A. Ferris Wheel (ferriswheel)

Time limit: 1 seconds
Memory limit: 1024 MiB

Cesenatico's main square features a colourful Ferris wheel, one of the city's signature attractions. During the winter, the wheel was dismantled and kept in storage, but now that summer is almost here it is finally time to build it again! The parts have just arrived in the square, and with your help we are ready to put them all together.

In front of you, there are N individual cabins that need to be attached to each other, in a circular manner, to form the Ferris wheel. The cabins are numbered from 0 to $N-1$, but not necessarily in the order in which they should be attached.

Each cabin comes with a special joint that is used to connect it to the next cabin in clockwise order. Each joint has one of two possible types:

- Type [+]: can only be used to connect to a cabin with a higher number;
- Type [-]: can only be used to connect to a cabin with a lower number.

In the example below, cabin 2 has a joint of type [+]. This means that the next cabin in clockwise order must be either cabin 3 or cabin 4.

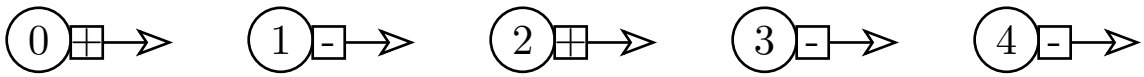

Figure 1: $N = 5$ and five separate cabins, each with a joint of type [+] or [-].

You are given the number of cabins and their joint types. Your task is to determine whether it is possible to assemble all N cabins into a Ferris wheel. If yes, you also need to find an order in which the cabins can appear on the wheel.

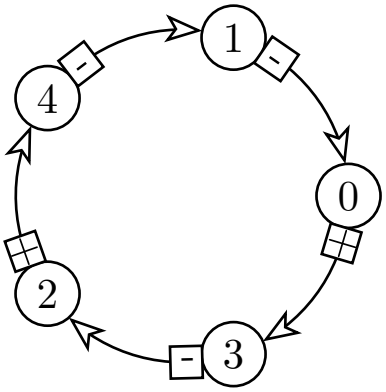

Figure 2: A valid Ferris wheel that can be assembled from the five cabins shown above.

The picture above shows one valid Ferris wheel that can be assembled from the five cabins shown above.

Formally, a valid order of cabins is a sequence $C_0, C_1, ..., C_{N-1}$ of numbers with the following properties.

- Each number from 0 to $N-1$ appears exactly once in the sequence.
- For each $0 \leq i \leq N-2$, cabin C_{i+1} must satisfy the condition imposed by the joint type of cabin C_i. That is, if the joint type of cabin C_i is [+], then $C_{i+1} > C_i$; if it is [-], then $C_{i+1} < C_i$.

- Additionally, cabin C_0 must satisfy the condition imposed by the joint type of cabin C_{N-1}.

Input

The input consists of two lines. The first line contains one integer N, denoting the number of cabins.

The second line contains a string S of length N, consisting of characters '+' and '-'. If $S_i =$ '+', then cabin i has joint type [+]. If $S_i =$ '-', then cabin i has joint type [-].

Output

If there is no order that satisfies the constraints, output `NO`.

Otherwise, output `YES`, followed by a line of N integers, the indices of the cabins on a valid Ferris wheel in clockwise order, starting from any index. If there are multiple solutions, you may print any of them.

Constraints

- $3 \leq N \leq 300\,000$.
- $S_i =$ '+' or '-'.

Scoring

Your program will be tested on several test cases grouped into subtasks. To obtain the score for a subtask, you must correctly solve all the tests it contains.

- **Subtask 0 [0 points]**: Examples.
- **Subtask 1 [16 points]**: $N = 3$.
- **Subtask 2 [13 points]**: There is exactly one '+' in the string S.
- **Subtask 3 [24 points]**: The characters '+' and '-' alternate in the string S; that is, for every $i = 0, ..., N-2$, it is the case that $S_i \neq S_{i+1}$.
- **Subtask 4 [23 points]**: $N \leq 1000$.
- **Subtask 5 [24 points]**: No additional constraints.

Examples

stdin	stdout
3 +++	NO
5 +-+--	YES 0 3 2 4 1
7 ------+	NO
8 +-+-+-+-	YES 3 2 4 6 7 1 0 5
11 +++--+-++--	YES 10 0 5 8 9 4 2 6 3 1 7

Explanation

First Example. We are given three cabins. Since all the joints are of type [+], we must arrange the cabins so that each cabin is followed by a cabin with a higher number. It can be shown that no order of the three cabins satisfies this condition, therefore the answer is `NO`.

