

UWPC

Question 2

Zero to Hero

Borhan wants to give you an integer array of numbers. He wants you to move all 0's to the end of it while maintaining the relative order of the non-zero elements.

Note that you must do this in-place without making a copy of the array.

Input

- An Integer array, where each element is separated by a space. Each integer is in the range [0, 50] and the length of the array is in the range [1, 100].

Output

- An Integer array, where each element is separated by a space. Where all the 0's are moved to the end of the array while maintaining the relative order of the non-zero elements.
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Sample 1

Input

```
0 1 0 3 12
```

Output

```
1 3 12 0 0
```

Explanation: 1, 3, 12 are non-zero elements and 0's are zero elements. The relative order of the non-zero elements is maintained.

Sample 2

Input

```
0
```

Output

```
0
```

Explanation: 0 is the only element in the array. The relative order of the non-zero elements is maintained.

Sample 3

Input

```
0 0 1 0 2 0 3 2
```

Output

```
1 2 3 2 0 0 0 0
```

Explanation: 1, 2, 3, 2 are non-zero elements and 0's are zero elements. The relative order of the non-zero elements is maintained.