the Arduino IDE 1.

LAST REVISION: **15.12.2022, 10:35** AUTHOR: Arduino

want to extend the ability of your Arduino with additional libraries.

What are Libraries?

Libraries are a collection of code that makes it easy for you to connect to a sensor, display, module, etc. For example, the LiquidCrystal library makes it easy to talk to character LCD displays.

There are thousands of libraries available for download directly through the Arduino IDE, and you can find all of them listed at the Arduino Library Reference.

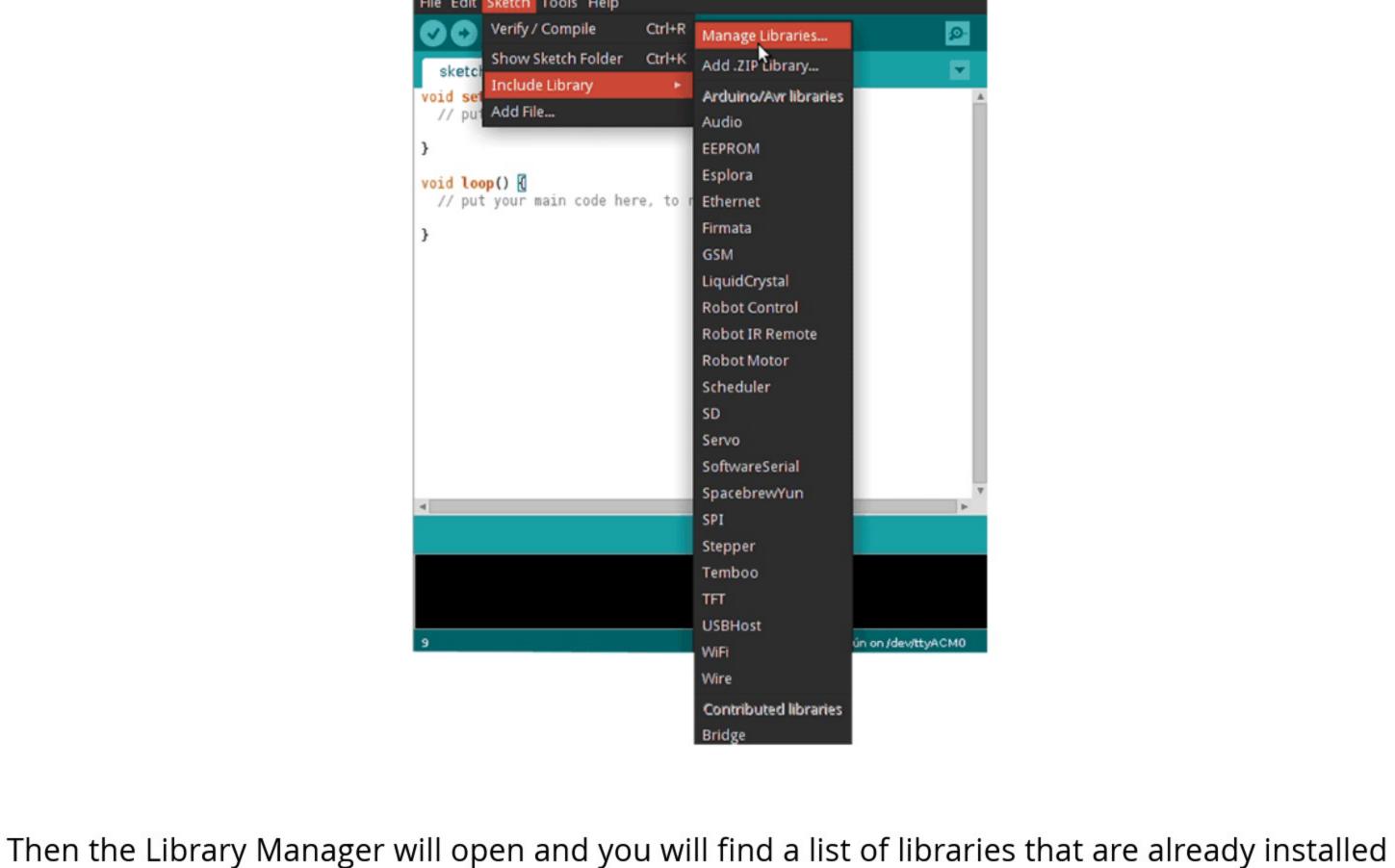
Once you are comfortable with the Arduino software and using the built-in functions, you may

