I’m going to do the ball.

I assume that the ball will become an object that I will be able to have interact with the walls – that the walls of the drawing box are an object of sorts also, and that this won’t produce errors.

I will also assume that user input is reasonable – that all numbers for the size of the panel are reasonable, and that the x and y coordinates are within the bounds of the original box.

Main (produces desired output)

Scanner (prompts user for input)

Box (creates the box)

Ball (creates ball, specifies initial velocity, gives framerate)

The Scanner will return the user’s input for the size of the box, the initial x and y coordinates for the ball and the initial x and y velocities for the ball.

Pseudocode Scanner:

//prints “This program will simulate a ball bouncing in a window.”

//prints “How wide would you like the panel (in pixels)?” and then sets the value the user inputs to a variable.

// prints “What is the initial X position of the ball?” and then sets the value the user inputs to a variable.

//prints “What is the initial Y position of the ball?” and then sets the value the user inputs to a variable.

//prints “What is the initial X velocity of the ball?” and then sets the value the user inputs to a variable.

//prints “What is the initial Y velocity of the ball?” and then sets the value the user inputs to a variable.

//allows all of the variables to be called from the main method

Pseudocode Box:

//Sets width equal to user input

//Sets height equal to user input

//Makes background color pink

Pseudocode Ball:

//Creates green ball

//puts ball at the x and y coordinates specified by the user

//sets the initial velocity of the ball to the values specified by the user

//a statement that says that when the ball hits the edge of the box, it bounces off at a 45 degree angle

//specifies the framerate