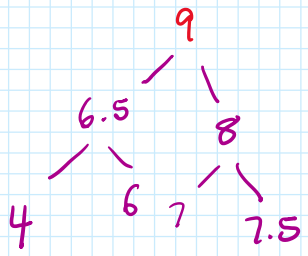
Binary Heap

Monday, October 23, 2023 9:42 AM

- Every tree entry is greater than everyone below it
- tree always full

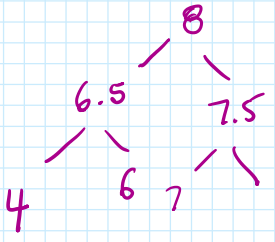


- Priority Encoder

Insert ① Place new item in first available slot

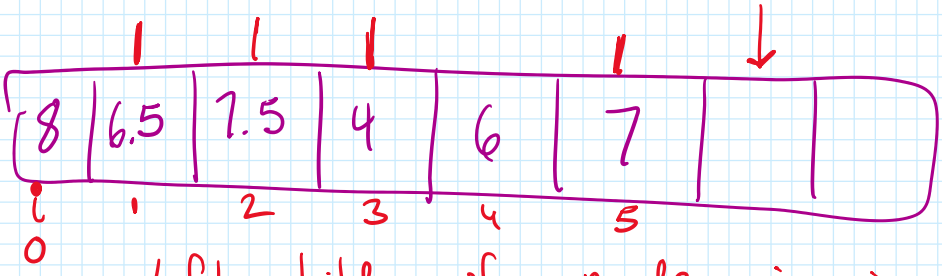
② Bubble Up

Pop 9



① Place last item at root

② Bubble down



i	L	R
0	1	2
1	3	4
2	5	6

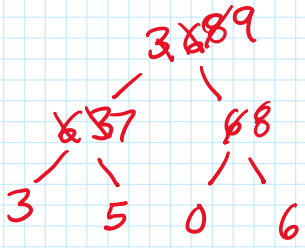
left child of node i is where: $2i+1$

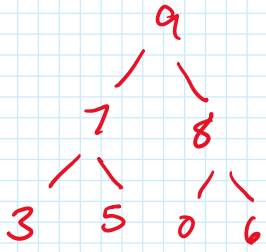
right child : $2i+2$

where's parent of node i

i	Mom	$\lfloor \frac{i-1}{2} \rfloor$
1	0	[0]
2	0	[½]
3	1	1
4	1	1½
5	2	2
6	2	2½

3 6 8 7 5 0 9





9 - 7 - 8 - 3 - 5 - 0 - 6