Second Example. See Figures 1 and 2 in the problem statement. We are given five cabins. We must arrange them in clockwise order such that:

- cabins 0 and 2 (joint type [+]) are immediately followed by a cabin with a higher number;
- cabins 1, 3, and 4 (joint type [-]) are immediately followed by a cabin with a lower number.

A Ferris wheel that satisfies all these conditions is shown in the figure below. For joints of type [+], the requirements hold since $0 < 3$ and $2 < 4$. For joints of type [-], the requirements hold since $1 > 0$, $3 > 2$, and $4 > 1$. There are multiple outputs that correspond to this Ferris wheel: instead of `0 3 2 4 1` you can also output `3 2 4 1 0`, `2 4 1 0 3`, `4 1 0 3 2`, or `1 0 3 2 4`.

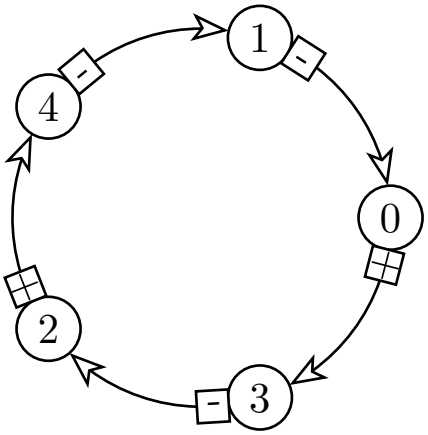

Figure 3: The Ferris wheel of sample 2.

In the third example, we are given seven cabins: all joints are of type [-], except for the last, which has type [+]. Thus, we must arrange the cabins so that every cabin is followed by one with a lower number, except for cabin 6, which must be followed by a cabin with a higher number. It can be shown that no such order exists, so the answer is `NO`.

The figures below show the Ferris wheels that correspond to the last two example outputs.

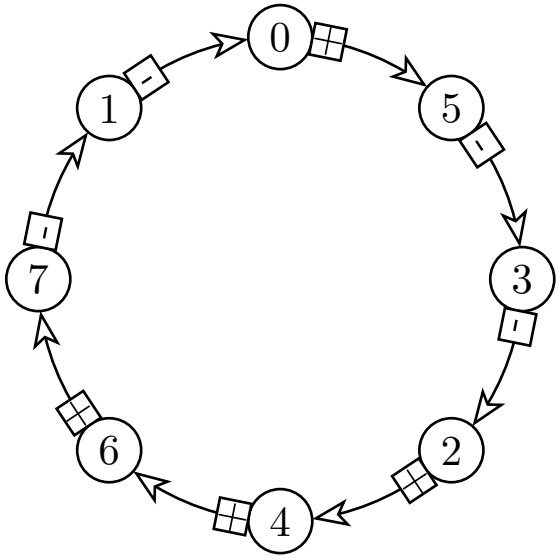

Figure 4: The Ferris wheel of sample 4.

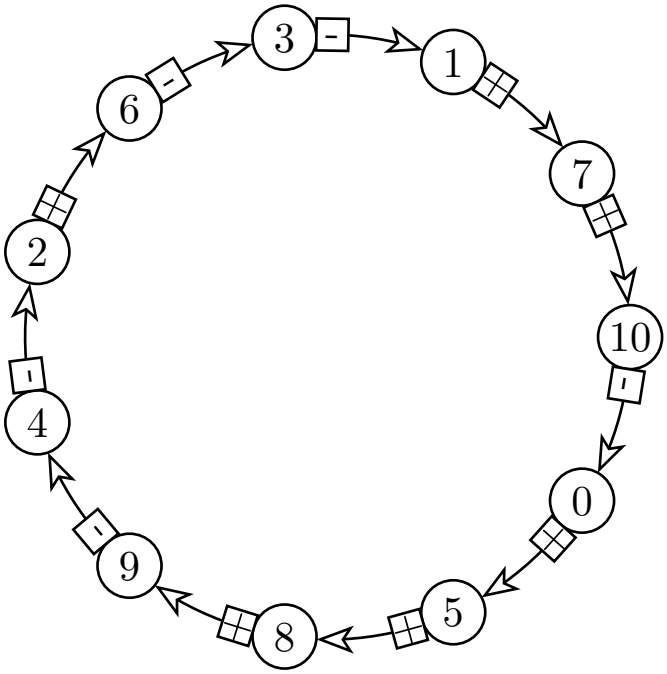

Figure 5: The Ferris wheel of sample 5.