

02 : 05 : 44
HRS MIN SEC

August Easy '21

LIVE

Aug 07, 2021, 09:30 AM IST - Aug 07, 2021, 12:30 PM IST

INSTRUCTIONS

PROBLEMS

SUBMISSIONS

LEADERBOARD

ANALYTICS

JUDGE

[← Problems](#) / Smallest number

Smallest number

Max. score: 100

You are given a string S that represents a number. This string consists of the following characters only:

- 1
- 2
- 3

You can perform the following operation:

- Swap any two adjacent characters only if the absolute difference between the characters is 1

Your task is to determine the smallest number that can be formed by using the provided operation. You can perform this operation any number of times (possibly zero).

Note: Assume 1 based indexing.

Input format

- The first line contains an integer T that denotes the number of test cases.
- For each test case:
 - The first line contains an integer that denotes the length of string S .
 - The second line contains a string that denotes the string S .

Output format

For each test case, print a string representing the smallest number that can be formed in a new line.

Constraints

$$1 \leq T \leq 10$$

$$1 \leq |S| \leq 10^5$$

SAMPLE INPUT



```
2
5
11223
6
213123
```

SAMPLE OUTPUT



```
11223
122313
```

Explanation

For the first test case:

- No operation is required. The number represented by the string S is already smallest.

For the second test case:

- Apply operation on character at 1^{st} and 2^{nd} position. String S will be **123123**.
- Apply operation on character at 4^{th} and 5^{th} position. String S will be **123213**.
- Apply operation on character at 3^{rd} and 4^{th} position. String S will be **122313**.
- **122313** is the smallest number that can be achieved.

Time Limit: 0.5 sec(s) for each input file.

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Score is assigned if any testcase passes.

Allowed Languages: Bash, C, C++, C++14, C++17, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, Java 14, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, Python 3.8, Racket, Ruby, Rust, Scala, Swift-4.1, Swift, TypeScript, Visual Basic

CODE EDITOR

Save

C (gcc 5.4.0)



```
1  #include <stdio.h>
2  int swap(int d[], int a)
3  {
4      for (int i = 0; i < a - 1; i++)
5      {
6          int flag = 0;
7          if (d[i] > d[i + 1] && ((d[i] - d[i + 1] == 1) || (d[i] - d[i + 1]
8          == -1)))
9          {
10             flag = 1;
```

```
10         int temp = d[i];
11         d[i] = d[i + 1];
12         d[i + 1] = temp;
13         // printf("\n(%d,%d)",d[i],d[i+1]);
14         printf("\n%d", temp);
15     }
16     if (flag == 1)
17     {
18         swap(d, a);
19     }
20 }
21 int temp = 0;
22 for (int i = 0; i < a; i++)
```

47:2 vscode

☒ Provide custom input

COMPILE & TEST

SUBMIT

Log ID: 177502067 / Aug 07, 2021 10:16 AM IST

RESULT: ❌ Wrong Answer[? Refer judge environment](#)

Time (sec)	Memory (KiB)	Language
0.10000000149	64	C

Input

```
2
5
11223
6
213123
```

Output

```
11223
2123123
```

Expected Correct Output

```
11223
122313
```

💡 **Tip:** You can submit any number of times you want. Your best submission is considered for computing total score.

Your Rating: ★★★★★ [Tweet](#)

?

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