



CSE220: Data Structures (Lab)
Fall 2024
Lab Quiz - 06
Duration: 20 Minutes

B

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

You are given two arrays A and B , both consisting of n integers. Starting from index 0, for each element in B , you must subtract it from the current largest integer in A . After processing all elements in B , return array A sorted in non-increasing order.

You are only allowed to use the `insert()` and `extract()` method from MinHeap/MaxHeap. Do not use any other functions (for example, `sort()`).

```
def sub_arrays(n, A, B):  
    //to do
```

Input	Output	Explanation
$n = 3$ $A = [1, 3, 5]$ $B = [2, 4, 6]$	$A = [1, -1, -3]$	<p>Initially, $A=[1, 3, 5]$, $B = [2, 4, 6]$</p> <ol style="list-style-type: none">1. Sub $B[0]=2$ from the largest integer $A[2]=5$. A becomes $[1, 3, 3]$.2. Sub $B[1]=4$ from the largest integer $A[2]=3$. A becomes $[1, 3, -1]$.3. Sub $B[2]=6$ from the largest integer $A[1]=3$. A becomes $[1, -3, -1]$. <p>Finally, make A non-increasing to get $[1, -1, -3]$.</p>