Using the Library Manager

IDE version 1.6.2). Open the IDE and click to the "Sketch" menu and then *Include Library* > Manage Libraries.

sketch_mar26a | Arduino 1.6.2

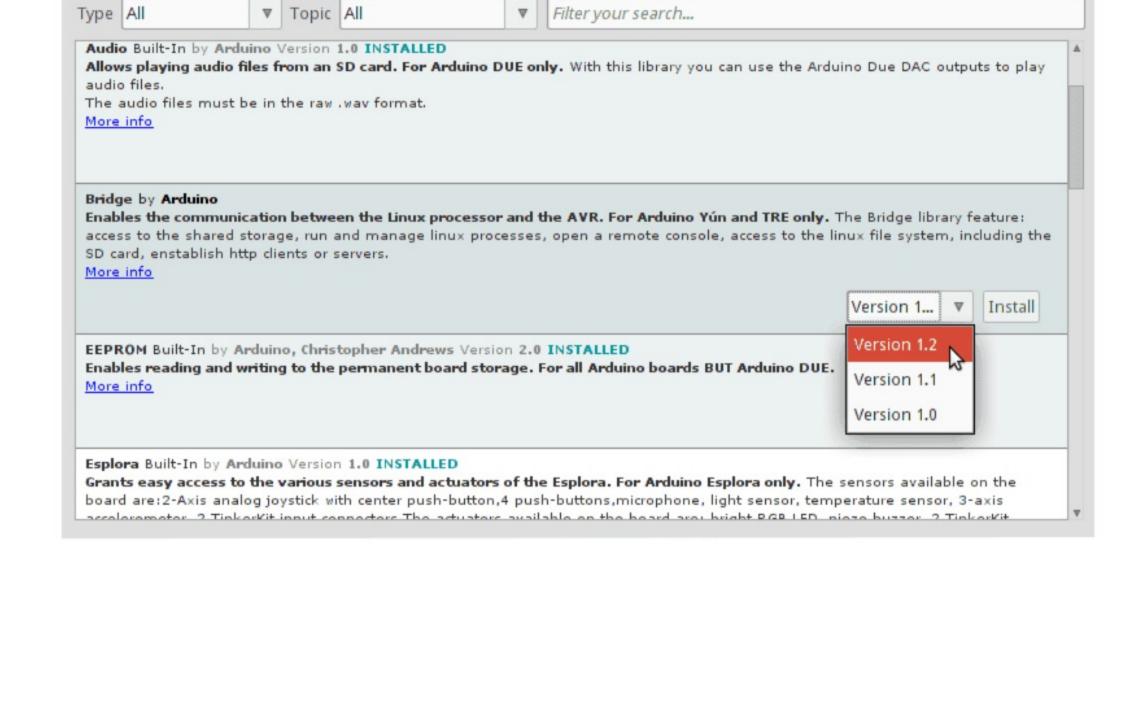
To install a new library into your Arduino IDE you can use the Library Manager (available from



it, click on it, then select the version of the library you want to install. Sometimes only one version of the library is available. If the version selection menu does not appear, don't worry: it is normal.

Library Manager

or ready for installation. In this example we will install the Bridge library. Scroll the list to find



