



Bigger is Greater

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Problem

Submissions

Leaderboard

Discussions

Editorial

Topics

Given a word w , rearrange the letters of w to construct another word s in such a way that s is lexicographically greater than w . In case of multiple possible answers, find the lexicographically smallest one among them.

Input Format

The first line of input contains t , the number of test cases. Each of the next t lines contains w .

Constraints

- $1 \leq t \leq 10^5$
- $1 \leq |w| \leq 100$
- w will contain only lower-case English letters and its length will not exceed 100.

Output Format

For each testcase, output a string lexicographically bigger than w in a separate line. In case of multiple possible answers, print the lexicographically smallest one, and if no answer exists, print `no answer`.

Sample Input

```
5
ab
bb
hefg
dhck
dkhc
```

Sample Output

```
ba
no answer
hegf
dhkc
hcdk
```


Explanation

- Test case 1:**
There exists only one string greater than `ab` which can be built by rearranging `ab`. That is `ba`.
- Test case 2:**
Not possible to rearrange `bb` and get a lexicographically greater string.
- Test case 3:**
`hegf` is the next string lexicographically greater than `hefg`.
- Test case 4:**
`dhkc` is the next string lexicographically greater than `dhck`.
- Test case 5:**
`hcdk` is the next string lexicographically greater than `dkhc`.

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C#



```
1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5
6 namespace ConsoleApplication1
7 {
8     class Program
9     {
10         public static bool nextPermutation(char[] array)
11         {
12             // Find non-increasing suffix
13             int i = array.Length - 1;
14             while (i > 0 && array[i - 1] >= array[i])
15                 i--;
16             if (i <= 0)
17                 return false;
18
19             // Find successor to pivot
20             int j = array.Length - 1;
21             while (array[j] <= array[i - 1])
22                 j--;
23             char temp = array[i - 1];
24             array[i - 1] = array[j];
25             array[j] = temp;
26
27             // Reverse suffix
28             j = array.Length - 1;
29
30             while (i < j)
31             {
32                 temp = array[i];
33                 array[i] = array[j];
34                 array[j] = temp;
35                 i++;
36                 j--;
37             }
38             return true;
39         }
40     }
41
42     static void Main(string[] args)
43     {
44         int t = int.Parse(Console.ReadLine());
45
46         while (t-- > 0)
47         {
48             string w = Console.ReadLine();
49             char[] perm = w.ToCharArray();
50
51             bool res = nextPermutation(perm);
52
53             if (res)
54             {
55                 Console.WriteLine(new string(perm));
56             }
57             else
58             {
59                 Console.WriteLine("no answer");
60             }
61         }
62     }
63 }
64
65
66
67
```



```
67  
68         Console.ReadLine();  
69     }  
70 }  
71 }  
72
```

Line: 66 Col: 14

 [Upload Code as File](#)☐ Test against custom input

Run Code

Submit Code

Congrats, you solved this challenge!

✓ Test Case #0

✓ Test Case #3

✓ Test Case #1

✓ Test Case #2

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