# **088.** 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:
     void merge(int A[], int m, int B[], int n) {
 5
        int a=m-1;
 6
       int b=n-1;
       int i=m+n-1; // calculate the index of the last element of the merged array
7
 8
       // go from the back by A and B and compare and put to the A element which is larger
9
10
       while(a>=0 && b>=0){
        if(A[a]>B[b]) A[i--]=A[a--];
else A[i--]=B[b--];
11
12
13
14
15
        16
        while(b \ge 0) A[i--]=B[b--];
17
18 };
```