Library Manager

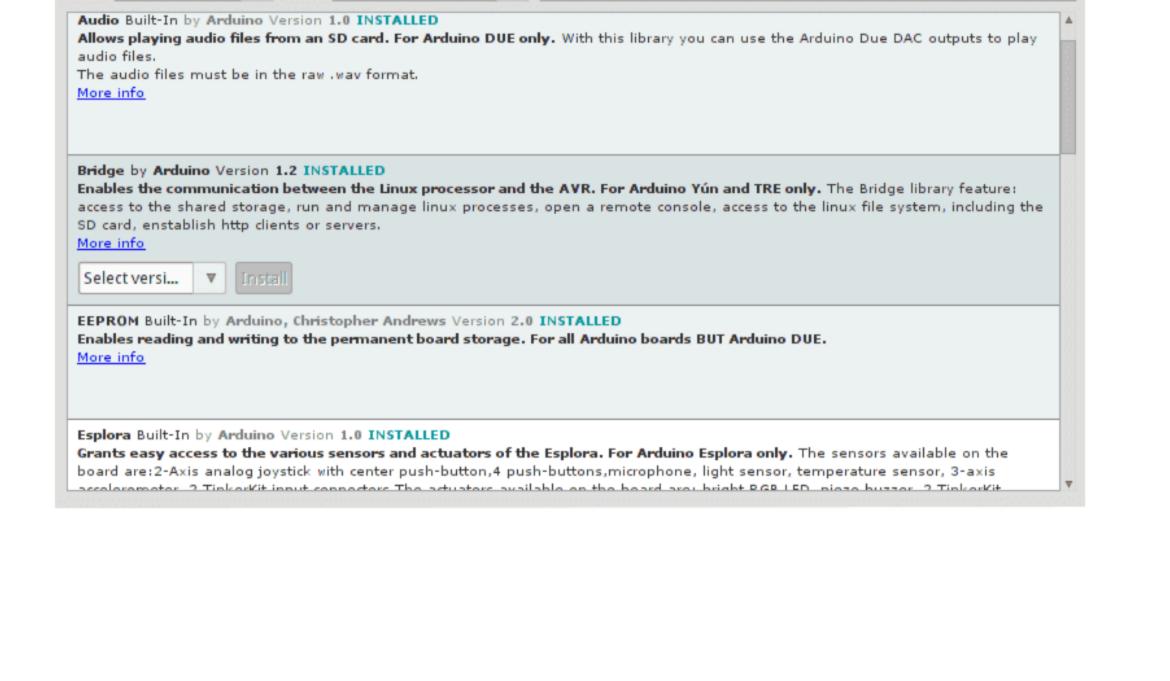
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time depending on your connection speed. Once it has finished, an Installed tag should appear

Finally click on install and wait for the IDE to install the new library. Downloading may take

next to the Bridge library. You can close the library manager.

▼ Topic All



Importing a .zip Library

Libraries are often distributed as a ZIP file or folder. The name of the folder is the name of the

You can now find the new library available in the *Sketch > Include Library* menu. If you want to

add your own library to Library Manager, follow these instructions.

library. Inside the folder will be a .cpp file, a .h file and often a keywords.txt file, examples folder, and other files required by the library. Starting with version 1.0.5, you can install 3rd

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yourself.

Editor font size:

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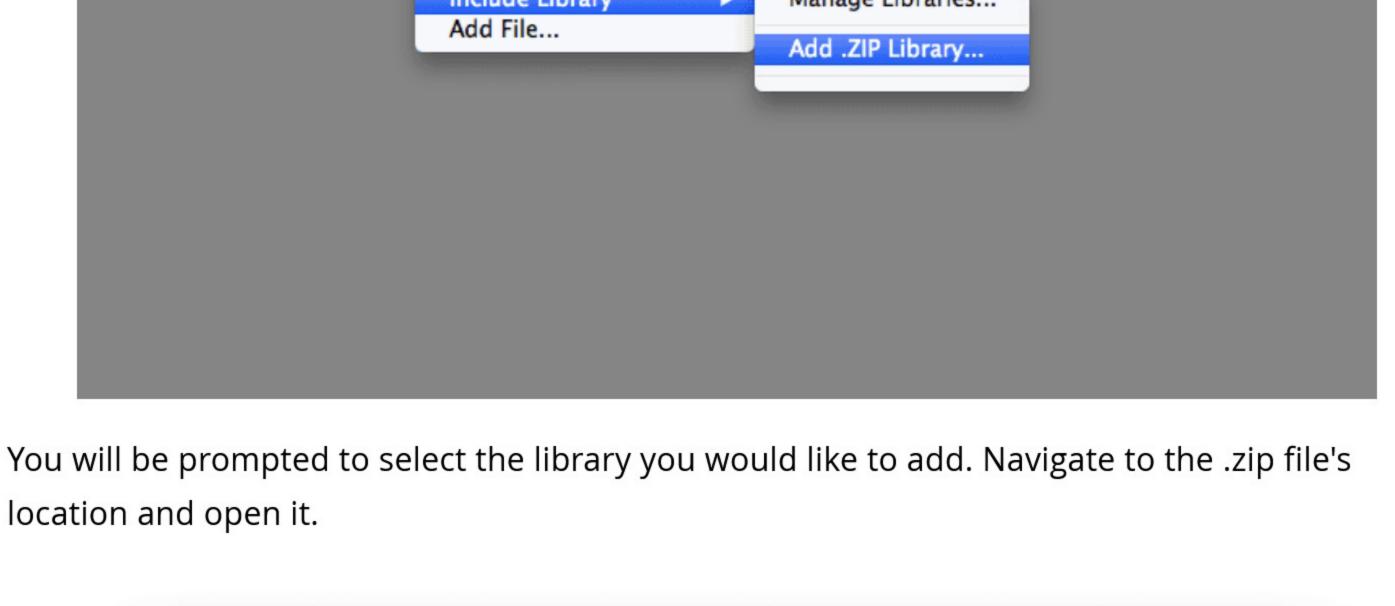
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Display line numbers

