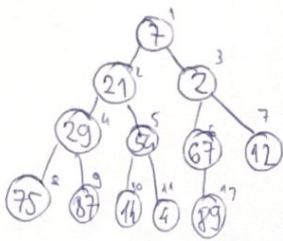


Java 8 HeapSort - Detypat e shtëpise

Lexda: Hyrje në Algoritme

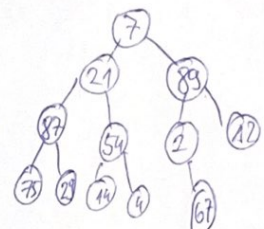
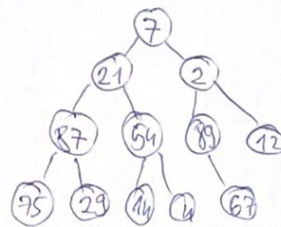
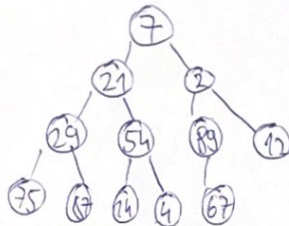
Detypa 1. Të sortohet vargu duke përdorur algoritmin Heap Sort.

7 21 2 29 54 67 12 75 87 14 4 89



1) sink(6) // 67

2) sink(4) // 29 3) sink(3) // 2

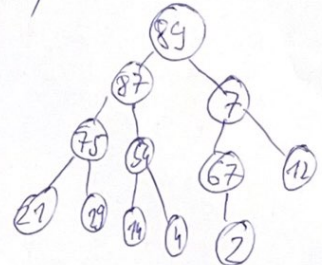
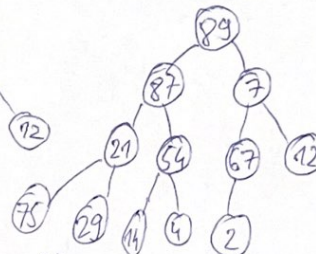
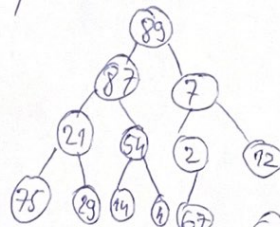
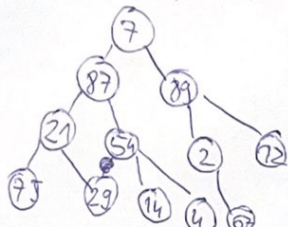


4) sink(2) // 21

5) sink(1) // 7

6) sink(6) // 2

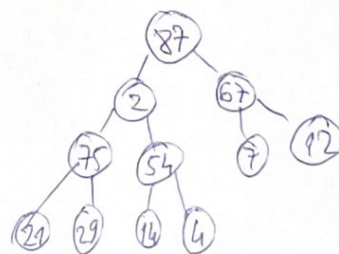
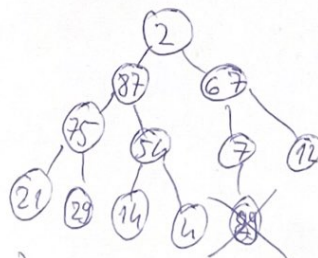
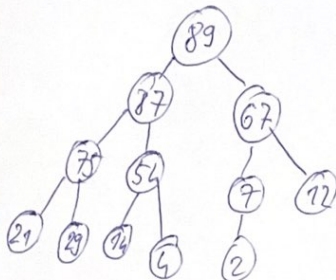
7) sink(4) // 21



8) sink(3) // 7

9) DelMax()
exch 89 me 2

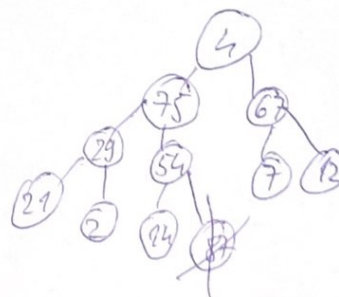
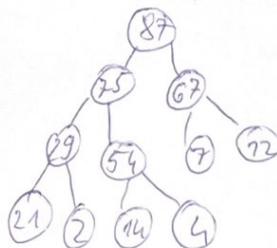
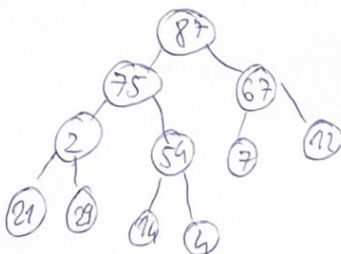
10) sink(1) // 2



