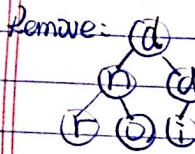
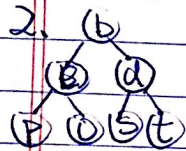


it is a min heap $a < (b, n)$ and $n < (r, i)$
 $d < (i, d)$



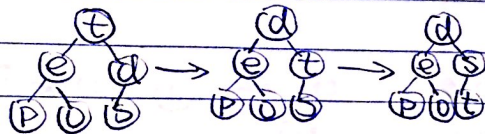
Array: a r n d r i i

There is nothing needed to trickle down.

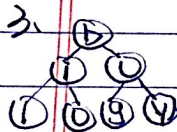


It is a minheap $b < (e, d)$; $e < (p, o)$; $d < (s, t)$.

Remove:

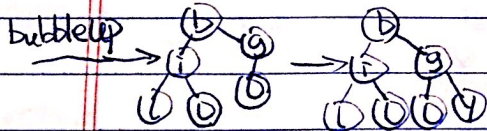
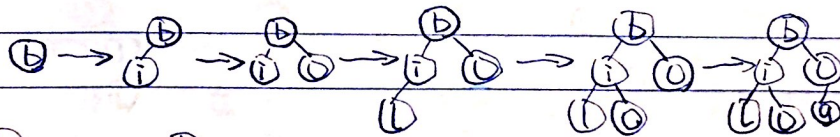


Array: d e s p o t

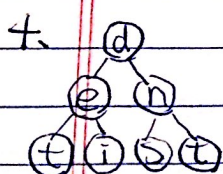


It is not a min-heap
 $g < o, o$

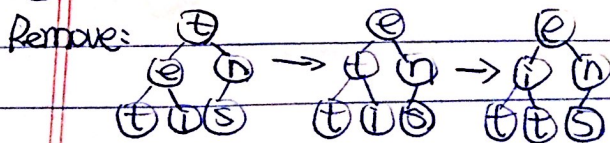
Insert:



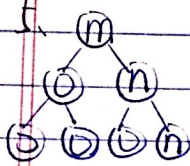
Array b i g l o y



it is a min-heap: $d < (e, n)$; $e < (t, i)$; $n < (s, t)$



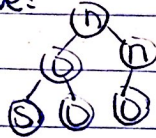
Array: e i n t t s



It is a min-heap

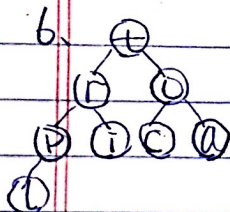
$m < (o, n); o < (s, u); n < (u, h)$

Remove:



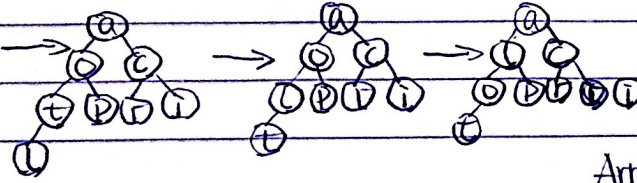
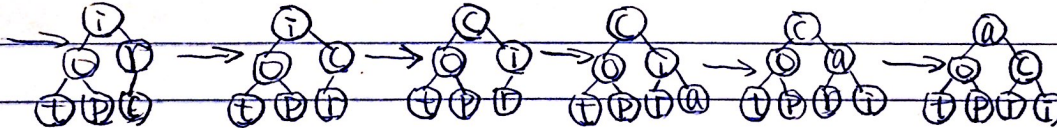
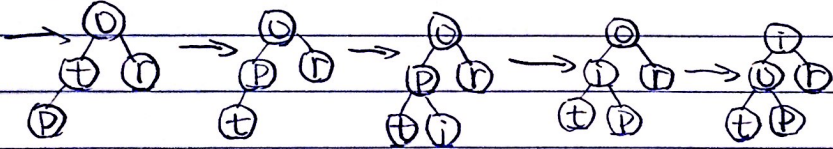
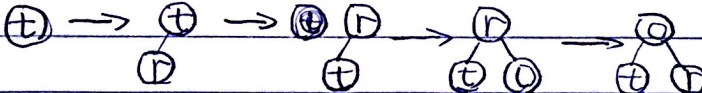
→ no need to trickle down

Array n o n s o o



It is not a min-heap

Insert:



Array a k c o p r i t