

Lab 2: Dynamic Pictures II

due September 28th/29th, 2017

SKETCH 1: Debugging Warm-Up Exercise

```

1. //MovingBallDebug
2. float x, y, speedx;
3.
4. void setup() {
5.   size(255, 200);
6.   x = width/2;
7.   y = height/2;
8.   speedx = 0;
9. }
10.
11. void draw() {
12.   background(255)
13.   if (keyPressed == true) {
14.     if (key == 'a') {
15.       speedx = speedx - 0.1;
16.     } else if (key == 'd') {
17.       speedx = speedx - 0.1;
18.     } else {
19.       speedx = 0;
20.     }}
21.
22.   x = x + speedx;
23.   constrain(x, 0, width);
24.
25.   //plot ellipse
26.   fill(x, 155, 255);
27.   ellipse(x, y, 50, 50);
28. }

```

Goal: To create a ball that moves around the screen when the 'a' or 'd' keys are pressed. It should stop if it reaches the edge of the screen. Ack! It doesn't run?! Debug the program. Hint: there are six bugs.

SKETCH 2: Swap you Dynamic Picture with a Classmate

- Add the capability to move some element of the picture using the UP, DOWN, LEFT, and RIGHT keys.
- Add at least one more dynamic element to the picture.
- Add at least one more interactive element to the picture.
- Create a credits screen when the spacebar is pressed, that lists both of your names.
- Make sure any moving elements do not leave the screen.

Learning Objectives

- Use if-statements
- Use the keyboard for interactivity
- Modify someone else's code

Deliverables

- Your programs should start with a comment that includes your name, email, date, assignment description & collaboration statement.
- Bring a hardcopy of your programs (the source code, not the graphics) to your next lab period.
- Be prepared to run the Processing sketches and demonstrate your "[Theory of the Program](#)."