**Convert an array to reduced form**

Submissions: [3406](https://practice.geeksforgeeks.org/problem_submissions.php?pid=608)  Accuracy:

52.91%

   Difficulty: [Medium](https://practice.geeksforgeeks.org/Medium/0/0/)   Marks: 4

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Given an array with n distinct elements, convert the given array to a reduced form where all elements are in range from 0 to n-1. The order of elements is same, i.e., 0 is placed in place of smallest element, 1 is placed for second smallest element, … n-1 is placed for largest element.

**Input:**

The first line of input contains an integer T denoting the number of test cases.  
The first line of each test case is N, where N is the size of array.  
The second line of each test case contains N input arr[i].

**Output:**

Print the reduced form of the array.

**Constraints:**

1 ≤ T ≤ 100  
1 ≤ N ≤ 200  
1 ≤ arr[i] ≤ 1000

**Example:**

**Input:**  
2  
3  
10 40 20  
5  
5 10 40 30 20

**Output:**  
0 2 1  
0 1 4 3 2

\*\* For More Input/Output Examples Use ['Expected Output'](https://practice.geeksforgeeks.org/problems/convert-an-array-to-reduced-form/0#ExpectOP) option \*\*

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<https://practice.geeksforgeeks.org/problems/convert-an-array-to-reduced-form/0>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp1

{

class Program

{

static void Convertir(int[] a)

{

Dictionary<int, int> dic = new Dictionary<int, int>();

int[] copia = a.ToArray();

Array.Sort(copia);

for (int i = 0; i < a.Length; i++)

{

dic[copia[i]] = i;

}

for (int i = 0; i < a.Length; i++)

{

Console.Write(dic[a[i]] + " ");

}

}

static void Main(string[] args)

{

int t = int.Parse(Console.ReadLine());

while (t-- > 0)

{

int n = int.Parse(Console.ReadLine());

int[] arr = Array.ConvertAll(Console.ReadLine().Trim().Split(' '), e => int.Parse(e));

Convertir(arr);

}

//int[] arr = { 5, 10, 40, 30, 20 };

//Convertir(arr);

Console.ReadLine();

}

}

}