

o88. Merge Sorted Array

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- Two Pointers + Array

Description

Given two sorted integer arrays *nums1* and *nums2*, merge *nums2* into *nums1* as one sorted array.

Note:

You may assume that *nums1* has enough space (size that is greater or equal to $m + n$) to hold additional elements from *nums2*. The number of elements initialized in *nums1* and *nums2* are *m* and *n* respectively.

1. Thought line

2. Two Pointers + Array

```
1 class Solution {
2 public:
3     void merge(int A[], int m, int B[], int n) {
4
5         int a=m-1;
6         int b=n-1;
7         int i=m+n-1;    // calculate the index of the last element of the merged array
8
9         // go from the back by A and B and compare and put to the A element which is larger
10        while(a>=0 && b>=0){
11            if(A[a]>B[b])    A[i--]=A[a--];
12            else            A[i--]=B[b--];
13        }
14
15        // if B is longer than A just copy the rest of B to A location, otherwise no need to do anything
16        while(b>=0)        A[i--]=B[b--];
17    }
18 };
```