

# Practice (/) BETA

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## Popular Company Tags

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- [Adobe \(/company/Adobe/\)](/company/Adobe/)
- [Synopsys \(/company/Synopsys/\)](/company/Synopsys/)
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### Popular Topic Tags

- Maths (/topics/maths/)
- Array (/topics/array/)
- Dynamic-Programming (/topics/Dynamic-Programming/)
- Greedy-Algorithm (/topics/Greedy-Algorithm/)
- Hashing (/topics/hashing/)
- Tree (/topics/tree/)
- Bit-Algorithm (/topics/bit-algorithm/)
- Matrix (/topics/matrix/)
- Backtracking (/topics/backtracking/)
- Operating System (/topics/Operating System/)
- Linked-List (/topics/Linked-List/)
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All-time Popular Problems
Remove duplicates from an unsorted linked list (/problems/remove-duplicates-from-an-unsorted-linked-list/1/?ref=self)
Count BST nodes that lie in a given range (/problems/count-bst-nodes-that-lie-in-a-given-range/1/?ref=self)
Minimize string value (/problems/minimize-string-value/0/?ref=self)
Sum of all prime numbers between 1 and N. (/problems/sum-of-all-prime-numbers-between-1-and-n/0/?ref=self)
Longest Common Substring (/problems/longest-common-substring/0/?ref=self)
Pythagorean Triplet (/problems/pythagorean-triplet/0/?ref=self)
Search an Element in an array (/problems/search-an-element-in-an-array/0/?ref=self)
Minimum element in a sorted and rotated array (/problems/minimum-element-in-a-sorted-and-rotated-array/0/?ref=self)
Detect Loop in linked list (/problems/detect-loop-in-linked-list/1/?ref=self)
Root to leaf path sum (/problems/root-to-leaf-path-sum/1/?ref=self)

Difficulty Level: [Easy \(https://practice.geeksforgeeks.org/Easy/0/0/\)](https://practice.geeksforgeeks.org/Easy/0/0/)

Submissions: 4700 (/problem\_submissions.php?pid=540) Accuracy: 49.32%

## Convert array into Zig-Zag fashion

(/topics/Array/) [Show Topic Tags](#)

[Paytm \(/company/Paytm/\)](#) [Amazon \(/company/Amazon/\)](#)

Given an array of distinct elements, rearrange the elements of array in zig-zag fashion in  $O(n)$  time. The converted array should be in form  $a < b > c < d > e < f$ . The relative order of elements is same in the output i.e you have to iterate on the original array only.

### Input:

The first line of input contains an integer  $T$  denoting the number of test cases. The description of  $T$  test cases follows.

The first line of each test case contains a single integer  $N$  denoting the size of array.

The second line contains  $N$  space-separated integers  $A_1, A_2, \dots, A_N$  denoting the elements of the array.

### Output:

Print the array in Zig-Zag fashion.

### Constraints:

$$1 \leq T \leq 100$$

$$1 \leq N \leq 100$$

$0 \leq A[i] \leq 10000$ **Example:**

Input:

```
2
7
4 3 7 8 6 2 1
4
```

```
1 4 3 2
```

Output:

```
3 7 4 8 2 6 1
1 4 2 3
```

**\*\* For More Input/Output Examples Use 'Expected Output' option \*\***Author: vaibhav95 (<https://auth.geeksforgeeks.org/user/vaibhav95/practice/>)

All submissions

(/problem\_submissions.php?pid=540)

My submissions

(/problem\_submissions.php?

pid=540&amp;isSolved=ALL&amp;lang=ALL&amp;user=Self)

Editorial (/editorial.php?pid=540)

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C (gcc 5.4)

C++ (g++ 5.4)

C#

Java (1.8)

Python 3

Theme Light

Set Default Code (<https://auth.geeksforgeeks.org/edit-profile.php>)

Reset




```
1 #code
2 for _ in range(int(input())):
3     n=int(input())
4     l=list(map(int,input().split()))
5     for i in range(n-1):
6         if i%2==0:
7             if l[i]>l[i+1]:
8                 l[i],l[i+1]=l[i+1],l[i]
9         else:
10            if l[i]<l[i+1]:
11                l[i],l[i+1]=l[i+1],l[i]
12    print(" ".join(map(str,l)))
13
14
```

**It is recommended to 'Compile & Test' your code before clicking 'Submit'!**

Compile &amp; Test

Submit

Expected Output

**Compilation/Execution Result:**Correct Answer. 

Execution Time:0.02

Next Suggested Problem: Find the element that appears once in sorted array (/problems/find-the-element-1)

Need help with your code? Please use [ide.geeksforgeeks.org](https://ide.geeksforgeeks.org/) (<https://ide.geeksforgeeks.org/>), generate link and share the link here.

