minheapify (Index): restoreDown for min heaps

maxheapify (Index): restoreDown for max heaps

CONVERT MAX → MIN HEAP

$$9, 4, 7, 1, -2, 6, 5 \implies -2, 1, 5, 9, 4, 6, 7$$

- One way to do this is to consider the max heap as a general set of inputs and simply construct a min-heap from the values.

  ie: for each input value, insert to a MIN heap

- Better way to implement this is:

  ↳ to take each parent node from the end

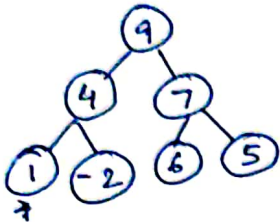 ↳ and minheapify it; i.e: restore down so as represent a min heap.

example: $\overset{0}{9}, \overset{1}{4}, \overset{2}{7}, \overset{3}{1}, \overset{4}{-2}, \overset{5}{6}, \overset{6}{5}$

last
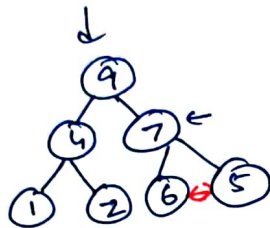↑ Parent node : $(len(heap) - 1) // 2$

so we move from index 3 to index 0, minheapifying
            at each index
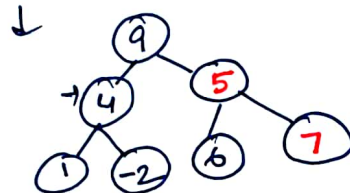

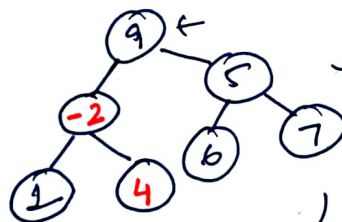→   minheapify (3)
    ① does not have any child nodes so RETURN

minheapify (2)

minheapify (6) → RETURN
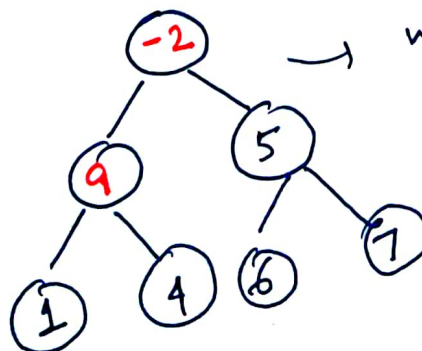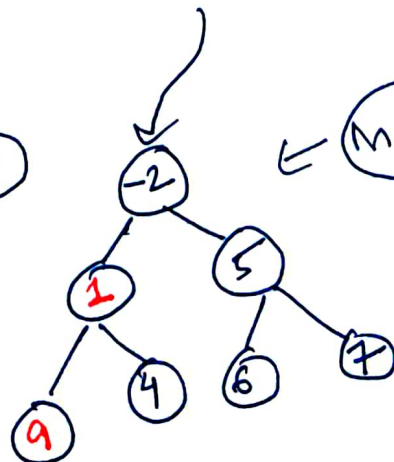   as no child node

minheapify (1) →

0	1	2	3	4	5	6
9	-2	5	1	4	6	7

→ minheapify (4) → RETURN

minheapify (0)

0 1 2 3 4 5 6
-2, 9, 5, 1, 4, 6, 7

→ minheapify (1)

← MIN HEAP