

Can we use heaps as priority queues? How so? Write an explanation, with the help of pseudocode/diagrams to support your explanation.

Yes. You can use heaps as priority queues. You can do this by initializing a heap instead, and inserting according to the heap property when you'd like to enqueue.

In order to delete from the "priority queue", or the heap in this instance, just remove the root node of the heap, which is equivalent to the element with the highest priority. Then you replace the root with the last node from the heap/queue and heapify to maintain the heap.

It's important to always keep the element with the highest priority at the very top of the heap for quick retrieval.

Diagrams:

