

## General Note on Processing and Arduino

@Written by Mahshid [mzeinaly@sfu.ca](mailto:mzeinaly@sfu.ca)

\*\*\*\* Processing is the one who has draw()

\*\*\*\* Arduino is the one that has loop()

loop and draw is being called over and over again automatically by your program.

\*\*\*\* setup is called one time at the beginning for both Processing and Arduino. If you need to setup something just once in the beginning it is the place. Example: setting the serial port

\*\*\*\* If you need to send information from Arduino/Processing use writing functions

\*\*\*\* If you need to receive information in Arduino/Processing, use reading functions

\*\*\*\* The scope of a variable is where the variable could be recognized by your program. Global scope is outside all the functions, before anything else. Global variables could be used in any of the functions. If you define a variable in setup, it could be used just in setup. However you could define a global variable and initialize it in setup.

example:

```
int a;
```

```
setup(){  
a=10;  
}
```

```
draw(){  
fill(a);  
rect(1,2,3,4);  
}
```

\*\*\*\* selecting a right port in Processing:

So this code in Processing might not work for your machine! :  
port = new Serial(this, Serial.list()[0], 9600);

To make it working:

\* Make sure you know which port is working for Arduino, if it is just working fine, you could simply go to tools>serial port and see which one is selected. Then go back to Processing and read what is printed after running the program. If the number beside is 0 then it is correct, if not, just change the number in the code to match that number.

Example:

Processing output:

```
[0] "COM1"  
[1] "COM2"  
[2] "COM9"
```

and my Arduino is on COM9,

Then change the code in processing to be:

```
port = new Serial(this, Serial.list()[1], 9600);
```

**\*\*\*\* *If you want to run an Arduino Program, make sure Arduino is connected with a USB, and after each change you upload your program to Arduino board! If the Processing is running, it does not work, close Processing and try again. If for any reason it did not work, close everything, reopen the files (sometimes even rename the files) and try again :)***