

1 Lab 3

Goals

The goals for this lab are:

1. Practicing using Processing
2. Practice using variables to control shape location and size
3. Understand arithmetic operators to control variable (and locations)
4. Understand the Processing 2D coordinate systems
5. Make a concise picture

Modality

Pair or individual?

Details

Task: You must create an image using Processing of a precise line of circles, each one larger than the next and perfectly adjacent to one another using variables and arithmetic operators. Your 'sketch' must:

- include 6 circles
- use variables to control the x and y location of each circle's center (but only one variable each)
- use variables to control the size of each circle with each circle being 1x larger
- use arithmetic to modify the size, x and y position per circle (ie you cannot lay out the circles by hand)

- each circle must be perfectly tangent to the preceding circle
- be of size 440 by 160 pixels
- be in color with the color of each circle changing (again controlled by variables)
- look pleasing

First: Please start by carefully computing the mathematical relationship of neighboring circles. Consider how large the first circle should be and where it should be placed in order to fit all 6 circles in the space given. Also carefully pick your color (background and circles) to reflect your mood.

Next: Code your design (you must use variables but complex control structures - no loops allowed)

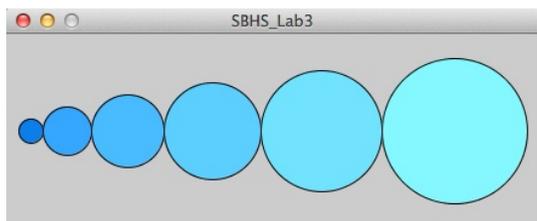


Figure 1: Example Image.

Demo:

In order to receive credit for this lab, you and your partner must demo your sketch to your instructor along with handing in the image and sketch of your creature via handin. Ask your instructor for details.

2 Resources

Some of this information will help you on your lab.

To create shapes in Processing, you have various choices. Some of them are:

1. `ellipse(x, y, width, height)`
2. Perhaps add an example of declaring a variable???