Name: *Matt Moore*

Assignment: 9

Submission and Compilation

- Builds and Compiles Successfully

Complete & Correct: 25/25

- Unit Test Results:

```
[==========] Running 15 tests from 2 test suites.
[----------] Global test environment set-up.
[----------] 14 tests from RBTCollectionTest
[ RUN      ] RBTCollectionTest.CorrectSize
[       OK ] RBTCollectionTest.CorrectSize (0 ms)
[ RUN      ] RBTCollectionTest.SimpleFind
[       OK ] RBTCollectionTest.SimpleFind (0 ms)
[ RUN      ] RBTCollectionTest.SimpleRemove
[       OK ] RBTCollectionTest.SimpleRemove (0 ms)
[ RUN      ] RBTCollectionTest.SimpleRange
[       OK ] RBTCollectionTest.SimpleRange (0 ms)
[ RUN      ] RBTCollectionTest.SimpleSort
[       OK ] RBTCollectionTest.SimpleSort (0 ms)
[ RUN      ] RBTCollectionTest.CopyAndAssignment
[       OK ] RBTCollectionTest.CopyAndAssignment (0 ms)
[ RUN      ] RBTCollectionTest.RemoveNodeWithTwoChildrenRightCases
[       OK ] RBTCollectionTest.RemoveNodeWithTwoChildrenRightCases (0 ms)
[ RUN      ] RBTCollectionTest.RemoveNodeWithTwoChildrenLeftCases
[       OK ] RBTCollectionTest.RemoveNodeWithTwoChildrenLeftCases (0 ms)
[ RUN      ] RBTCollectionTest.AddRebalanceCheckLeftCases
[       OK ] RBTCollectionTest.AddRebalanceCheckLeftCases (0 ms)
[ RUN      ] RBTCollectionTest.AddRebalanceChecRightCases
[       OK ] RBTCollectionTest.AddRebalanceChecRightCases (0 ms)
[ RUN      ] RBTCollectionTest.RemoveRebalanceRightCases
[       OK ] RBTCollectionTest.RemoveRebalanceRightCases (0 ms)
[ RUN      ] RBTCollectionTest.LargeInputRightAddRemove
0
[       OK ] RBTCollectionTest.LargeInputRightAddRemove (1 ms)
[ RUN      ] RBTCollectionTest.LargeInputLeftAddRemove
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
[       OK ] RBTCollectionTest.LargeInputLeftAddRemove (6283 ms)
[ RUN      ] RBTCollectionTest.LargeInputMiddleAddRemove
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
[       OK ] RBTCollectionTest.LargeInputMiddleAddRemove (3358 ms)
[----------] 14 tests from RBTCollectionTest (9642 ms total)
```

```
[----------] 1 test from BasicListTest
[ RUN      ] BasicListTest.RemoveRebalanceChecksLeftCases
[       OK ] BasicListTest.RemoveRebalanceChecksLeftCases (0 ms)
[----------] 1 test from BasicListTest (0 ms total)

[----------] Global test environment tear-down
[==========] 15 tests from 2 test suites ran. (9642 ms total)
[  PASSED  ] 15 tests.
```

- Performance Tests:

  - Test 1: Finished in 6.9797 s
  - Test 2: Finished in 9.2348 s
  - Test 3: Finished in 6.9795 s
  - Test 4: Finished in 10.9391 s
  - Test 5: Finished in 16.8019 s
  - Test 6: Finished in 5.877 s

Testing: 5/5

Format and Comments: 5/5

Discussion and Analysis: 5/5

Total Score: 40/40