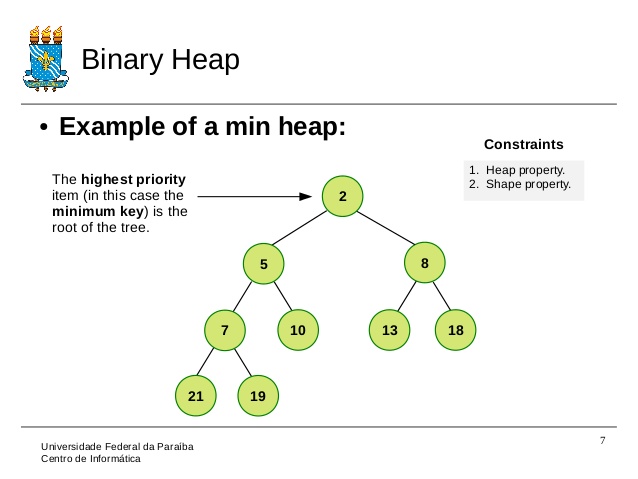
**Priority queue**

While priority queues are often implemented with heaps, they are conceptually distinct from heaps. A priority queue is an abstract concept like "a list" or "a map" - just as a list can be implemented with a linked list or an array, a priority queue can be implemented with a heap or a variety of other methods such as an unordered array.

Because most priority queue implementations use heap, we will focus on this data structure.

**Heap**

In a heap, for every node *i*other than the root, the value of a node is greater \ smaller than or equal (at most) to the value of its parent.  
Thus, the largest \ smallest element in a heap is stored at the root. This is the most important property of a heap and priority queue.

Heaps are usually implemented in an array (fixed size or dynamic array):