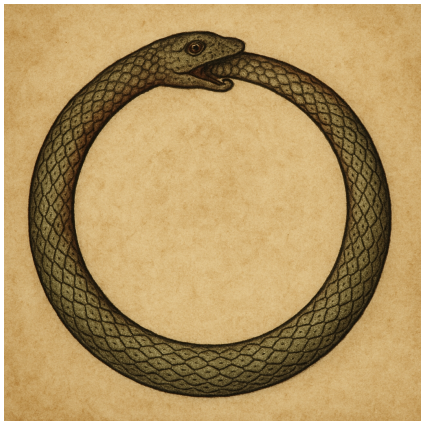
Ouroboros sequence P87670_en



The ouroboros is an ancient symbol depicting a snake eating its own tail.

We will call a sequence of n numbers $x_1 \ldots x_n$ an ouroboros if two things happen:

1. For every $1 \leq i < n$, x_i and x_{i+1} differ by one.
2. x_n and x_1 also differ by one.

For instance, 3 4 5 4 3 2 1 2 is an ouroboros sequence, while 3 4 5 4 3 is not.

Given a sequence of numbers, can you decide if they can be rearranged to form an ouroboros sequence?

Input

Input consists of several cases, each with n, followed by $x_1 \ldots x_n$. Assume $2 \leq n \leq 10^5$, and that each x_i is an integer number between 0 and 1000.

Output

Print one line for each case. If it is not possible to build an ouroboros sequence from the given numbers, print "`NO`". Otherwise, print "`YES`" followed by the lexicographically largest ouroboros sequence.

Sample input 1

```
8  3 4 5 4 3 2 1 2
5  3 4 5 4 3
2  1000 0
4  2 1 1 0
6  9 9 8 9 8 8
6  9 11 9 10 8 10
8  2 2 3 3 4 4 2 3
8  2 1 2 1 2 1 2 4
```

Sample output 1

```
YES 5 4 3 2 1 2 3 4
NO
NO
YES 2 1 0 1
YES 9 8 9 8 9 8
YES 11 10 9 8 9 10
NO
NO
```

Problem information

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