Aspen Anderson and Alina Chadwick

CS10

Problem Set 2 Discussion

**QuadTreeTest:** In the class QuadTreetTest, trees were created and searches on the trees were made in order to test the correctness of our code. With each different test, coordinates of a tree were given by x and y - the size of the tree was stated. The main part that was being tested within this class was the searches itself on the tree. These included finding specific parts of the tree and groups within the tree. This was done by specifically calling on different areas, using a circle (x and y coordinates, and a radius), and seeing how many points are within the circle, how many times the circle is intersected, and what points are within this area. We use all of this information to test if our code is correct because if we make a tree and try to make searches, the information that we expect to be found should be correct, allowing for the test to ‘pass’. If the test does otherwise, the test will result in a ‘fail’.

**CollisionsGUI:** At first, when testing CollisionsGUI, the blobs stayed black even after colliding, so we realized that the additions to the list were being done incorrectly, so we changed the way that the blobs were added to the list. Afterwards, we tested again, and did so by pressing in the same spot to make blobs that would collide as well as making blobs immediately where another blob would collide. The screenshot was not able to capture the collision due to the nature of screenshotting, but the test shows red blobs when the collisions do occur.