

SNS COLLEGE OF TECHNOLOGY Coimbatore-35 An Autonomous Institution

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING 19ECT213-IOT SYSTEM ARCHITECTURE

II YEAR/ IV SEMESTER

UNIT 2 – MICROCONTROLLER AND INTERFACING TECHNIQUES FOR IOT DEVICES

TOPIC 1 – ARDUINO LIBRARIES: LIBRARY ADDING AND REMOVING





ARDUINO IDE

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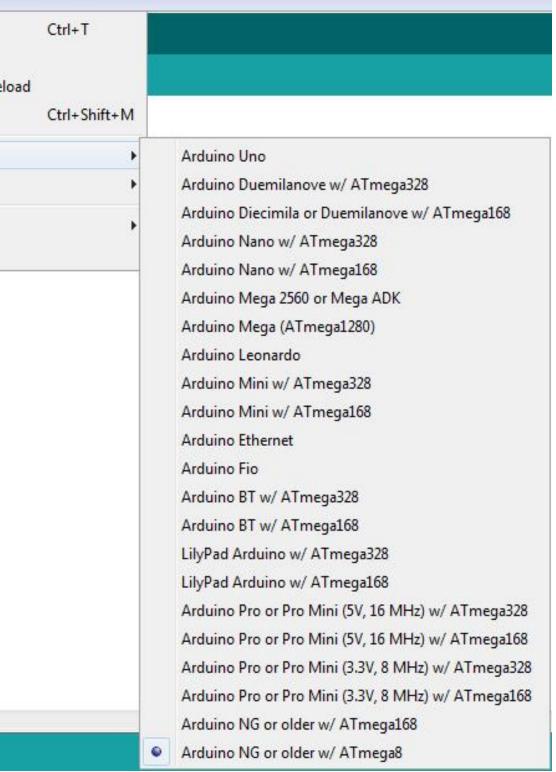


ARDUINO IDE

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	Board Serial Port Programmer
	Burn Bootloader







ARDUINO IDE

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FEATURES OF ARDUINO IDE

≻Open-source

 \succ makes it easy - write code and upload it to the board. ≻Runs on

➢ Windows

- ≻Mac OS X
- ≻Linux

 \succ C++ Based codes

► RTOS - Hard Task – Super Loop based approach







ARDUINO GETTING STARTED

Get an Arduino board and USB cable > Download the Arduino environment Connect the board \succ Install the drivers Launch the Arduino application Code Program for the application Select your board Select your serial port ► Upload the program











ARDUINO LIBRARIES

 \succ The Arduino environment can be extended through the use of libraries, just like most programming platforms. Libraries provide extra functionality for use in sketches, e.g. working with hardware or manipulating data.

 \succ To use a library in a sketch, select it from Sketch > Import Library.

A number of libraries come installed with the IDE, but you can also download or create your own





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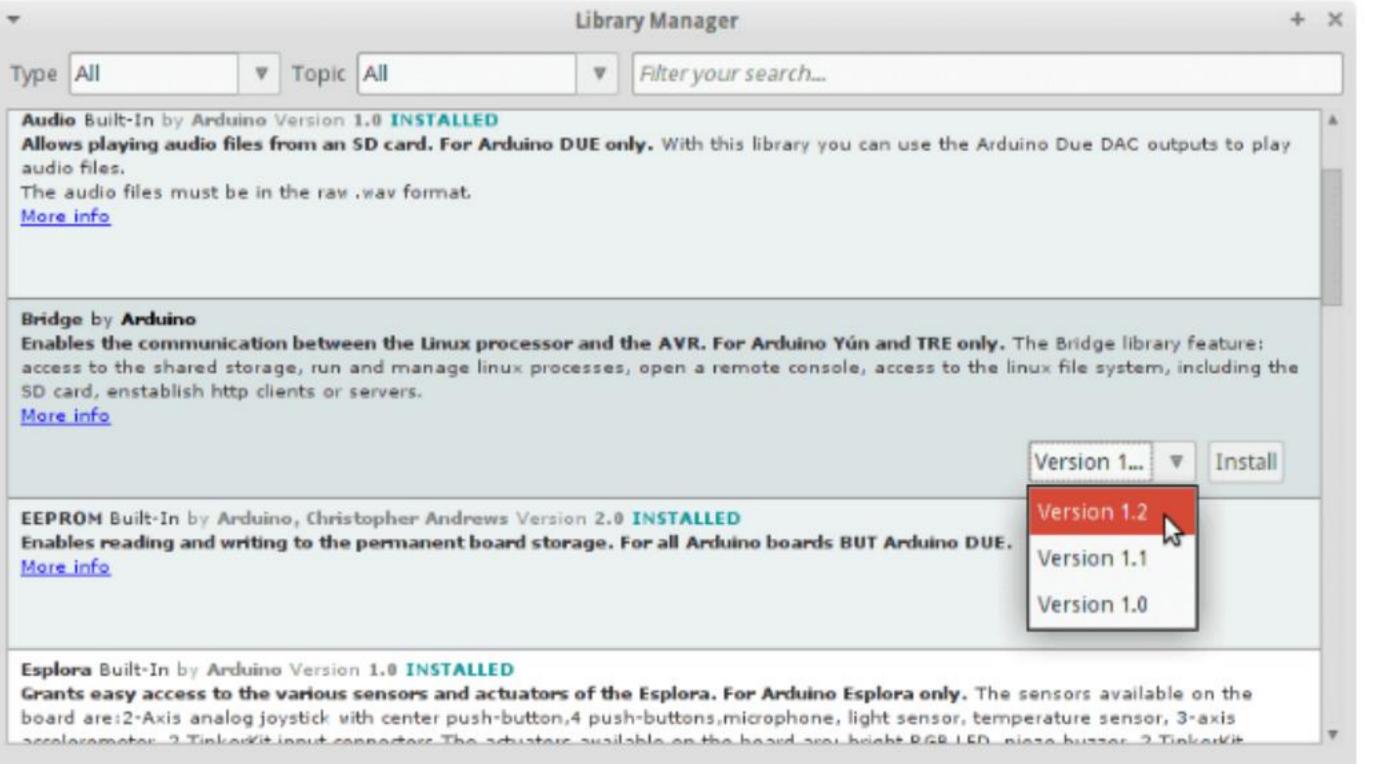






