

CSE220: Data Structures (Lab)

Fall 2024
Lab Quiz - 06
Duration: 30 Minutes

Name:	ID:	Section:
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## Question 1 [15 Points]

You are given an **array of integers** and values of `x` and `y`. You need to create a new heap consisting of the numbers between  $x^{th}$  highest position and  $y^{th}$  highest position from the array.

## Note:

- 1. You need to figure out which heap to use.
- 2. You are not allowed to use any direct sorting, searching on the array.
- 3. You are not allowed to use any built-in functions except len()
- 4. You can assume insert() and swim() functions are already implemented. You have to implement whatever else is needed.

Sample Input:	Sample Output:	
array = [11, 15, 8, 2, 31, 23]	result = [23, 15, 11, 8]	
x = 2		
y = 5		
Explanation:		
When the array is sorted [31, 23, 15, 11, 8, 2]	Here,	
the values are in highest to lowest order	x = 2, 2-nd highest: 23	
For each position of n we can say, If:-	y = 5, 5-th highest: 8	
n = 1 (Position-1), 1-st highest: 31	Numbers between 2nd and 5th highest in	
n = 2 (Position-2), 2-nd highest: 23	the given array are: 23, 15, 11, 8	
	So the new heap will have these values.	
n = 5 (Position-5), 5-th highest: 8		
n = 6 (Position-6), 6-th highest: 2		