



Problem G. Football Match

Input file: *standard input*
Output file: *standard output*
Time limit: 1 second
Memory limit: 256 mebibytes

Zenyk wants to play football, and $n - 1$ friends join him. All players have skill level — an integer between 1 and 10 000.

Players want to choose a referee and then divide into two teams such that each player is either the referee or a member of one of the teams, and the sums of skills of players in both teams are the same. So that will be a fair game.

Unfortunately all of them forgot their own skill levels. But each player remembers if it's possible to divide into teams when he is a referee.

Find such skill values that satisfy all conditions. If several possible answers exist print any of them.

Input

The first line contains one integer n ($3 \leq n \leq 50$).

The second line contains a string of length n . The i -th character of this string equals “Y” if it's possible to divide players into teams if i -th player is a referee, and “N” otherwise.

Output

In the first line, print “YES” if at least one possible set of values exists, and “NO” otherwise. If the answer is “YES”, print n integers — the corresponding values. These values should be between 1 and 10 000. If several possible answers exist, print any of them.

Example

standard input	standard output
4 YNNY	YES 3 1 2 3