

# Write a program to move zeros in Python

In this article, TipsMake.com will work with you to write a program to move zeros in Python.

**Problem :** Given an array of random numbers, move all zeros in that array to the end of the array.

**Example :** Given array {1, 9, 8, 4, 0, 0, 2, 7, 0, 6, 0}, it becomes {1, 9, 8, 4, 2, 7, 6, 0, 0, 0, 0} after sorting. The order of all other elements is the same.

Input : arr[] = {1, 2, 0, 4, 3, 0, 5, 0}; Output : arr[] = {1, 2, 4, 3, 5, 0, 0, 0, 0, 0, 0}

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## Method 1: Use a loop

Move the array "arr" from left to right. While moving, keep checking for non-zero element in array. Let's set the position of non-zero elements as "count". For each element other than 0 arr[i], set the element to "arr[count]" and increment the value "count". Once the move was completed all non-zero elements were moved to the front and "count" was set as the index of the first zero. Now, what we need to do is run a loop for all zero elements from "count" to the end of the array.

Here is sample code:

```
# Python3 code to move all zeroes # at the end of array # Function which pushes a
?ng sau khi di chuy?n toàn b? s? 0 v? cu?
i :") print(arr) # This code is contributed by "Abhishek Sharma 44"
```

## Method 2: Partition the array

The approach of this method is quite simple. We will use 0 as the pivot element and whenever we see a non-zero element we will swap it with the pivot element. As a result, non-zero elements will appear at the beginning.

Sample code:

```
# Python Program to move all zeros to the end A = [5, 6, 0, 4, 6, 0, 9, 0, 8] n = len(A)
```

## Method 3: Use the method to count the number 0

In this approach we will traverse the entire array and will count the number of zeros present in the array. While counting, we will remove zero from the array.

After completing the above process, we will push back the count of zeros into the array.

Here is sample code:

```
# Python program to shift all zeros # to right most side of array # without affe  
?ng sau khi di chuy?n toàn b? s? 0 v? cu?i là: " + arr)
```

TipsMake.com hope that this article will be useful to you!

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