

Question:

Suppose that your application will have a huge number of insert operations, but only a few remove the maximum operations. Which priority-queue implementation do you think would be most effective: heap, unordered array, ordered array?

Answer:

Unordered arrays are more effective because the time complexity for the insertion of elements into the array is $O(1)$, whereas for, ordered arrays and heaps, the time complexity for insertion is $O(N)$ and $\log(N)$ respectively. Similarly, the time complexity for deletions is $\log(N)$ in unordered arrays, whereas, in ordered arrays, it is $O(1)$, and for the heap, it is $\log(N)$.

As here a number of insertions are more, unordered arrays are more effective.