

# Rearrange an array with O(1) extra space

Given an array **arr[]** of size **N** where every element is in the range from **0** to **n-1**. Rearrange the given array so that the transformed array **arr<sup>T</sup>[i]** becomes **arr[arr[i]]**.

**NOTE:** **arr** and **arr<sup>T</sup>** are both same variables, representing the array before and after transformation respectively.

## Example 1:

### Input:

N = 2

arr[] = {1,0}

**Output:** 0 1

### Explanation:

arr[arr[0]] = arr[1] = 0.

arr[arr[1]] = arr[0] = 1.

## Example 2:

### Input:

N = 5

arr[] = {4,0,2,1,3}

**Output:** 3 4 2 0 1

### Explanation:

arr[arr[0]] = arr[4] = 3.

arr[arr[1]] = arr[0] = 4.

and so on.

## Your Task:

You don't need to read input or print anything. The task is to complete the function **arrange()** which takes arr and N as input parameters and rearranges the elements in the array in-place.

**Expected Time Complexity:** O(N)

**Expected Auxiliary Space:** O(1)

## Constraints:

1 <= N <= 10<sup>5</sup>

0 <= Arr[i] < N