11) sink(2) // 2

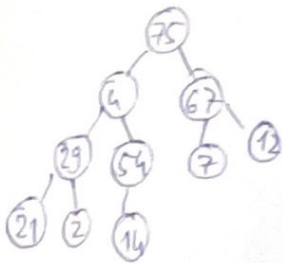
12) sink(4) // 2

13) DelMax()
exch 87 me 4

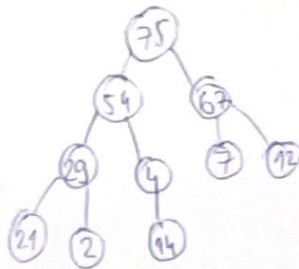


Olta Hasimja G3B

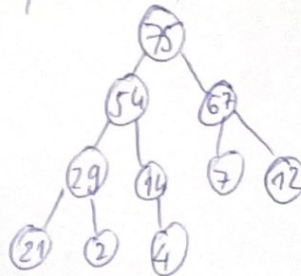
14) sink (1) // 4



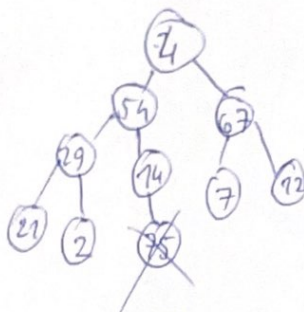
15) sink (2) // 4



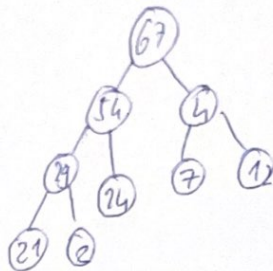
16) sink (5) // 4



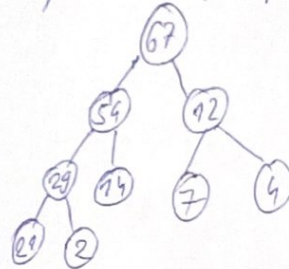
17) DelMax()
exch 75 me 4



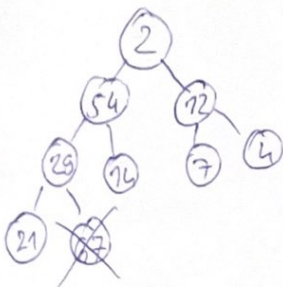
18) sink (1) // 4



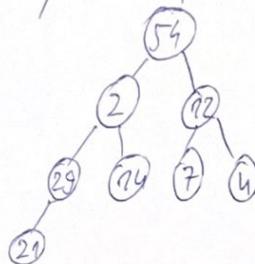
19) sink (3) // 4



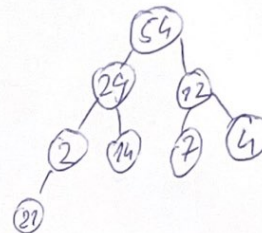
20) DelMax()
Exch 2 me 67



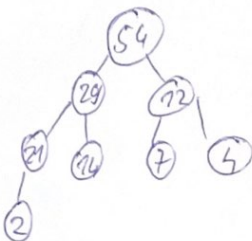
21) sink (1) // 2



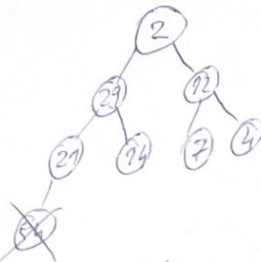
22) sink (2) // 2



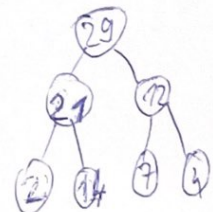
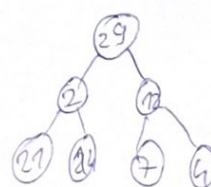
23) sink (4) // 2



