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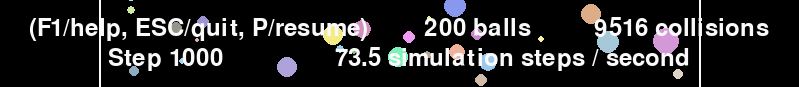
PSET 3

1. Submitted via Sakai
2. The outer loop runs N times while the inner loop will run N-1, N-2, N-3 times etc

N + N – 1 + N – 2 … = **O(N^2)**

1. By adding balls into bins appropriate to their location in the world, and only comparing balls in the same bin or in adjacent bins, we are only comparing the balls that have a **chance** of colliding. We are not wasting precious time comparing balls that are in opposite corners of the world. The previous algorithm compares every ball with every other ball regardless of if they are even close to each other.
2. Submitted via Sakai.

Original:



My Code:



1. I got 9516 collisions at 449.1 simulation steps/second. The original code ran at 73.5 simulation steps/second