

Hunter Schwartz

1. The search for "not_here" produces the worst results for both methods because in both cases, since "not_here" is actually not in the data set, both methods will have to exhaustively check each of the possibilities (although the binary search will be much, much faster), there is no chance they will find it earlier by 'luck', each method must get to its respective final case before it can decide that the element is not in the data set.
2. The "mzzzz" search is the average time for the linear search since that is the value in the middle of the data set, half the time it will take longer, half the time shorter, but the average will be the time to the center.
3. The "aaaaa" search is the best-case for the linear search because it is the first element in the data set, so the linear search will find it immediately and conclude its search, taking the minimum possible time by being maximally 'lucky'.
4. Since this is a large data set, the complexity of the algorithm makes a large difference, evident in the fact that the binary search is orders of magnitude faster than the linear search except in the best-case for the linear search.
5. The binary search will have to perform about the same number of comparisons between each run, since it's focused on pinning down the correct value rather than guessing it straight away, and the linear searches differ so greatly because it can either guess correctly the first time or compare every single value, which for large data sets will be a big time difference.

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ANALYSIS: not_here
Linear search
  Result: -1
  Time: 92376069
Binary search
  Result: -1
  Time: 53697

ANALYSIS: mzzzz
Linear search
  Result: 5940687
  Time: 59659372
Binary search
  Result: 5940687
  Time: 2605

ANALYSIS: aaaaa
Linear search
  Result: 0
  Time: 38200
Binary search
  Result: 0
  Time: 18590
```