

Question 02

You are given two sorted arrays `arr1` and `arr2` of lengths `m` and `n` respectively, and an integer `x`. Your task is to find the pair of elements (`arr1[i]`, `arr2[j]`) such that the absolute difference between their sum and `x` is minimum.

Write a function or program to solve this problem efficiently.

Input:

The input consists of four parts:

The first line contains two integers `m` and `n` ($1 \leq m, n \leq 10^5$), representing the lengths of arrays `arr1` and `arr2` respectively.

The second line contains `m` space-separated integers, representing the elements of the sorted array `arr1`.

The third line contains `n` space-separated integers, representing the elements of the sorted array `arr2`.

The fourth line contains an integer `x` ($-10^9 \leq x \leq 10^9$), denoting the target sum.

Output:

Output two integers `i` and `j`, representing the indices of the pair (`arr1[i]`, `arr2[j]`) such that the absolute difference between their sum and `x` is minimum. If there are multiple pairs with the same minimum absolute difference, output the pair with the smallest value of `i` and `j`.

Example:

Sample Input: 3 4 6 7 9 4 5 6 8 16 Output: The closest pair is [7, 8]	Sample Input: 4 4 1 4 5 7 10 20 30 40 50 Output: The closest pair is [7, 40]
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Explanation:

In the given example, the arrays `arr1` and `arr2` are [6, 7, 9] and [4, 5, 6, 8] respectively. The target sum `x` is 16. The pair (`arr1[1]`, `arr2[3]`) = (7, 8) has the sum $7 + 8 = 15$, which is closest to $x = 16$ among all pairs.

Note:

Both arrays `arr1` and `arr2` are sorted in ascending order.

The absolute difference between the sum of elements of any pair (`arr1[i]`, `arr2[j]`) and `x` should be minimized.