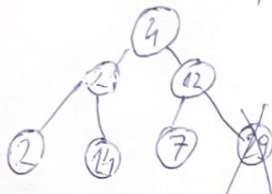
24) delMax()
exch 54 me 54



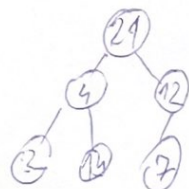
25) sink (1) // 2 26) sink (2) // 2



27) DelMax()
exch 29 me 4



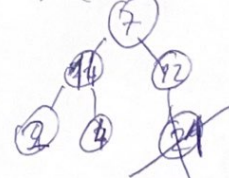
28) sink (1) // 4



29) sink (2) // 4

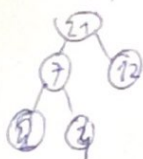


30) DelMax()
exch 24 me 7

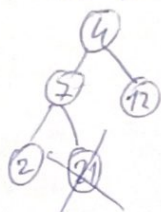


Olta Hasimja G3B

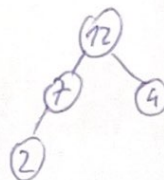
31) sink (1) // 7



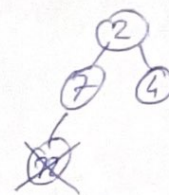
32) Del Max
exch 21 me 4



33) sink (1) // 4



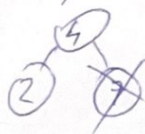
34) del Max
exch 12 me 2



35) sink (1) // 2



36) del Max
exch 7 me 4

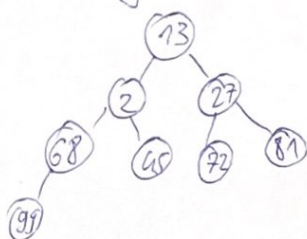


37) del Max
exch 4 me 2

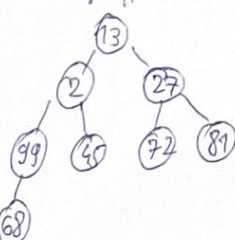


2 4 7 12 14 21 29 54 67 75 87 89

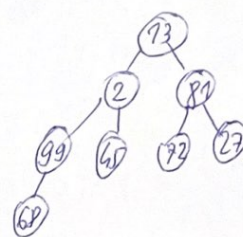
Detyra 2. Nga vargu i dhënë $A = \{13, 2, 27, 68, 45, 72, 81, 99\}$
A. Të krijohet Max Binary heap.



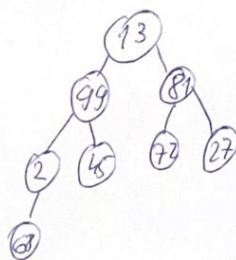
1) sink (5) // 68



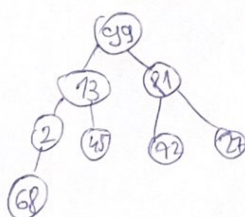
2) sink (3) // 27



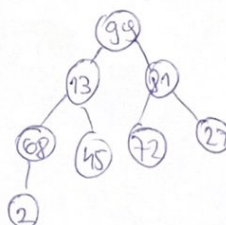
3) sink (2) // 2



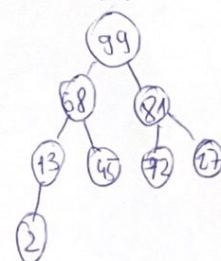
4) sink (1) // 13



5) sink (4) // 12

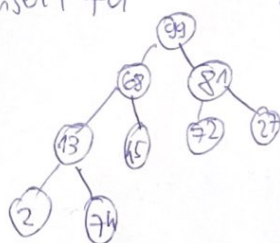


6) sink (2) // 13



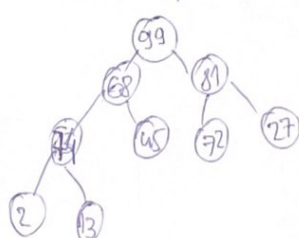
B. Nga binary heap i krijuar në hapin A, të shtohet elementi me vlerë 74.

