CSC263 Assignment 3

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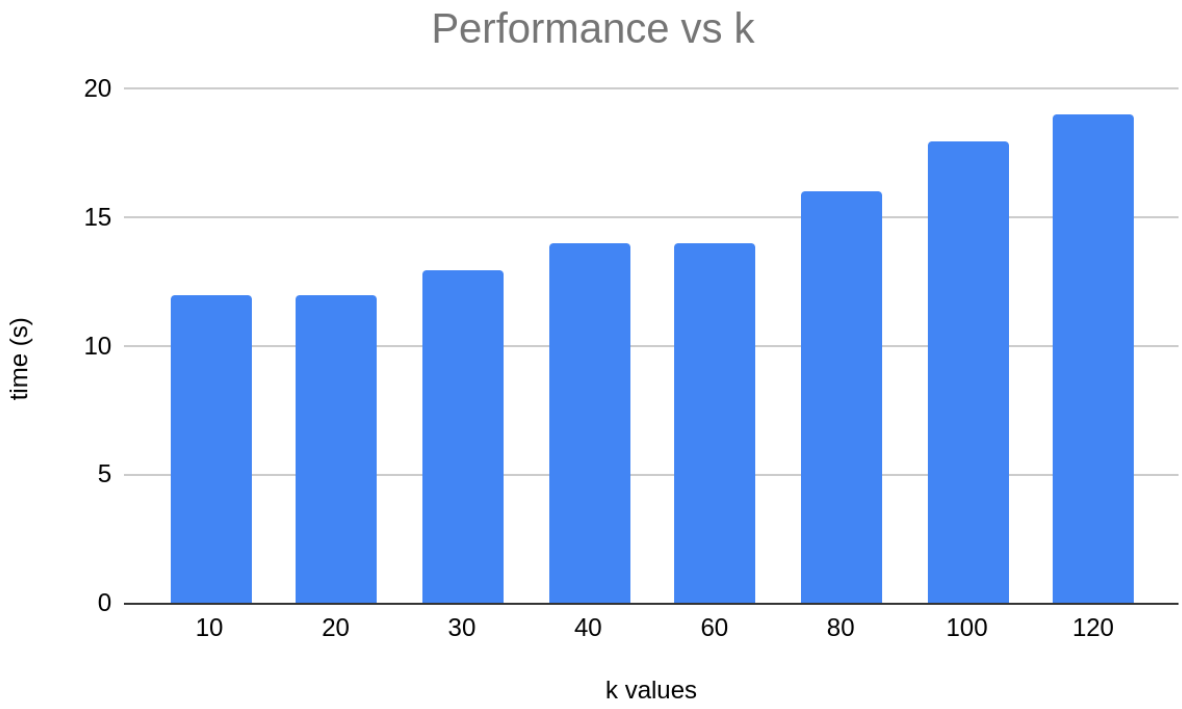
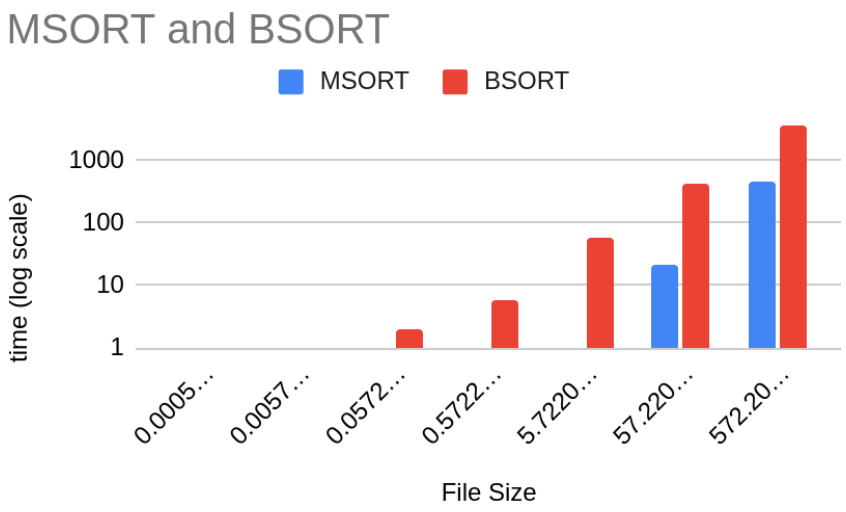
All of the information about our testings are saved in this Google Sheet. The Google Sheet is also attached to this submission, as a .xlsx file. If you are logged in with your University of Rochester email, you should be able to access it.

- **MSORT Performance vs Memory Allowed**
  - the bigger the memory capacity, the faster the sorting is done while keeping k and the file size fixed. This is very intuitive and makes sense; the bigger the buffer, the faster the sorting is done.

- **MSORT Performance vs Memory Allowed**
  - An increase in k decreased the performance according to our findings given that the file size and the buffer size are fixed.



- **MSORT and BSORT vs File size**
  - Clearly the bigger the file the more it takes to sort it. The following graph is on a time log scale and the last value for BSort was approximated from the previous ones.
    We can see an exponential growth on both and see that MSORT is much faster. A possible explanation as to why this is the case is because of the fact that it's only job is to sort, and doesn't create an index or anything else, and probably has much less disk access than BSORT.
    Did not run on the 5.7GB file due to shortage of time (it should take quite a long time to sort it).



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