Problem 658: Find K Closest Elements

Problem Information

Difficulty: Medium
Acceptance Rate: 49.19%
Paid Only: No
Tags: Array, Two Pointers, Binary Search, Sliding Window, Sorting, Heap (Priority Queue)

Problem Description

Given a **sorted** integer array `arr`, two integers `k` and `x`, return the `k` closest integers to `x` in the array. The result should also be sorted in ascending order.

An integer `a` is closer to `x` than an integer `b` if:

* `|a - x| < |b - x|`, or * `|a - x| == |b - x|` and `a < b`

Example 1:

Input: arr = [1,2,3,4,5], k = 4, x = 3

Output: [1,2,3,4]

Example 2:

Input: arr = [1,1,2,3,4,5], k = 4, x = -1

Output: [1,1,2,3]

Constraints:

* `1 <= k <= arr.length` * `1 <= arr.length <= 104` * `arr` is sorted in **ascending** order. * `-104 <= arr[i], x <= 104`

Code Snippets

C++:

```
class Solution {
public:
vector<int> findClosestElements(vector<int>& arr, int k, int x) {

}
};
```

Java:

```
class Solution {
public List<Integer> findClosestElements(int[] arr, int k, int x) {

}
}
```

Python3:

```
class Solution:
def findClosestElements(self, arr: List[int], k: int, x: int) -> List[int]:
```