

In test2, for DotTreeGUI, we created 6 Dots at various points. This resulted in the creation of a PointQuadtree. We then checked for the number of times circleIntersectsRectangle had to be called, how many times pointInCircle had to be called, and how many Dot objects were in the circle examined. Whenever a tested value did not match the expected value, the variable errors was incremented. If error was equal to 0 at the end of the method, a message was printed saying that the test was passed. For instance, for the first call of testFind, we expected there to be exactly one Dot in the circle, causing pointInCircle to be called exactly twice. It was more difficult to tell how many time circleIntersectsRectangle had to be called, but that was not necessary for checking if the code was working logically, which it did. This test worked as intended, with the Dots being integrated into a PointQuadtree logically and findInCircle running as planned.

In test0, for CollisionGUI, 4 Dots were created, and both pairs were expected to collide, change color, then change back, which occurred as intended. In test1, two of the Dots were supposed to collide, while the others were not intended to ever come into contact with each other. Both of these tests worked as intended, as shown in the screenshots.