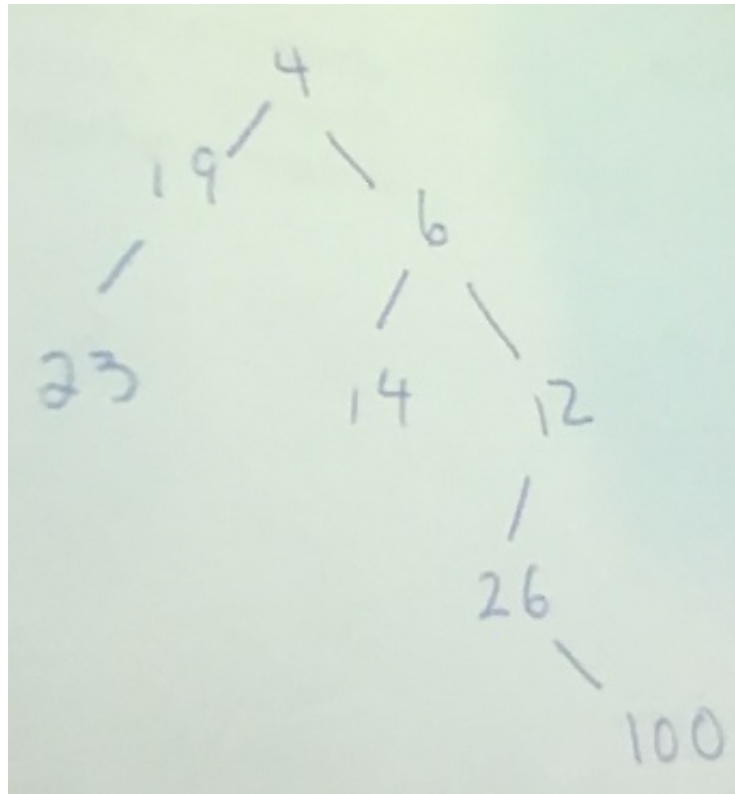


# ADT Priority Queue

- The ADT Priority Queue maintains a collection of elements with an accessing function that produces the highest priority element
  - addElt: PQ elt  $\rightarrow$  PQ
  - minElt: PQ  $\rightarrow$  elt
  - remMinElt: PQ  $\rightarrow$  PQ

# Heaps

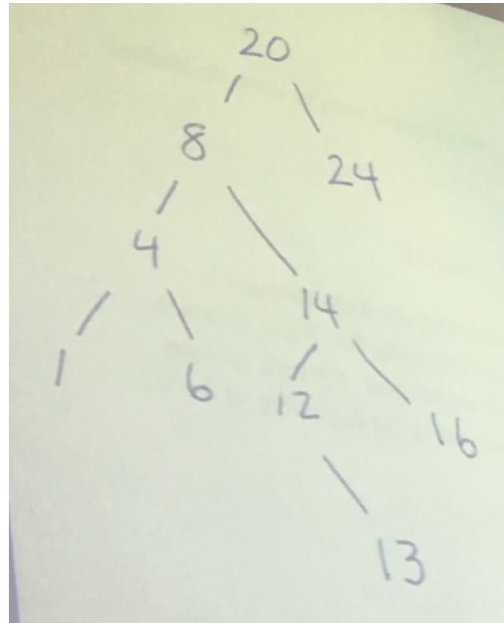
A heap is a binary tree such that the smallest item is the root of the tree and the left and right subtrees are heaps.

