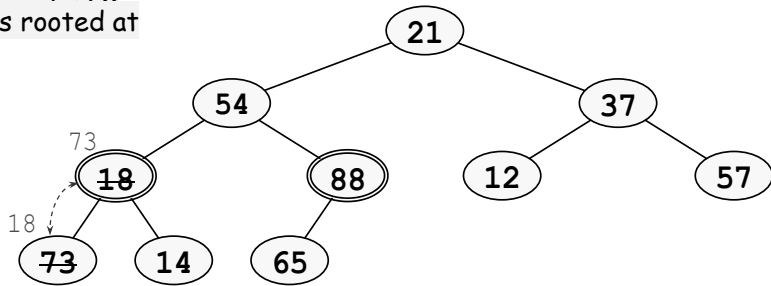


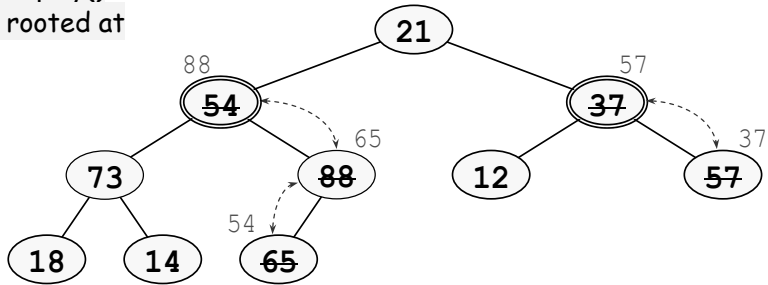
# Heapsort

## Phase 1: Transform arbitrary array to heap

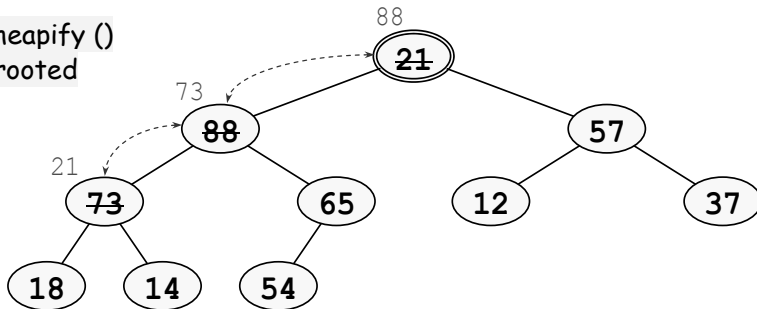
Apply max-heapify()  
to subtrees rooted at  
88 and 18



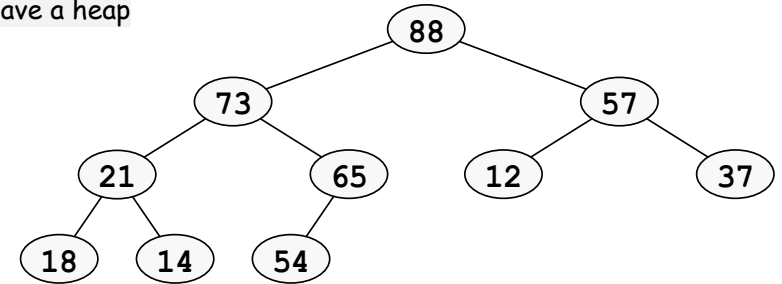
Apply max-heapify()  
to subtrees rooted at  
37 and 54



