16/11/2017 HackerRank

















Points: 25 Rank: 183202



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Balanced Brackets





A bracket is considered to be any one of the following characters: (,), {,}, [, or].

Two brackets are considered to be a *matched pair* if the an opening bracket (i.e., (, [, or {) occurs to the left of a closing bracket (i.e.,),], or }) of the exact same type. There are three types of matched pairs of brackets: [], {}, and ().

A matching pair of brackets is *not balanced* if the set of brackets it encloses are not matched. For example, {[(])} is not balanced because the contents in between { and } are not balanced. The pair of square brackets encloses a single, unbalanced opening bracket, (, and the pair of parentheses encloses a single, unbalanced closing square bracket,].

By this logic, we say a sequence of brackets is considered to be balanced if the following conditions are met:

- It contains no unmatched brackets.
- The subset of brackets enclosed within the confines of a matched pair of brackets is also a matched pair of brackets.

Given n strings of brackets, determine whether each sequence of brackets is balanced. If a string is balanced, print YES on a new line; otherwise, print NO on a new line.

Input Format

The first line contains a single integer, $\boldsymbol{n}_{\!\scriptscriptstyle f}$ denoting the number of strings.

Each line i of the n subsequent lines consists of a single string, s, denoting a sequence of brackets.

Constraints

- $1 < n < 10^3$
- $1 \leq len_s \leq 10^3$, where len_s is the length of the sequence.
- Each character in the sequence will be a bracket (i.e., {, }, (,), [, and]).

Output Format

For each string, print whether or not the string of brackets is balanced on a new line. If the brackets are balanced, print YES; otherwise, print NO.

Sample Input

```
3
{[()]}
{[(])}
{{[[(())]]}}
```

Sample Output

YES

NO

YES

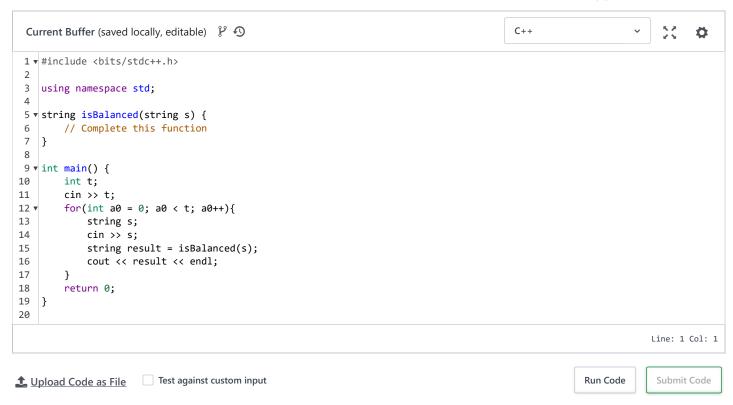
Explanation

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1. The string {[()]} meets both criteria for being a balanced string, so we print YES on a new line.

- 2. The string {[(])} is not balanced, because the brackets enclosed by the matched pairs [(] and (]) are not balanced.
- 3. The string {{[[(())]]}} meets both criteria for being a balanced string, so we print YES on a new line.

f in Submissions:<u>35559</u> Max Score:25 Difficulty: Medium Rate This Challenge: ☆☆☆☆☆



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