Braces

You are designing a compiler for a C++ program and need to check that braces in any given file are balanced.

Braces in a string are considered to be balanced if the following criteria are met:

- All braces must be closed. Braces come in pairs of the form (), {} and []. The left brace *opens* the pair, and the right one *closes* it.
- In any set of nested braces, the braces between any pair must be closed.

For example, [{}] is a valid grouping of braces but []]{} is not.

Function Description

Complete the function *braces* in the editor below. The function must return an array of strings where the string at each index *i* denotes whether or not the braces were balanced in a $values_i$. The array should consist of strings "YES" or "NO" aligned with their indexes in *values*.

braces has the following parameter(s):

$values[values_0,...values_{n-1}]$: an array of strings to analyze

Constraints

- $1 \le n \le 15$
- 1 ≤ length of $values_i \le 100$
- It is guaranteed that each $values_i$ consists of (,), {, }, [, and] only.

Input Format For Custom Testing

Sample Case 0

Sample Input For Custom Testing

```
2
{}[]()
{[}]}
```

Sample Output

```
YES
NO
```

Explanation

$values_0$: {}[]() meets the criteria for a balanced string, so index *0* in our return array should contain the string YES.

$values_1$: {[}]} contains unmatched braces between a matched pair in the substrings [}, {[}, and [}], so index *1* in our return array should contain the string NO.

YOUR ANSWER

We recommend you take a quick tour of our editor before you proceed. The timer will pause up to 90 seconds for the tour. Start tour

For help on how to read input and write output in Python 3, click here.

Original Code Python 3

```
    opening_braces = ['{', '[', '(']
    closing_braces = ['}', ']', ')']

    stack = []
    result = []

    for braces in values:
        for b in braces:
            if not stack:
                stack.append(b)
            else:
                if opening_braces.index(stack[-1]) == closing_braces.index(b):
                    stack.pop()
                else:
                    stack.append(b)

        if stack:
            result.append('NO')
        else:
            result.append('YES')

    return result

```

Line: 10 Col: 1

Test against custom input

Run Code | Submit code & Continue

(You can submit any number of times)

Download sample test cases *The input/output files have Unix line endings. Do not use Notepad to edit them on windows.*