

Ex 2.4.12: Suppose that your application will have a huge number of find the maximum operations, but a relatively small number of insert and remove the maximum operations. Which priority-queue implementation do you think would be most effective: heap, unordered array, or ordered array?

Solution:

Heap is good for avg case for large number of *find_max* with relatively small number of *insert()* and *Del_max()* operations. If you have a large number of *del_max* ops, then best to use ordered array due to $O(1)$ complexity. If few deletions but more insertions, then an unordered array would be best.