Enable Code Folding

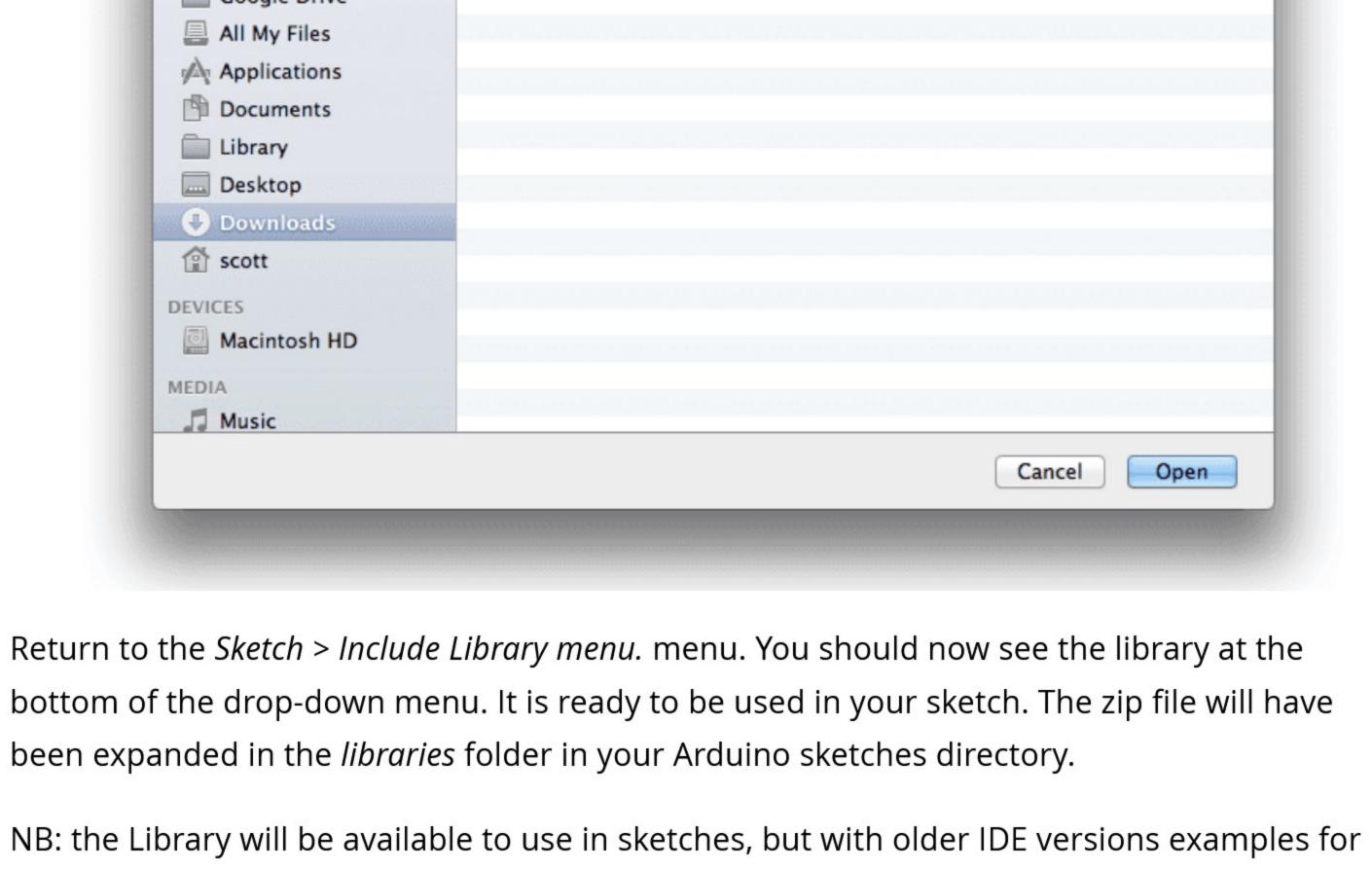
party libraries in the IDE. Do not unzip the downloaded library, leave it as is. In the Arduino IDE, navigate to *Sketch > Include Library > Add .ZIP Library*. At the top of the drop down list, select the option to "Add .ZIP Library".

