

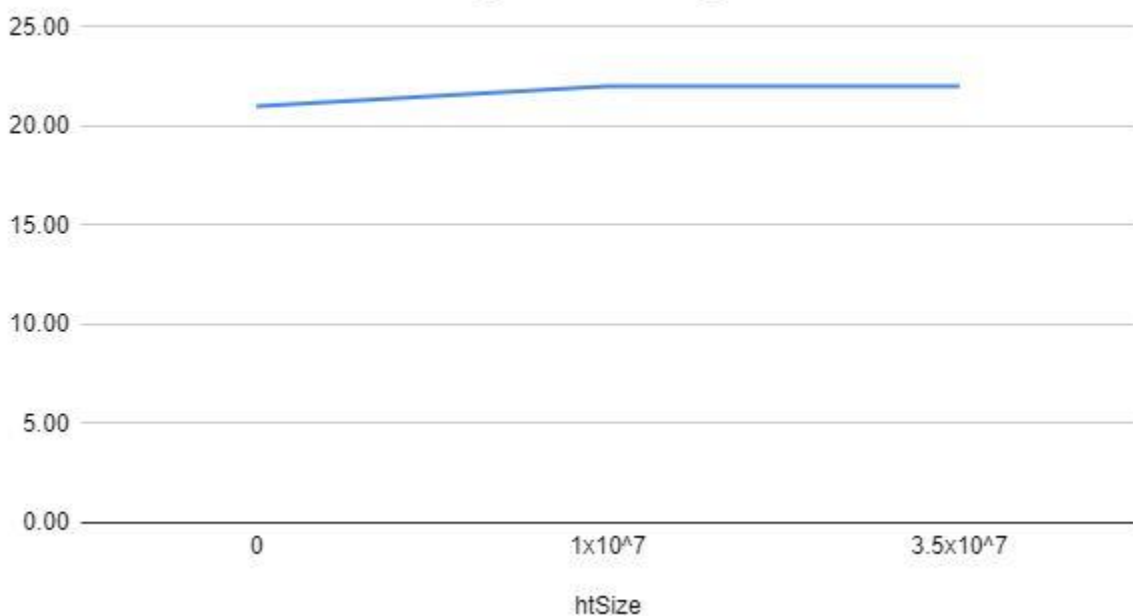
WRITEUP

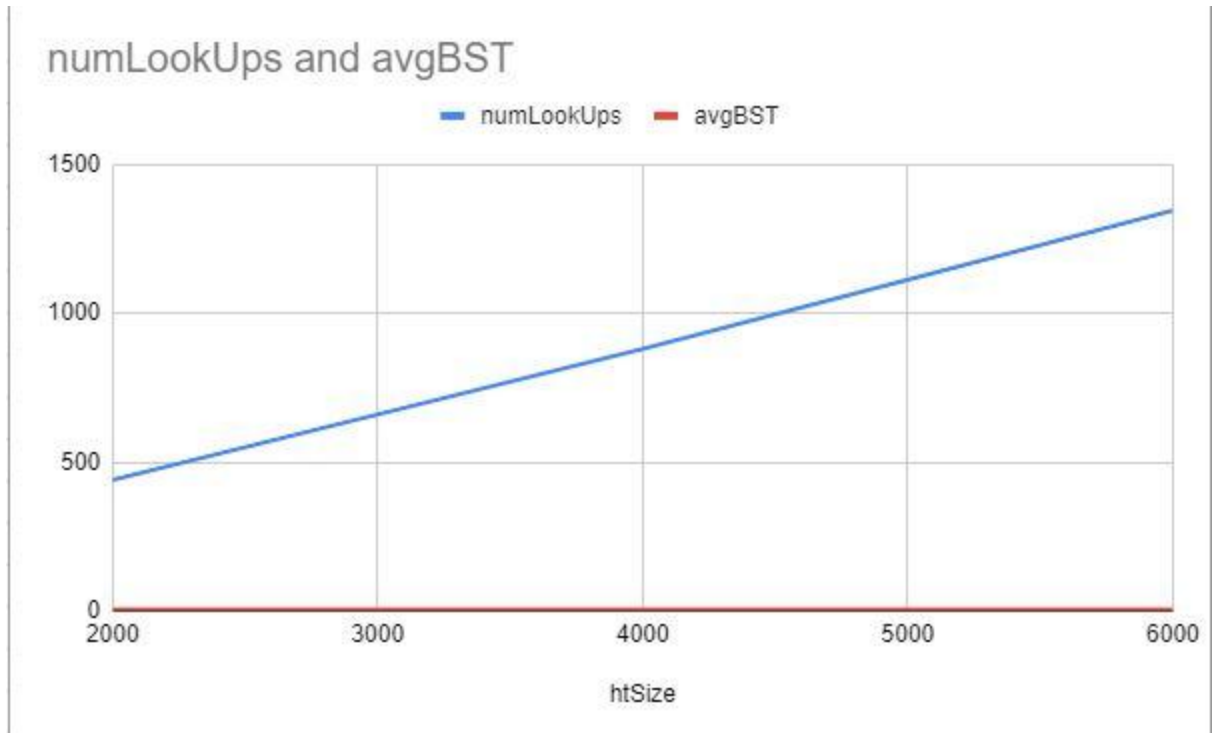
December 5, 2021

Abhinav Prasanna

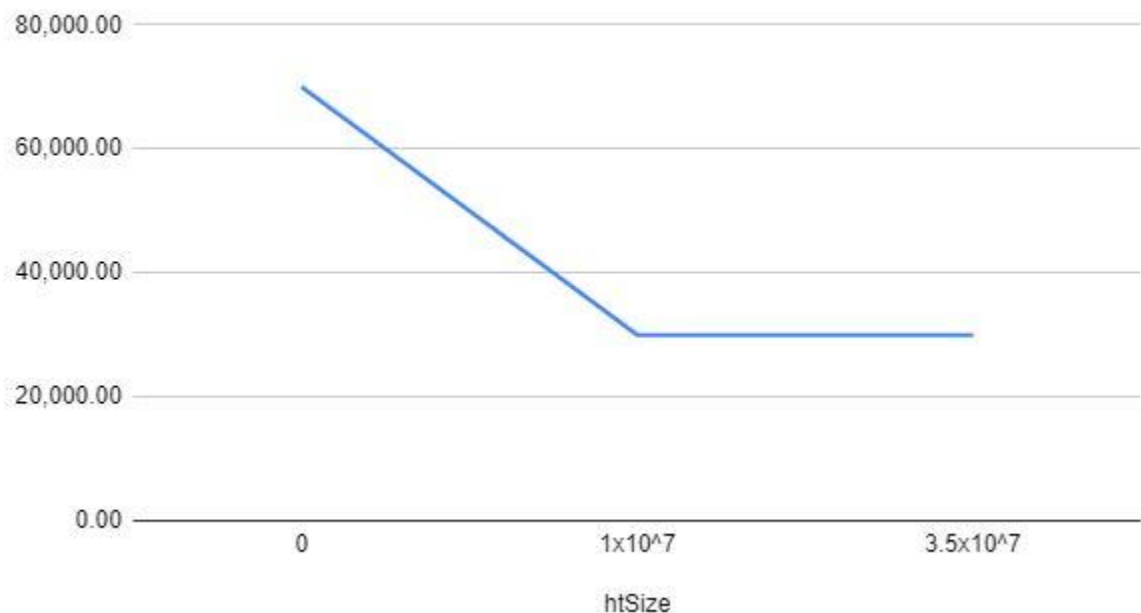
The size of the hashtable should have no effect on the total number of seeks. The program is only seeking if the probe from bloom filter returns true. There is a difference however in the average seek length as the size of the hash table changed.

Bloom Filter Size vs Average Seek Length





Bloom Filter Size vs Average Seek Length



The graph shows that as size of the Hash Table increases the average seek length decreases at an exponential rate. The seek length is different for the different files because the size of each file is different. The number of seeks is high while the bloom filter is small. The opposite happens when the bloom filter size increases with the average number of seeks

exponentially increasing. Increase the bloom filter size and decrease the number of lookups in the hashtable.