

Cards

2023/2024 SEASON – SECOND ROUND



You have n two-sided cards positioned next to each other. On every side of the cards is written a digit. The digits on the visible side of the cards form a natural number. The sum of digits on the two sides of every card is 9. You can flip whatever card you want. Your task is to find the smallest possible natural number obtainable by performing several flips (possibly zero).

Input

The first line of the file **cards.in** contains an integer n – the number of cards. The next line contains a string with length n denoting the digits of the visible sides of the cards.

Output

On the single line of the file **cards.out** print a string with length n – the smallest possible natural number that can be derived.

Constraints

$$1 \leq n \leq 10^5$$

$$0 \leq s_i \leq 9$$

Time limit: 0.1 sec.

Memory limit: 256 MB.

Sample test

Input (cards.in)	Output (cards.out)
6 170635	120334