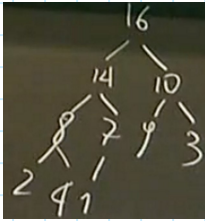


Heap sort

martedì 7 giugno 2022

16:04

Dati:

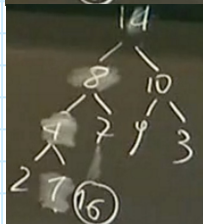


A = [16, 14, 10, 8, 7, 9, 3, 2, 4, 1]

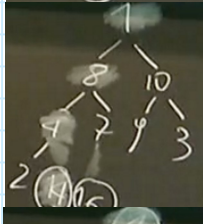
La heapsort funziona così:



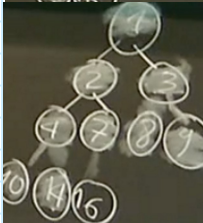
- Scambio radice con ultimo elemento, stacco l'ultimo elemento



- Lancio la heapify sulla radice



- Scambio radice con ultimo elemento dell'heap, stacco



- Risultato una volta aver finito la heap

Heapsort(A):

Buildheap(A)

$O(n)$

For i = 1 to len(A) - 1:

 app = A[1]

 A[1] = A[heapsize(A)]

 A[heapsize(A)] = app

 Heapsize(A) --

 Heapify(A, 1)

$O(\ln n)$

$$t(n) = \text{buildheap} * \text{heapify} = O(n) * O(\ln n) = O(n \ln n)$$