

CECS 174 – Extra Credit #3 – 10 points

Falling Balls

Write an applet that allows the user to click anywhere on the screen and a ball of random size and color appears at that location and falls off the screen.

- You can use the Ball class given in Lecture 31 and modify it as needed, or create your own.
- Use a timer similar to the one in Lecture 31 to help you animate the movement of the ball.
- Use the MouseClicked event handler introduced in Lecture 32 to allow the user to choose a drop point. This event should also choose a random size and color for the ball and then begin the timer.
- Use the equation $V_y = V_{y_0} + a*t$, where $a = 9.8 \text{ m/s}^2$ to calculate the speed at which the ball should be falling at any given moment. Add this value to the ball's y position to calculate the ball's new y position.
- When a ball is falling, the user should not be able to create a new ball until it has fallen off of the edge of the screen.
 - When the ball has fallen below the edge of the screen, make sure to cancel the timer so it does not keep falling forever.

Place your applet on a web page, email me the link, and print out your code.