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**My Subjective Stats**

Subjective Questions (/questions/himanshudce/)



Subjective Answers (/answers/himanshudce/)

Trending Problems
Firing employees (/problems/firing-employees/0/?ref=self)
Normal BST to Balanced BST (/problems/normal-bst-to-balanced-bst/1/?ref=self)
Number of subsequences in a string divisible by n (/problems/number-of-subsequences-in-a-string-divisible-by-n/0/?ref=self)
Tom and String (/problems/tom-and-string/0/?ref=self)
Equivalent Sub-Arrays (/problems/equivalent-sub-arrays/0/?ref=self)
Find the missing no in string (/problems/find-the-missing-no-in-string/1/?ref=self)
Palindromic Primes (/problems/palindromic-primes/0/?ref=self)
Brothers From Different Roots (/problems/brothers-from-different-root/1/?ref=self)
Number of permutation with K inversions (/problems/number-of-permutation-with-k-inversions/0/?ref=self)
Perfect Binary Tree (/problems/perfect-binary-tree/1/?ref=self)
Max Sum Subarray of size K (/problems/max-sum-subarray-of-size-k/0/?ref=self)
Change all even bits in a number to 0 (/problems/change-all-even-bits-in-a-number-to-0/0/?ref=self)
Sum of digits in factorial of a number (/problems/sum-of-digits-in-factorial-of-a-number/1/?ref=self)
Shortest Uncommon Subsequence (/problems/shortest-uncommon-subsequence/0/?ref=self)
Distributing Question Papers (/problems/distributing-question-papers/0/?ref=self)
Chandler and Joey (/problems/chandler-and-joe/0/?ref=self)
Word Wrap (/problems/word-wrap/0/?ref=self)
Modular multiplicative inverse (/problems/modular-multiplicative-inverse/0/?ref=self)

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**Deepak Gupta** • 2 months ago

Java

<http://hackerranksolutionc...>

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**Brij Bhushan Awasthi** • 3 months agoSimilar problem solved for linked list: <http://ide.geeksforgeeks.or...>

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**Amol Mejari** • 4 months agoSolution in Java - <http://ide.geeksforgeeks.or...>

^ | ▾ • Reply • Share ›

**NITESH GUPTA** • 4 months ago

Here is simple CPP code.

<http://ide.geeksforgeeks.or...>

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**Ankit** • 4 months ago

test case 1 output is wrong

it is:

7

4 3 7 8 6 2 1

but rather it should be

4 3 7 6 8 1 2

^ | v • Reply • Share ›



**Ramya Meruva** • 9 months ago

Wrong Answer!!!Wrong Answer

The first test case where your code failed:

Input:

33

6202 4625 5469 2038 5916 3405 5533 7004 2469 9853 4992 361 9819 3294 7195 4036 9404 8767 5404 1711 3214 3100 3751  
2139 5437 4993 1759 9572 6270 3789 9623 2472 9493

Its Correct output is:

4625 6202 2038 5916 3405 5533 5469 7004 2469 9853 361 9819 3294 7195 4036 9404 4992 8767 1711 5404 3100 3751 2139  
5437 3214 4993 1759 9572 3789 9623 2472 9493 6270

And Your Output is:

4625 6202 2038 5469 3405 5916 5533 7004 2469 9853 361 4992 3294 9819 4036 8767 7195 9404 1711 5404 3100 3214 2139  
4993 3751 5437 1759 9572 3789 6270 2472 9623 9493

Can anyone please explain me why my output is wrong?

^ | v • Reply • Share ›



**NITESH GUPTA** → Ramya Meruva • 4 months ago

The relative order of elements should be same in the output.

But in your case, it is not.

^ | v • Reply • Share ›



**Rock** → NITESH GUPTA • 4 months ago

what is relative order of elements?

^ | v • Reply • Share ›



**NITESH GUPTA** → Rock • 4 months ago

Suppose there are two numbers in input x and y. And if x appears before y in the input. And if there is a solution such that x will appear before y in the solution then you should print THE solution, even if there is a solution such that y will appear before x then also you have to print the first solution. And if there is not any solution such that x will appear before y in the solution then you can print any possible solution. Hope it will help.

^ | v • Reply • Share ›



**Hassan** • a year ago

plz,anyone check my code....<http://code.geeksforgeeks.org/BfMP...> ide gives the correct ans,but here shows wrong ans....plz,anyone correct me.....

^ | v • Reply • Share ›



**n\_vh** → Hassan • a year ago

Hey bro!! that wasn't giving the correct answer. check your output for the test case that you provided in the link: 3785, 9448, 9711, ..... this is wrong output according to the question.Well i have correct your solution, you can check it now....  
<http://code.geeksforgeeks.o...>

^ | v • Reply • Share ›



**Hassan** → n\_vh • a year ago

can u plz explain me,why u have used j equal 0...in 26 nd 31 line...i cant understand...plz tell me.....

^ | v • Reply • Share ›



**Anuj Mahajan** • a year ago

@GeeksForGeeks please check output for below input . I think mine output is lexicographically smaller than the expected output :

Input:

33

6202 4625 5469 2038 5916 3405 5533 7004 2469 9853 4992 361 9819 3294 7195 4036 9404 8767 5404 1711 3214 3100 3751  
2139 5437 4993 1759 9572 6270 3789 9623 2472 9493

Its Correct output is: