Data Structure Assignment 5

Programming Homework 1

(textbook p.230)

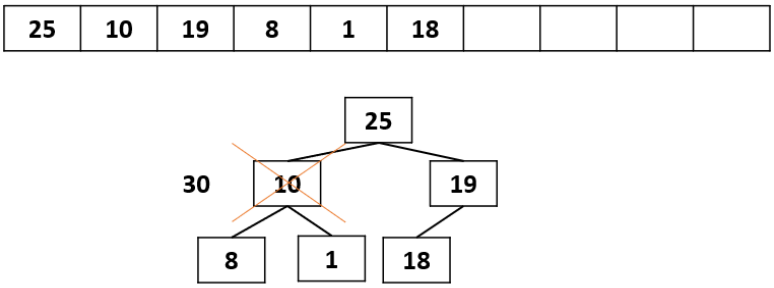
5. Write a C/C++ function that changes the priority of an arbitrary element in a max heap. The resulting heap must satisfy the max heap definition.

The input consists of two lines. The first line contains several(< 100) integer numbers representing the element of max heap. The second line contains two integer numbers. One indicates the element to be modified, and the other indicates the updated key to be assigned to the element.

Input:

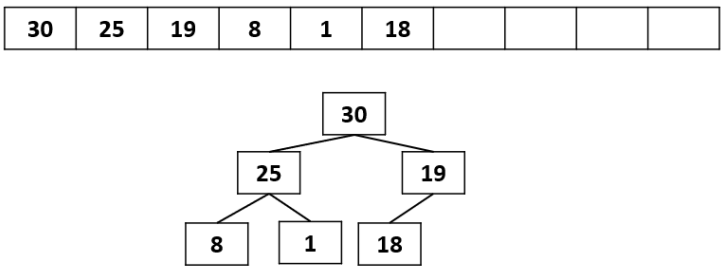
25 10 19 8 1 18

10 30



Output:

30 25 19 8 1 18



General Information:

- Deadline : 2018/12/7 23:55.
- Upload your assignment to Moodle system.
- Upload file format : “student-ID_Name.rar” or “student-ID_Name.zip, Ex. F12345678_王小明.rar
- Your file should consist of the following items : Source Code & Readme file(Program description)
- Late homework will not be accepted.
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Programming Homework 2

(textbook p.230)

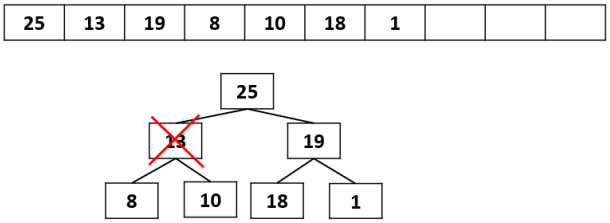
6. Write a C/C++ function that deletes an arbitrary element from a max heap (the deleted element may be anywhere in the heap). The resulting heap must satisfy the max heap definition.
   (Hint: Change the priority of the element to one greater than that of the root, use the change priority function of *programing homework 1,* and then pop.)

The input consists of two lines. The first line contains several(< 100) integer numbers representing the element of max heap. The second line contains a integer number indicating which element will be deleted.

Input :

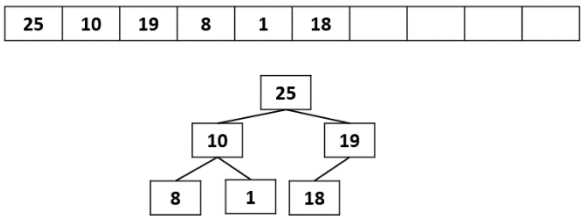
25 13 19 8 10 18 1

13



Output :

25 10 19 8 1 18



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