1) Insert 74

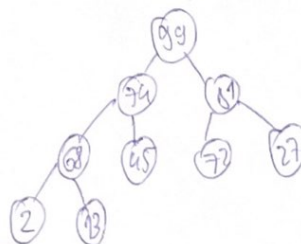


2) swim (9) // 74

3) swim (4) // 74



3) swim (4) // 74

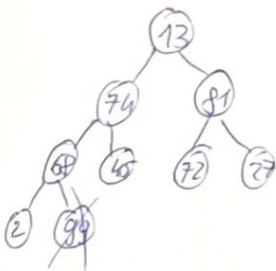


Oltar
Hasimja
G3B

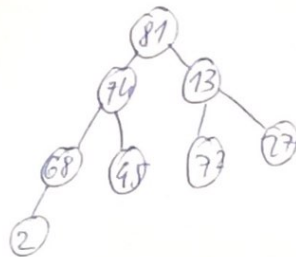
C. Nga binary heap i krijuar në hapin B, të shihet elementi root

1) Del Max()

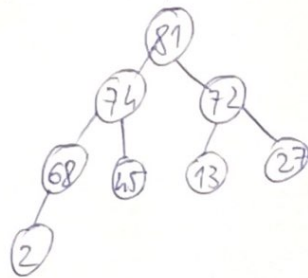
exch 99 me 13



2) sink(1)//13



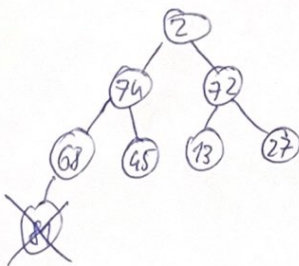
3) sink(3)//13



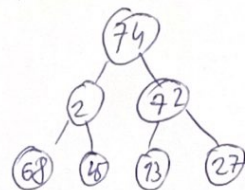
D. Nga MaxBinary heap i fituar, të sortohet vargu me Heap Sort

1) del Max()

