Christopher Lum

lum@uw.edu

**Lum Arduino SDK Notes**

Version History

12/12/21: Created

12/26/21: Minor update

11/10/24: Added troubleshooting

12/11/24: Updating notes

01/11/25: Minor update to troubleshooting (had to unplug and replug Arduino several times).

# Arduino Language

## Library Development

* Add files in a folder called ‘src’
* Add a file called ‘library.properties’ in the root folder so the Arduino IDE will recognize this as a library and allow it to be included in other sketches.
* Add a file called ‘.development’ to the root folder otherwise files in the library folder will be read-only and you will not be able to edit them using the Arduino IDE. See <https://forum.arduino.cc/t/please-remove-the-infernal-read-only-protection-on-arduino-example-sketches/448019>

## Default Arguments

* Default arguments should be placed in the function prototype (.h file), not the function definition (.cpp file). See <https://forum.arduino.cc/t/default-arguments/40909/8> .

# Servo Library

* <https://www.arduino.cc/reference/en/libraries/servo/>
  + Excerpt: “On boards other than the Mega, use of the library disables analogWrite() (PWM) functionality on pins 9 and 10, whether or not there is a Servo on those pins.”

# Trouble Shooting

## Can’t open device. COM port access is denied

**Problem:**

* When uploading sketch you encounter an error similar to that shown below



**Solution:**

* Try uploading again
* Use a shorter USB cable (one time I was using a super long cable and it gave this problem. I shortened the cable, uploaded successfully, and then went back to the long cable which also uploaded successfully).

## Problem uploading to board

**Problem:**

* When uploading sketch you encounter an error similar to that shown below

**A screen shot of a computer

Description automatically generated**

**Solution:**

* Is the name of your sketch too long?
* I encountered an issue where it appeared there might have been another similarly named subfolder inside the folder which might have caused a problem.

## Problem uploading to board: COM Access is denied

**Problem:**

* When uploading sketch you encounter an error similar to that shown below

**A screen shot of a computer

Description automatically generated**

**Solution:**

* Unplug and replug the Arduino USB cable. This might take several tries.