

Can You Make It Empty 2

You are given a string S with only 0 and 1. You can delete the string 100 from any position of S an infinite number of times and obtain a new S after concatenation. Is it possible to make the string empty?

As for example, if $S=101000$ then $101000 \rightarrow 100 \rightarrow \text{empty}$

If $S=1010001$ then $1010001 \rightarrow 1001 \rightarrow 1 \rightarrow \text{not empty}$

Input

Input starts with an integer T (≤ 100), denoting the number of test cases.

Each case contains a string S . The size of string is at most 120000.

Output

For each test case, print the case number and “yes” if it is possible to make the string S empty, print “no” otherwise.

Sample Input

```
2
101000
1010001
```

Output for Sample Input

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Case 1: yes
Case 2: no
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Problem Setter: Md Abdul Alim, Dept. of Computer Science, Bangladesh University of Business & Technology