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Grants easy act board are:2-Axi	s analog joystick with cent	NSTALLED s and actuators of the Esplora. For Arduino I ter push-button,4 push-buttons,microphone, rs The actuators available on the beard area

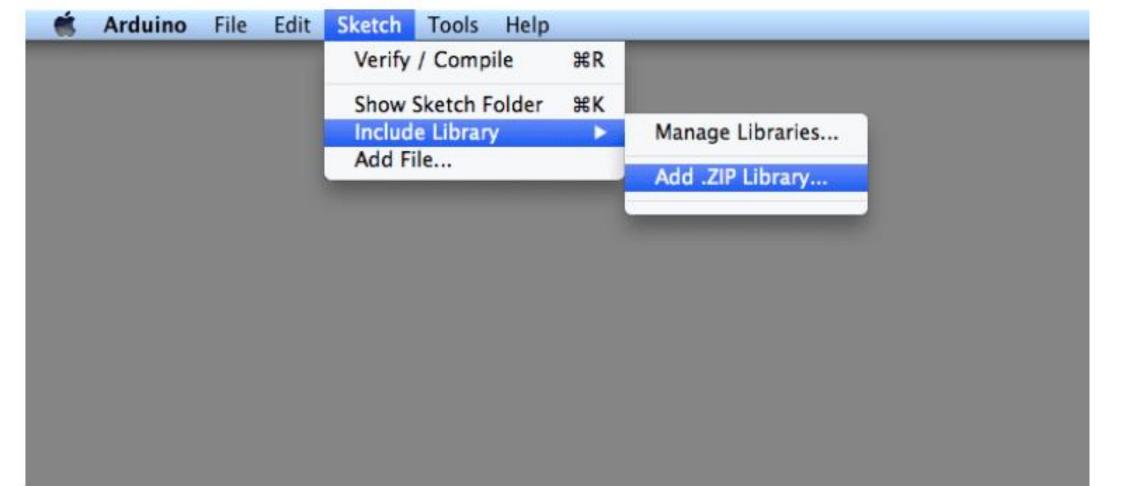






Libraries are often distributed as a ZIP file or folder. The name of the folder is the name of the library. Inside the folder will be a .cpp file, a .h file and often a keywords.txt file, examples folder, and other files required by the library. Starting with version 1.0.5, you can install 3rd party 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".

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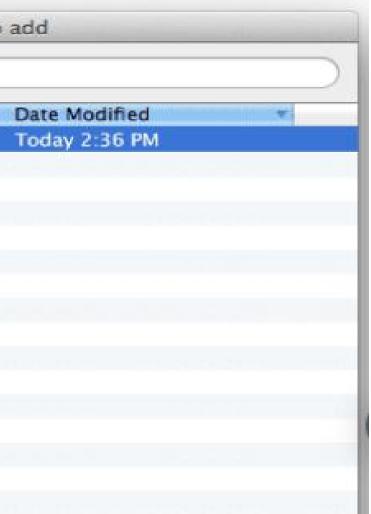




Return to the *Sketch > Include Library menu*. menu. You should now see the library at the bottom of the drop-down menu. It is ready to be used in your sketch. The zip file will have been expanded in the *libraries* folder in your Arduino sketches directory. NB: the Library will be available to use in sketches, but with older IDE versions examples for the library will not be exposed in the *File > Examples* until after the IDE has restarted.

000	Select a zip file containing the libr	rary you'd like to
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FAVORITES	Name	
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Google Drive		
All My Files		
Applications		
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When you want to add a library manually, you need to download it as a ZIP file, expand it and 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 yourself.

Preferences		
Settings Network		
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Compiler warnings:	None 🤝	
Display line numbers		
Enable Code Folding		







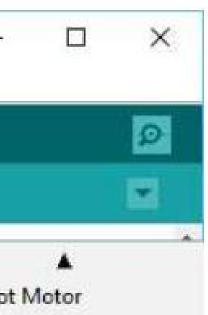
Start the Arduino Software (IDE), go to *Sketch > Include Library*. Verify that the library you just added is available in the list.

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and the second	Upload	Ctrl+U
etch	Upload Using Programmer	Ctrl+Shift+U
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	Include Library	
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put y	our main code here, to	run repeate

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