Apply max-heapify ()  
to subtree rooted  
at 21



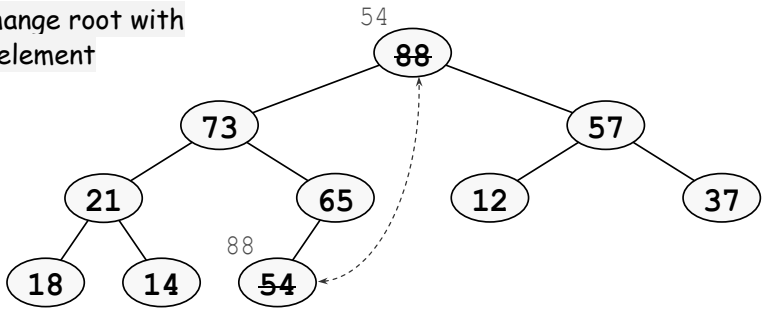
We now have a heap



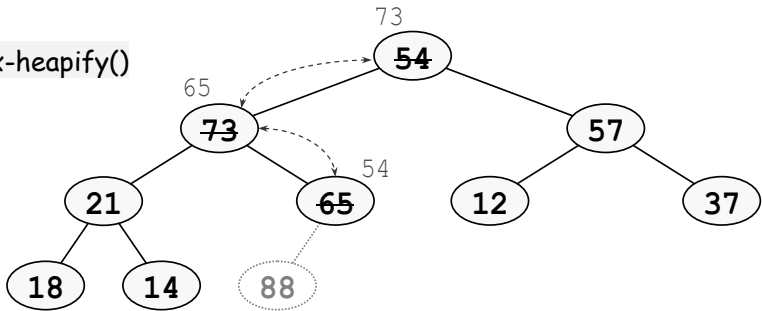
# Heapsort

## Phase 2: Transform heap to sorted array

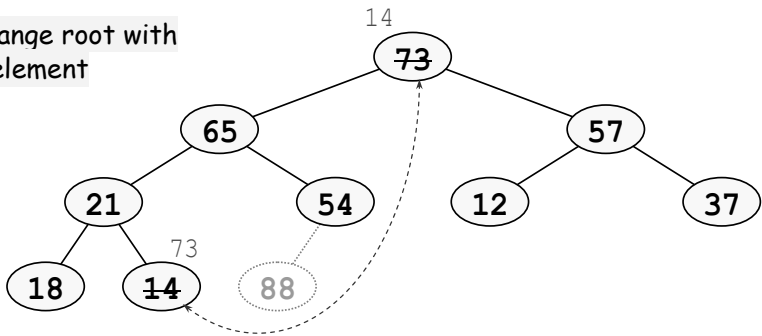
Exchange root with last element



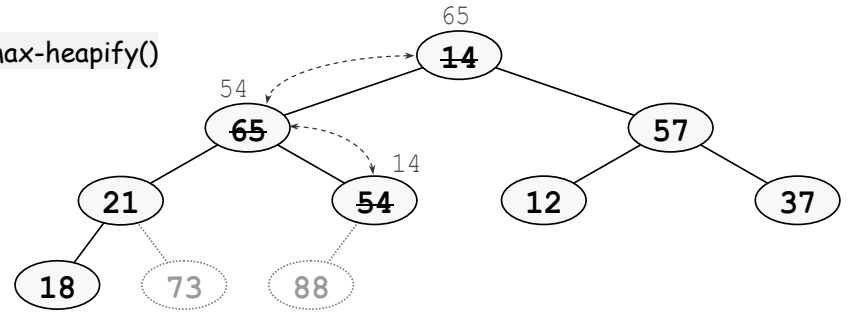
max-heapify()



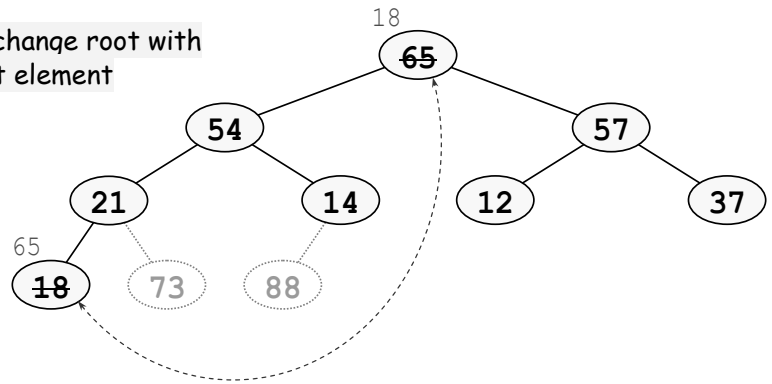
Exchange root with last element



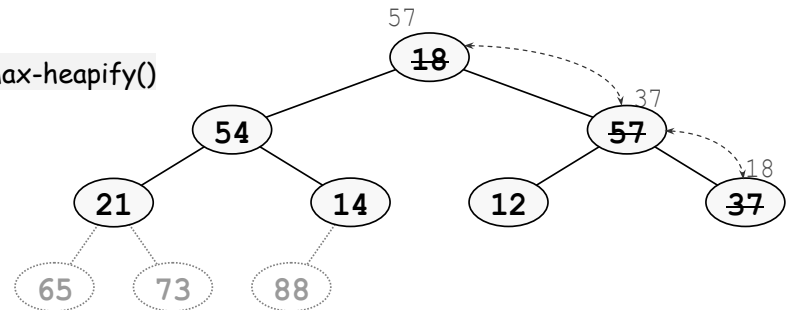
max-heapify()



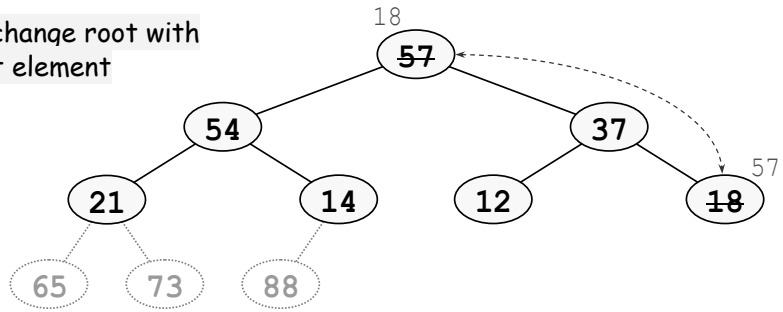
Exchange root with last element



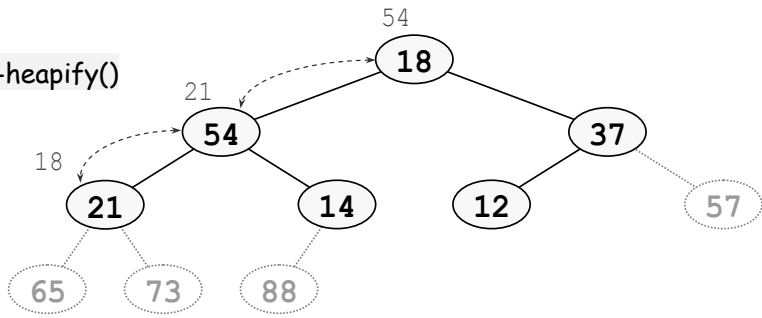
max-heapify()



Exchange root with last element



max-heapify()



Five more exchanges, followed by calls to *fixHeap()*, complete the transformation from a heap to a sorted array.