

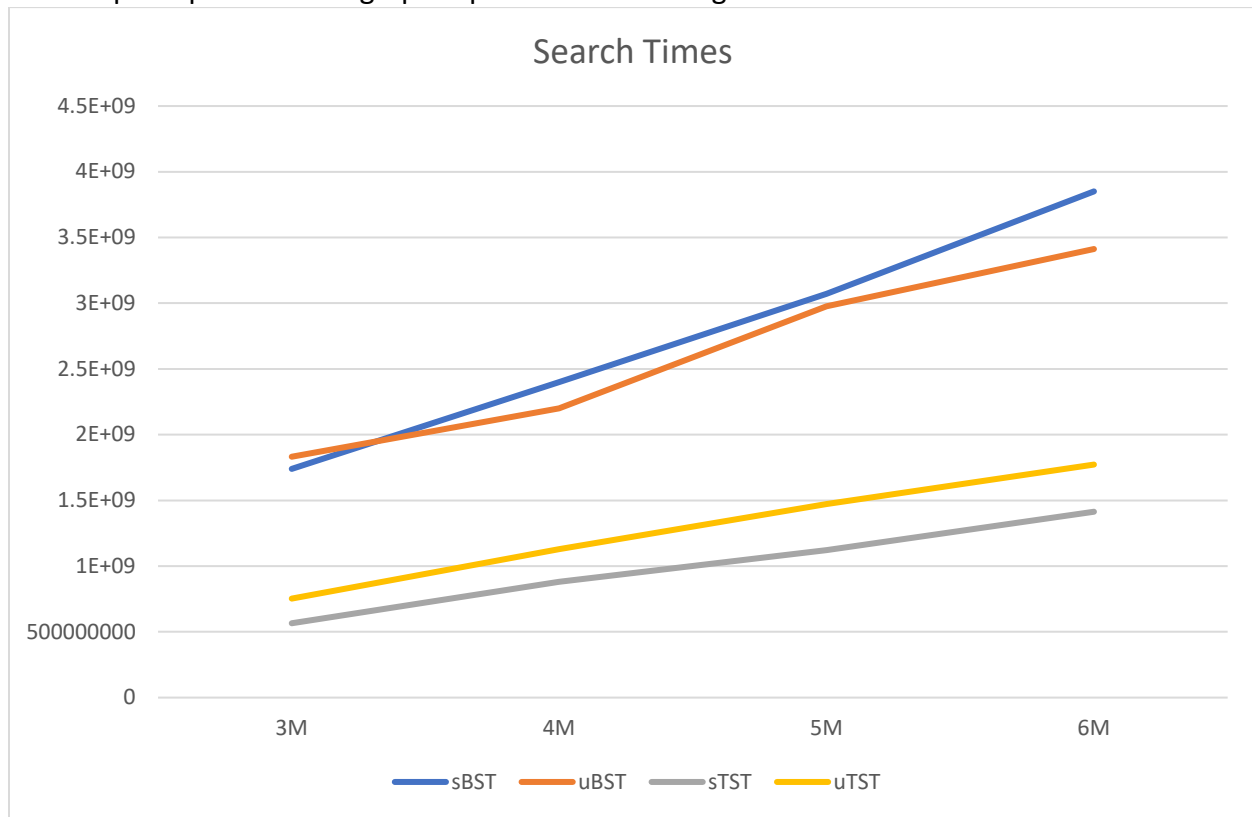
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Program 7

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Input sizes : 3, 4, 5, 6 Million

10 runs per input size. The graph represents the averages of those times.



sBST = successful search of BST

uBST = unsuccessful search of BST

sTST = successful search of TST

uTST = unsuccessful search of TST

Y axis has time in nanoseconds

X axis has the number of keys being searched for (in millions)

1. Magnitude of time taken

As we can see from the graph above, the time taken for search is considerably less in a TST vs for in a BST.

2. Unsuccessful search versus successful search

From the above graph we can see that the unsuccessful BST has a slope similar to that of a successful BST. Similarly, a successful TST has a similar slope as an unsuccessful TST.

In terms of magnitude, for BST the times are very close for successful and unsuccessful search. The difference in search times for successful TST and unsuccessful TST is not very much, but still significant.

3. Slopes

The slope for searching BSTs is steeper than that of TSTs. That means that it probably has a larger big-OH notation than that of TSTs.