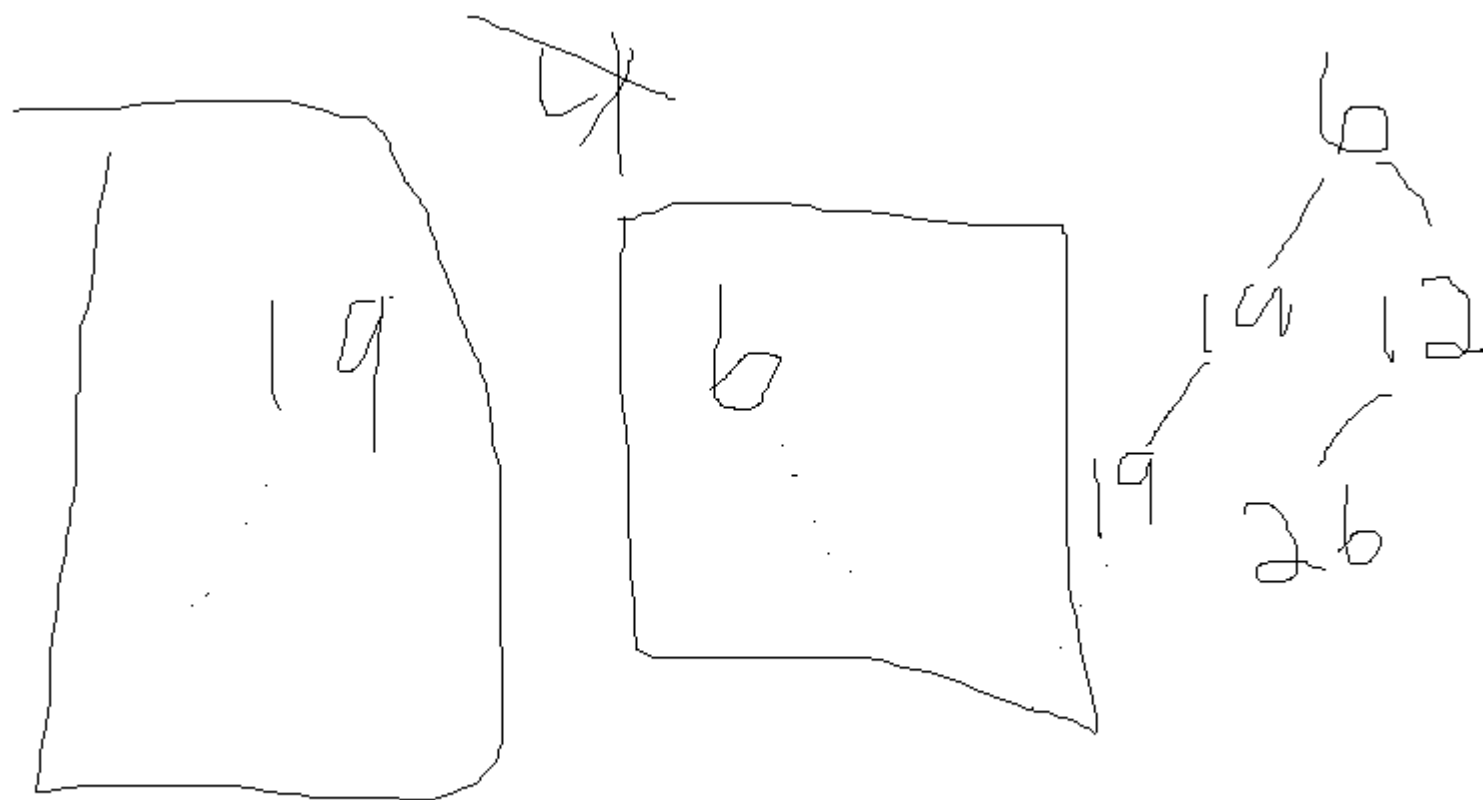


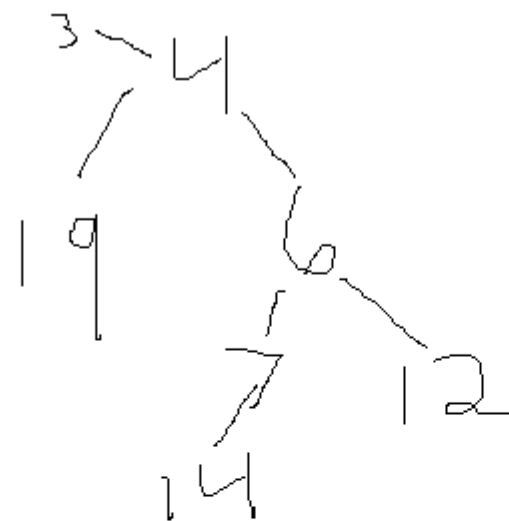
# Binary Search Trees

In a binary search tree (BST), every node has the following properties:

- Every element in the left subtree is smaller than the element in the root
- Every element in the right subtree is larger than the element in the root
- Both the left and right subtrees are BSTs







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