15-102 Exploring Programming with Graphics

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If you cannot find the course web page, try Googling:
Jim Roberts CMU
This usually brings up my web page link near the top of the list.

Homework #1 is due at the start of class Wednesday (Jan 12)
#1 Downloading Processing (the software which is free)
Go to the course web page; http://www.andrew.cmu.edu/course/15-102/

- Click on the "Downloading The Software (Processing) link
- Click on either **Mac OS** or **Windows**
  - **Windows** folks: Do not choose:
    Windows without Java
    You should be asked if you want to open it or save it: choose save to disk
- Right click on **Windows** (control click if you do not have a two button mouse on a **Mac**) to expand it if necessary
- Save it to your desktop - it is the easiest place to find it On a **Mac**, you should see a window with a Processing icon and an Applications folder. Drag the icon into the folder.
- This works about 95% of the time,. Try it tonight, and see Jim tomorrow in the office if it does not.

#2 Double click the Processing icon. This may fail the first one or two times - keep trying. This will open a window where you write your program. This is called the "Processing IDE". IDE stands for "Integrated Programming Environment".

#3 The first lines of your program MUST be the required comments. Two slashes (//) start a "comment". Comments are for humans and are ignored by Processing. Put the require comments at the top of your program.

#4 The first line of "program code" after the comments must be:
size(400, 400);
which sets the size of the output window. This line of code is referred to as a "function call" because **size( )** *is a function. Its function is to "know" how to create a window that is 400 by 400.*

#5 Using the Processing API ("Application Programmers Interface) from the link on the course web page, to read about the seven **shape 2-d** *functions and how they work.*

#6 Lay out you initials on graph paper. Make the upper left corner the **(0, 0)** *location.* **x** *increases in value as you move from the left edge to the right edge.* **y** *increases in value as you move from top to bottom.*

#7 Using the API, look up the functions that control the color of the figures, their boarders and the size of the borders to see how they work. Then figure out how you want to color the background and your initials. You can use the color selector choice in the tools menu to get the red, green, blue values for different colors.

#8 Write and debug your code. Be sure to save your code.

#9. Print the graphics window
To do this, the last line of code in your program must be:
saveFile("hw1");
This will literally take a picture of the graphics window and save it in your homework 1 folder as **hw1.tiff**. *You must print this file and turn it in with your code on Wednesday. It does not have to be in color.*

#10 Print your code. Sometimes, Processing does not print all of your code - in this case, copy the code and paste it into a Word document. The colors usually do not print - that is ok. Bring it to class Wednesday.