



## Homework 6Ex: The Programming Detective

**Goal:** Programming realizes human intent – that is, we write programs to do stuff we want. In this extra credit assignment, we analyze someone else’s intent, and then we implement our own ideas.

### *A Simple Program*

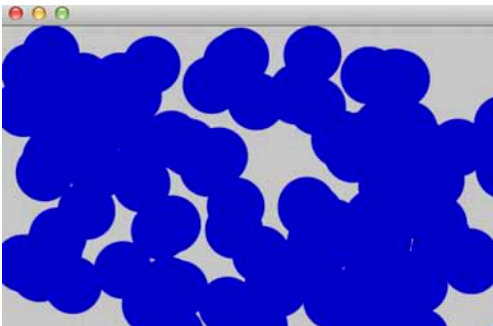
I wrote this program,

```
float eks, why;

void setup( ) {
  size (1000,1000);      //biggish canvas
  background(200);      //light gray
  noStroke();           //remove lines
  fill(0,0,200);        //set strong blue
}

void draw( ) {
  eks = random(20, 980); //pick random x not near edge
  why = random(20, 980); //pick random y not near edge
  ellipse(eks, why, 50, 50); //draw a circle
}
```

and this is some of what I got after a few moments.

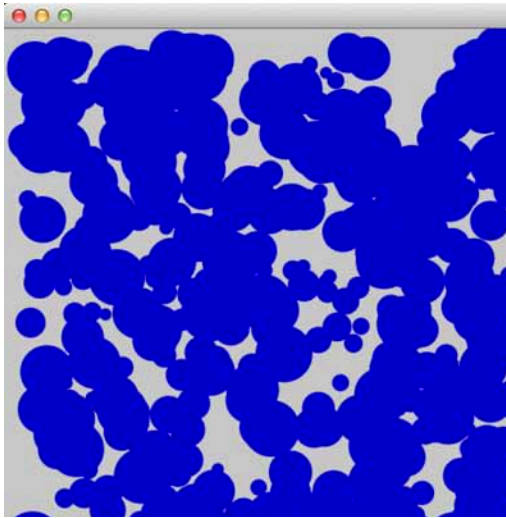


Step 1: Try this program.

### *A Change of Mind*

I decided to declare a new float variable at the top of my program. Then in the draw() function, after choosing a random position of the circle, I chose a random diameter for it – not too big and not too small. (Hint: Check how random() works.)

This is some of what I got after a few moments

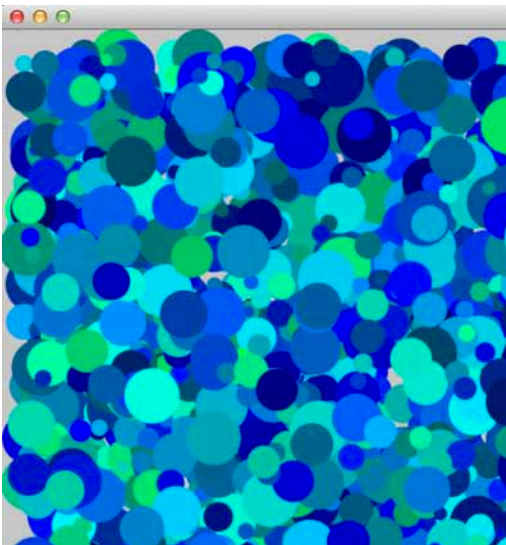


Step 2: Adjust your program to produce a similar result.

### ***Still Another Idea***

This is pretty cool, but I need to change the result so I can see the circles in different colors.

So, in my `draw()` function, before drawing the circle, I chose a random bluish color. “Bluish” is defined to be a little green and a little blue, maybe not too dark or too light. No red! This is some of what I got after a few moments.

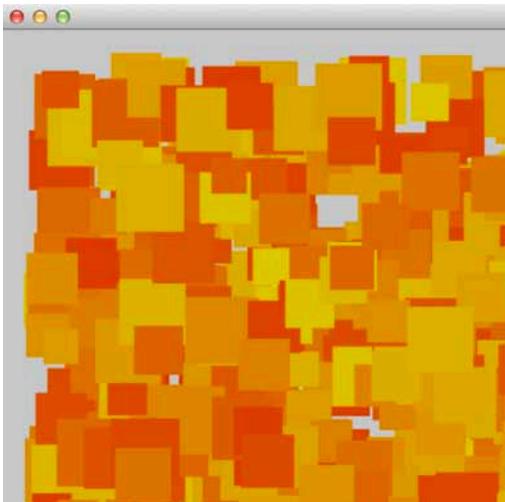


Step 3: Modify your program to produce a similar result.

**Step 4:** Now create a different but still very simple base program that draws squares (or maybe diamonds) instead of circles. Pick a color red for the squares and repeat Step 1 with that shape.

**Step 5:** Repeat Step 2 with differing size shapes, not too large and not too small.

**Step 6:** Finally, change the fill color to be a random color of red through gold. Do this by leaving the red, or R argument, as it was for the last two steps, and changing only the G field, that is, the green argument. Get something that looks like this:



Why does changing the green argument result in various colors from red through gold? It's a mystery of the universe that will probably be explained in class.

***Wrap Up.***

You have figured out what someone else did with a program, and you made similar modifications yourself.

***Turn In.*** Turn in your Step 3 and Step 6 programs to the class drop box. Be sure they are commented. Submit your .pde file files.