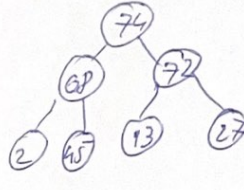
exch 81 me 2



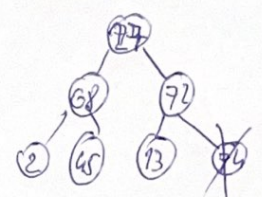
2) sink(1)//2



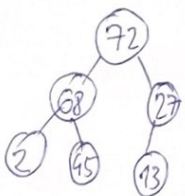
3) sink(2)//2



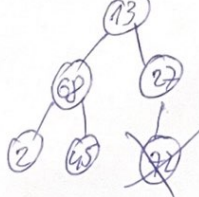
4) DelMax
exch 74 me 27



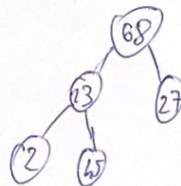
5) sink(1)//27



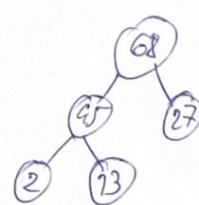
6) DelMax()
exch 72 me 13



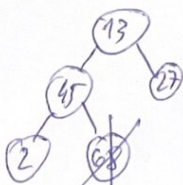
7) sink(1)//13



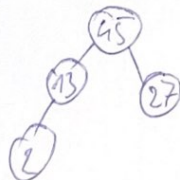
8) sink(2)//13



9) DelMax()
exch 68 me 13



