CSE220: Data Structures (Lab)

Fall 2024

Lab Quiz - 06

Duration: 20 Minutes

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

You are given two arrays and , both consisting of integers. Starting from index 0, for each element in , you must subtract it from the current largest integer in . After processing all elements in , return array 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] | Initially, A=[1, 3, 5], B = [2, 4, 6]   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].   Finally, make A non-increasing to get [1, -1, -3]. |