Arduino File Edit Sketch Tools Help Verify / Compile Include Library Manage Libraries...



■ BB BB IIII IIII IIII Downloads \$ Q Date Modified FAVORITES Tlc5940_r014_2.zip Today 2:36 PM Dropbox Google Drive

Select a zip file containing the library you'd like to add



Manual Installation

the library will not be exposed in the *File > Examples* until after the IDE has restarted.

put in the proper directory. The ZIP file contains all you need, including usage examples if the author has provided them. The library manager is designed to install this ZIP file automatically as explained in the former chapter, but there are cases where you may want to perform the

installation process manually and put the library in the libraries folder of your sketchbook by

When you want to add a library manually, you need to download it as a ZIP file, expand it and

You can find or change the location of your sketchbook folder at File > Preferences > Sketchbook location. Preferences Settings Network Sketchbook location: C:\Users\Simone\Documents\Arduino Browse (requires restart of Arduino) English (English) Editor language:

✓ Automatic 100 \$ % (requires restart of Arduino)

Date modified Type → Quick access Adafruit-GFX-Library-master.zip 2/6/2017 11:25 PM Compressed (zipped)... Desktop MyDownloads 2/6/2017 11:46 PM File folder - Downloads

Go to the directory where you have downloaded the ZIP file of the library

Compressed Folder Tools

Extract

16

None V

Show verbose output during: ___ compilation ___ upload

Share View

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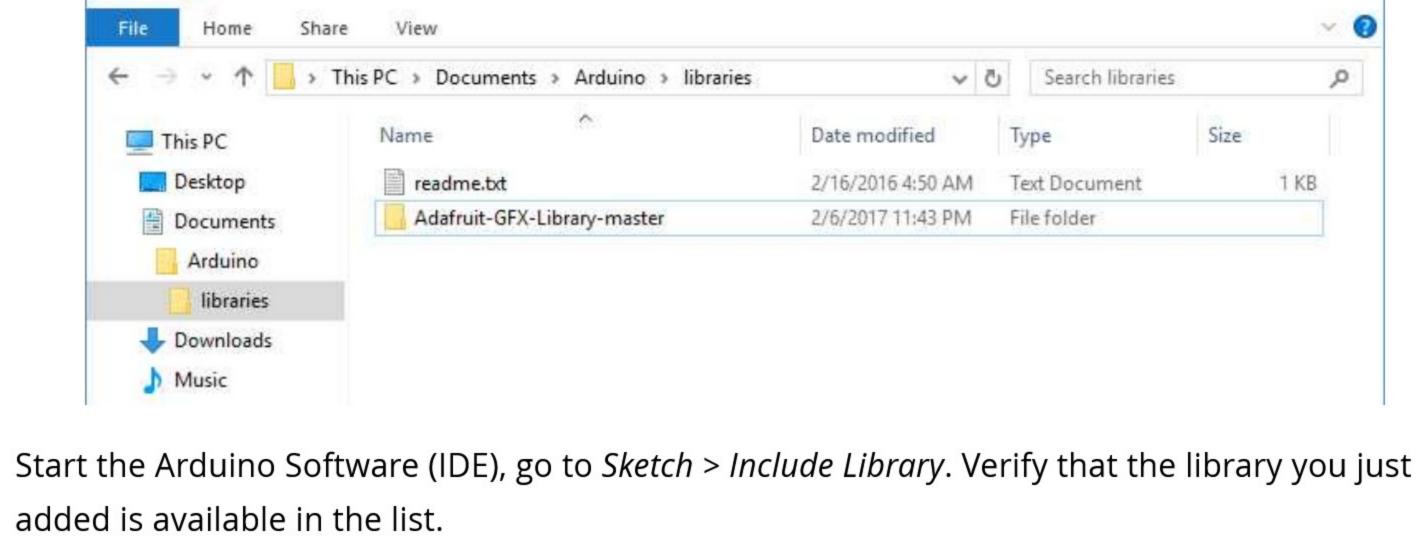