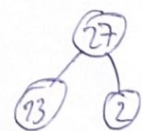
10) sink(1)//13



11) DelMax
45 me 2



12) sink(1)//2



13) DelMax
exch 27 me 2



14) sink(1)//2



15) DelMax
exch 13 me 2

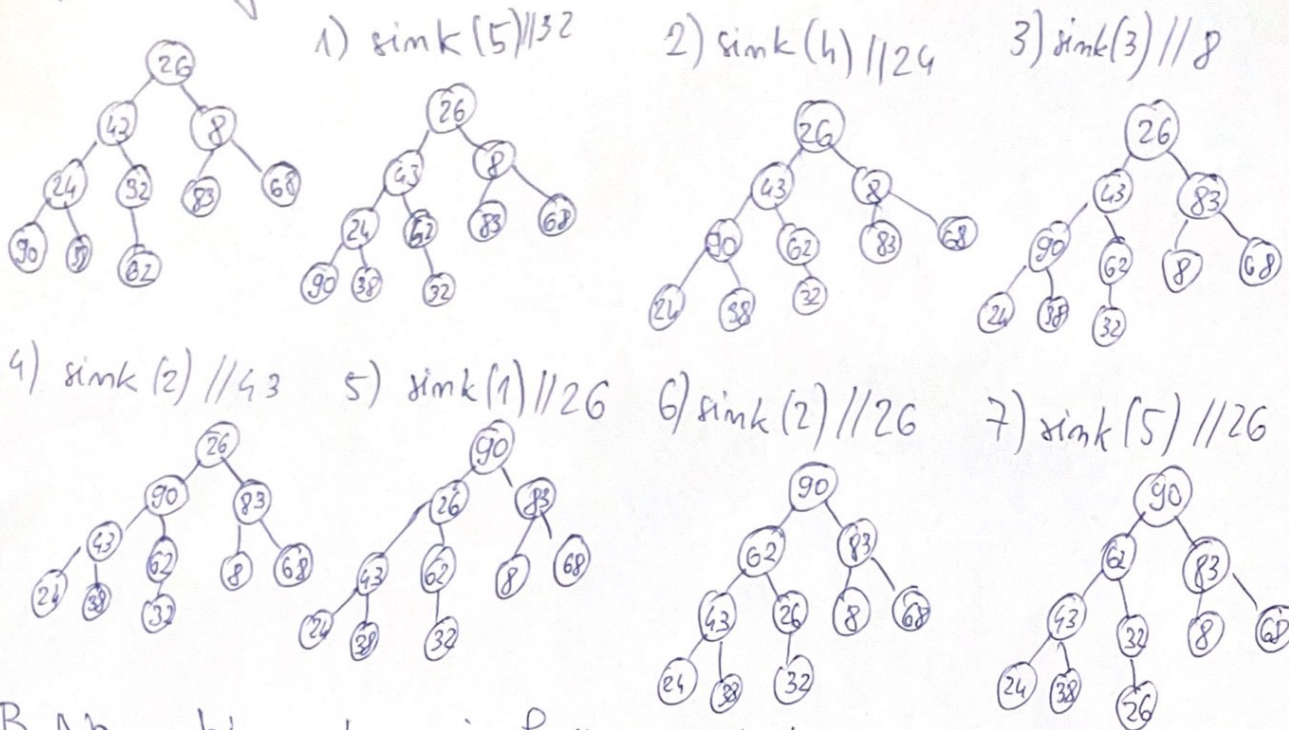


Oltar
Haximja
G3B

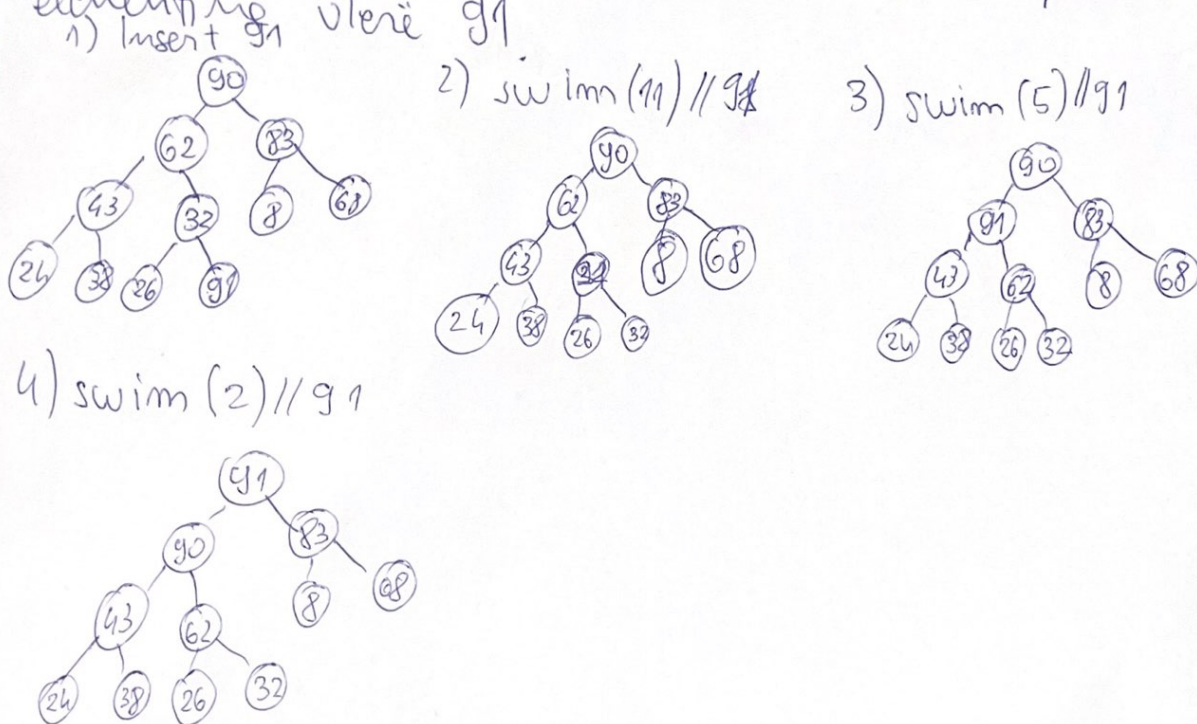
2, 13, 27, 45, 68, 72, 74, 81

Detyra 3. Nga vargu i dhënë $A = \{26, 43, 8, 24, 32, 83, 68, 90, 38, 62\}$

A. Të krijohet Max Binary heap



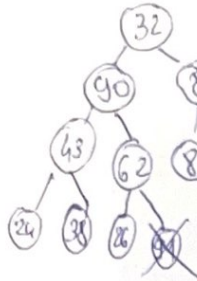
B. Nga binary heap i krijuar në hapin A, të shohet elementet në vlerë 91



