

Array · LeetCode

Median of Two Sorted Arrays

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Array

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4. Median of Two Sorted Arrays

Attempted

Hard Topics Companies

Given two sorted arrays `nums1` and `nums2` of size `m` and `n` respectively, return **the median** of the two sorted arrays.

The overall run time complexity should be $O(\log(m+n))$.

Example 1:

Input: `nums1 = [1,3]`, `nums2 = [2]`
Output: `2.00000`
Explanation: merged array = `[1,2,3]` and median is 2.

Example 2:

Input: `nums1 = [1,2]`, `nums2 = [3,4]`
Output: `2.50000`
Explanation: merged array = `[1,2,3,4]` and median is $(2 + 3) / 2 = 2.5$.

Constraints:

- `nums1.length == m`
- `nums2.length == n`
- $0 \leq m \leq 1000$
- $0 \leq n \leq 1000$
- $1 \leq m + n \leq 2000$

Code

Java

```
1 class Solution {
2     private int p1=0,p2=0;
3     private int getMin(int[] nums1,int[] nums2){
4         if(p1<nums1.length && p2<nums2.length){
5             return nums1[p1]<nums2[p2]? nums1[p1++]:nums2[p2++];
6         }
7         else if(p2<nums2.length){
8             return nums2[p2++];
9         }
10        return -1;
11    }
12    public double findMedianSortedArrays(int[] nums1,int[] nums2){
13        int m=nums1.length,n=nums2.length;
14        if((m+n)%2==0){
15            for(int i=0;i<(m+n)/2-1;i++){
16                int tmp=getMin(nums1,nums2);
17            }
18            return (double)(getMin(nums1,nums2)+getMin(nums1,nums2))/2;
19        }
20        else{
21            int tmp=getMin(nums1,nums2);
22            return (double)tmp;
23        }
24    }
25 }
```

Speed

Ln 1, Col 1

Testcase

Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

nums1 =

[1,3]

nums2 =