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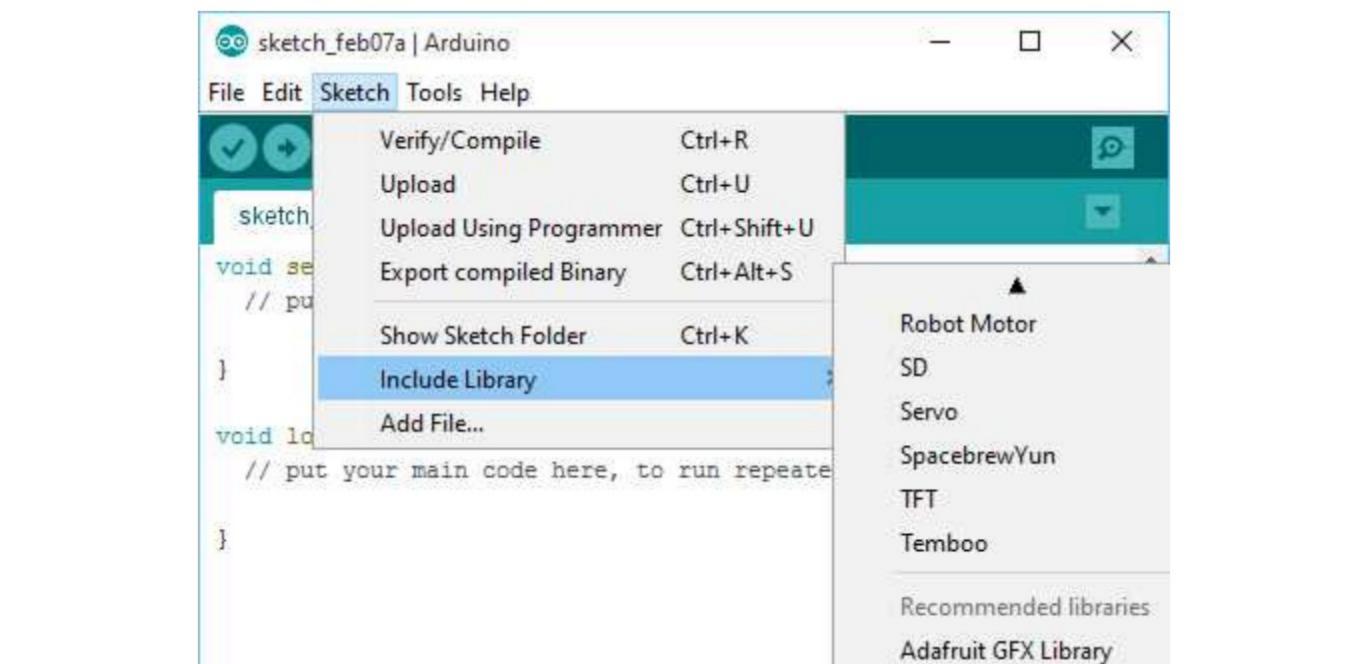
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Size

Copy it in the "libraries" folder inside your sketchbook. ☐ I Ibraries



sketch_feb07a | Arduino File Edit Sketch Tools Help



Please note: Arduino libraries are managed in three different places: inside the IDE installation folder, inside the core folder and in the libraries folder inside your sketchbook. The way libraries are chosen during compilation is designed to allow the update of libraries present in the distribution. This means that placing a library in the "libraries" folder in your sketchbook overrides the other libraries versions.

The same happens for the libraries present in additional cores installations. It is also

the one in the distribution or core folders, nevertheless it will be the one used during compilation. When you select a specific core for your board, the libraries present in the core's folder are used instead of the same libraries present in the IDE distribution folder. Last, but not least important is the way the Arduino Software (IDE) upgrades itself: all the files

important to note that the version of the library you put in your sketchbook may be lower than

in Programs/Arduino (or the folder where you installed the IDE) are deleted and a new folder is created with fresh content. This is why we recommend that you only install libraries to the sketchbook folder so they are not deleted during the Arduino IDE update process. This tutorial based on text by Limor Fried.

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