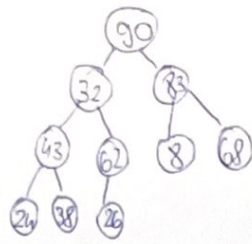
Olta Hasimja G3B

C. Nga binary heap i krijuar në hapin B, të fshihet elementi root.

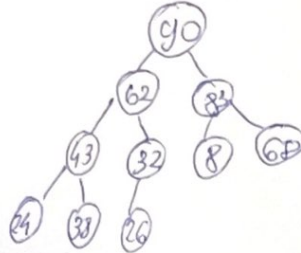
1) DelMax()
exch 91 me 32



2) sink(1)//32

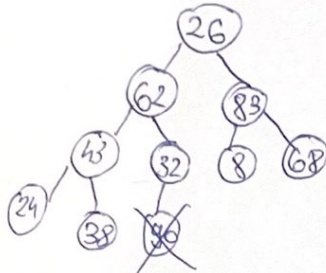


3) sink(2)//32

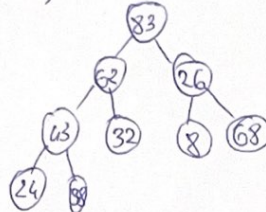


D. Nga Max Binary Heap i fituar, të sortohet vengun me heapsort

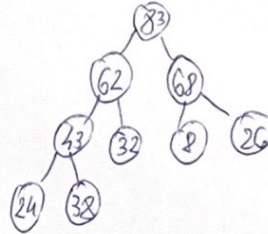
1) DelMax()
exch 90 me 26



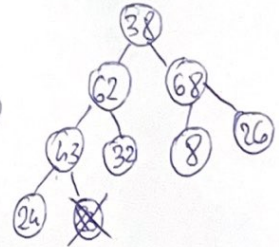
2) sink(1)//26



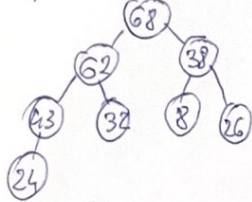
3) sink(3)//26



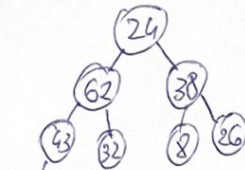
4) DelMax()
exch 83 me 38



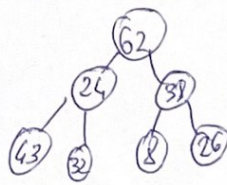
5) sink(1)//38



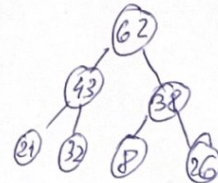
6) DelMax
exch 68 me 24



7) sink(1)//24



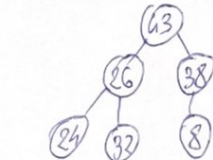
8) sink(2)//24



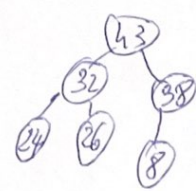
9) DelMax
exch 62 me 26



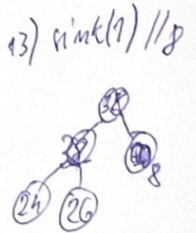
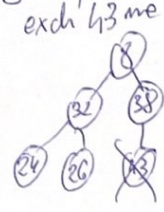
10) sink(1)//26



11) sink(2)//26



12) DelMax
exch 43 me 8



14) DelMax//
exch 38 me 26



15) sink(1)//26



16) DelMax()
exch 32 me 24



17) sink(1)//24



0th Hsimja G3B

18) DelMax
exch 26 me 8



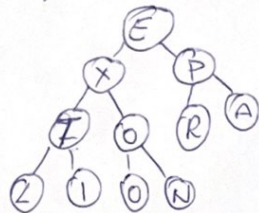
19) sink(4) // P
20) DelMax
exch 26 me 8



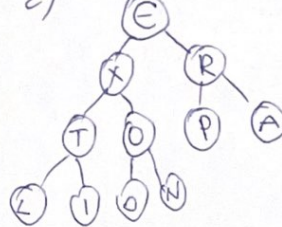
8 24 26 32 38 43 62 68 83 90
Detyra 4. Të sortohet vargu duke përdorur algoritmin
Heapsort.

