James Hahn

Assignment 2

Analysis of differing class implementations

* append()

StringBuilder was definitely the best class for appending characters. It was not very close; in a run with StringBuilder at 2048ns, MyStringBuilder was at 6436ns, and String was at 41,359,686ns. Since StringBuilder won this competition every in every single run by a decent amount, it is the winner.

* delete(0,1)

MyStringBuilder was the best implementation for deleting the first character in the data structure. The competition was definitely closer than appending characters, but MyStringBuilder won the race every run. In a sample run, MyStringBuilder took 1171ns, String took 2048ns, and StringBuilder took 3804ns. Although somewhat close, I won’t call it close because of outright winning nature of MyStringBuilder.

* insert()

This is by far the closest matchup thus far. In MOST test runs, StringBuilder won, but MyStringBuilder was extremely close (within 100) or tied, whereas String was only a slightly behind by a couple hundred nanoseconds. In a test run, StringBuilder took 1755ns, MyStringBuilder took 1756ns, and String took 2048ns.

Conclusion

Overall, I think StringBuilder is the best class implementation out of the three because it showed to be not only the winner of append(), but also the best of insert(), and although last in delete(0,1), it still showed a strong prescence.