

QuadtreeTest:

- The test I added is designed to evaluate the effectiveness of the allPoints() function in PointQuadtree. It does so by evaluating the size of the list generated by the function and comparing it to the number of elements stored within the quadtree. If these two numbers match, it can be reasonably assumed that the function returned all the points in the tree. This expectation was confirmed by the results of the test

CollisionGUI Test:

- The first test I added attempts to determine whether the GUI is detecting collisions. It does so by creating two Blobs in the exact same location. If the program were working as expected, these Blobs would collide instantaneously. But, since the CollisionGUI doesn't check for collisions until after it begins drawing frames, no collisions would be detected if the test were run immediately. Instead, I used an asynchronous timer to determine whether, after one second, the collision was indeed registered. As expected, the test shows the collisions are being detected as hoped.
- The second test I added attempts to determine whether the GUI isn't detecting collisions that aren't happening. It does this by creating two Blobs at opposite ends of the frame and quickly checking to ensure that they aren't registered as colliders. Since they're so far apart, it's unreasonable to expect them to collide. As expected, the test is successful.