EXPLORATION

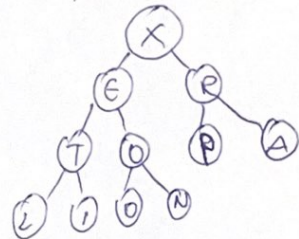
1) sink(4) // L



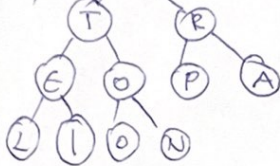
2) sink(3) // P



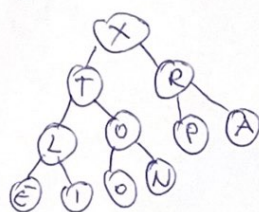
3) sink(1) // E



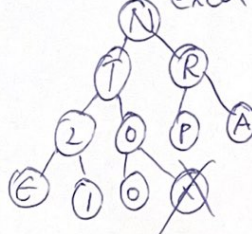
4) sink(2) // E



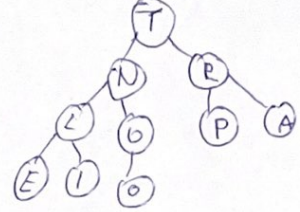
5) sink(1) // E



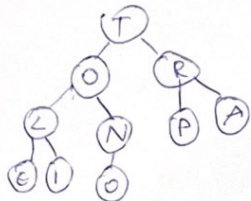
6) DelMax
exch x me N



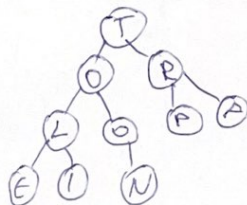
7) sink(1) // N



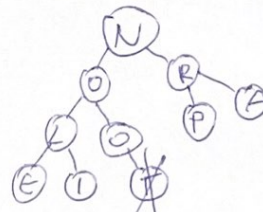
8) sink(2) // N



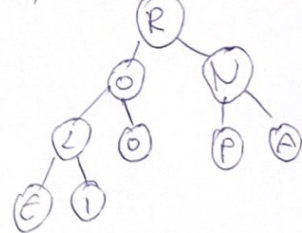
9) sink(5) // N



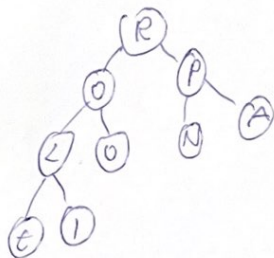
10) DelMax
exch T me N



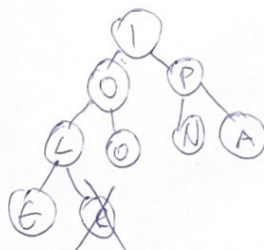
11) sink(1) // N



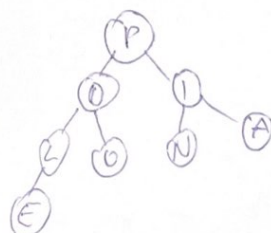
12) sink(3) // N



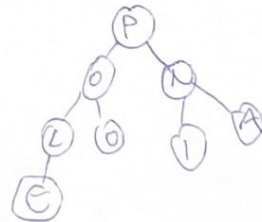
13) DelMax
exch R me I



14) sink(1) //

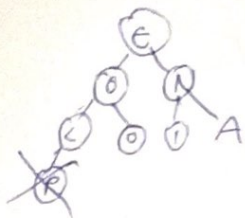


15) sink(3) // I

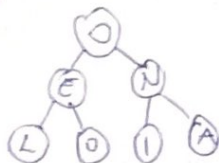


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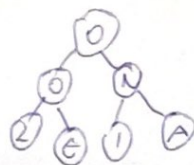
16) Del Max
exch P me E



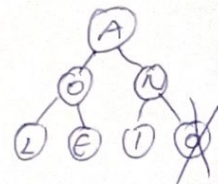
17) sink(1) // E



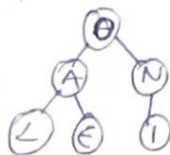
18) sink(2) // E



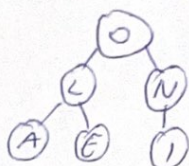
19) Del Max
exch O me A



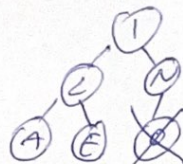
20) sink(1) // A



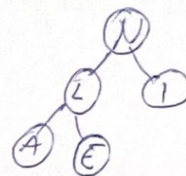
21) sink(2) // A



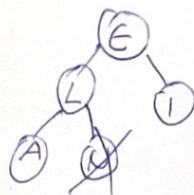
22) Del Max
exch O me I



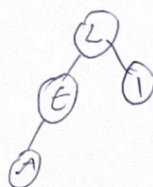
23) sink(1) // I



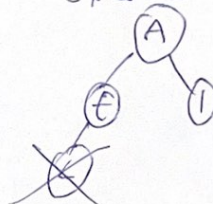
24) Del Max
exch N me E



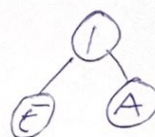
25) sink(1) // E



26) Del Max(I)
exch L me A



27) sink(1) // A



28) Del Max(I)
exch I me A



29) sink(1) // A



30) Del Max
exch E me A



A E I L N O O P R T X

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