



Separate the Numbers

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Problem

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A numeric string, s , is *beautiful* if it can be split into a sequence of two or more positive integers, a_1, a_2, \dots, a_n , satisfying the following conditions:

- $a_i - a_{i-1} = 1$ for any $1 < i \leq n$ (i.e., each element in the sequence is 1 more than the previous element).
- No a_i contains a leading zero. For example, we can split $s = 10203$ into the sequence $\{1, 02, 03\}$, but it is *not* beautiful because **02** and **03** have leading zeroes.
- The contents of the sequence cannot be rearranged. For example, we can split $s = 312$ into the sequence $\{3, 1, 2\}$, but it is not beautiful because it breaks our first constraint (i.e., $1 - 3 \neq 1$).

The diagram below depicts some beautiful strings:

$$\begin{aligned}
 \text{"1234"} &= \text{"1"} + \text{"2"} + \text{"3"} + \text{"4"} \\
 \text{"91011"} &= \text{"9"} + \text{"10"} + \text{"11"} \\
 \text{"99100"} &= \text{"99"} + \text{"100"}
 \end{aligned}$$

You must perform q queries, where each query consists of some string s . For each query, print whether or not the string is beautiful on a new line. If it's beautiful, print YES x , where x is the first number of the increasing sequence (if there are multiple such values of x , choose the smallest); otherwise, print NO instead.

Input Format

The first line contains an integer denoting q (the number of strings to evaluate).
Each of the q subsequent lines contains some string s for a query.

Constraints

- $1 \leq q \leq 10$
- $1 \leq |s| \leq 32$
- Each character in s is a decimal digit from 0 to 9 (inclusive).

Output Format

For each query, print its answer on a new line (i.e., either YES x where x is the smallest first number of the increasing sequence, or NO).

Sample Input 0

```

7
1234
91011
99100
101103
010203
13
1

```

Sample Output 0

```
YES 1
YES 9
YES 99
NO
NO
NO
NO
```

Explanation 0

The first three numbers are beautiful (see the diagram above). The remaining numbers are not beautiful:

- For $s = 101103$, all possible splits violate the first and/or second conditions.
- For $s = 010203$, it starts with a zero so all possible splits violate the second condition.
- For $s = 13$, the only possible split is $\{1, 3\}$, which violates the first condition.
- For $s = 1$, there are no possible splits because s only has one digit.

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Max Score: 20

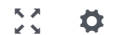
Difficulty: Easy

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Java 7



```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8
9     public static void main(String[] args) {
10         Scanner in = new Scanner(System.in);
11         int q = in.nextInt();
12         for(int a0 = 0; a0 < q; a0++){
13             String s = in.next();
14             // your code goes here
15         }
16     }
17 }
18
```

Line: 1 Col: 1

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