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 a **number k**. Your task is to find the **product of top k lowest** elements from the list.

**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]  k = 3 | product = 176 |
| **Explanation:** | |
| The array is [11, 15, 8, 2, 31, 23] and the top k lowest elements are [2, 8, 11]. So the product will be 2\*8\*11 = 176 | |