

Q: In a couple of paragraphs, explain your strategy for comparing the timing of the two approaches. How many elements did you insert? How many times did you perform the simulation?

A: I will use Valgrind command from Assignment 3 to capture and compare memory usage and time. I will graph them afterwards. With the numbers for Memory and data they output into the output file. I will put these on an excel spreadsheet and graph them.

Q: Which BST is faster and why do you think this is the case?

A: I think the times will be the same for both Recursive Binary Tree and the Iteration Binary Tree. They will both be  $O(n \log n)$ .

Q: Which BST takes up less memory? Explain why.

A: The Iteration Binary Tree takes up less memory. Recursion uses a lot of memory since on each call it uses up more memory.

Q: Create and turn in two charts graphing the comparison of the two BST implementations in terms of time, and memory usage (See Assignment 3 comparisons).

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