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PROBLEMS SET : YOUR FIRST STEP TO THE PROBLEM-SOLVING WORLD

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Valid Parentheses

Given a string s containing just the characters '(', ')', '{', '}', '[' and ']', determine if the input string is valid.

An input string is valid if:

Open brackets must be closed by the same type of brackets.

Open brackets must be closed in the correct order.

Every close bracket has a corresponding open bracket of the same type.

Input Specification

$\mathbf{1} \leq |\boldsymbol{s}| \leq 10^4$
S consists of parentheses only '()[]{}'.

Output Specification

Print $\boldsymbol{Yes}$ if the multiplication of $\boldsymbol{A}$ and $\boldsymbol{B}$ is larger or equal to CC and $\boldsymbol{No}$ otherwise.

Sample Input

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

Sample Output

```
true
```

Sample Input

```
()
```

Sample Output

```
false
```

Submit your solution here: https://shorturl.at/KOP67

Java substring problem

We define the following terms:

- **Lexicographical Order**, also known as alphabetic or dictionary order, orders characters as follows:

$$\mathtt{A} < \mathtt{B} < \ldots < \mathtt{Y} < \mathtt{Z} < \mathtt{a} < \mathtt{b} < \ldots < \mathtt{y} < \mathtt{z}$$

For example, ball < cat, dog < dorm , Happy < happy , Zoo < ball.

- A **substring** of a string is a contiguous block of characters in the string. For example, the substrings of abc are a , b, c , ab, bc , and abc .

Given a string, , and an integer, , complete the function so that it finds the lexicographically smallest and largest substrings of length .

Input Specification

- The first line contains a string denoting s.
- The second line contains an integer denoting k.
- $1 \leq |s| \leq 1000$
- s consists of English alphabetic letters only (i.e., [a-zA-Z]).

Output Specification

String: the string ' + "\n" + ' where and are the two substrings

Sample Input

```
welcometojava
3
```

Sample Output

```
ava
wel
```

Explanation

String $s=$*"welcometojava"* has the following lexicographically-ordered substrings of length $k=3$:

["nava", "corn" , "elc", "eto", "jav", "lco", "met", "oja", "ome", "tor, "well"]

We then return the first (lexicographically smallest) substring and the last (lexicographically largest) substring as two newline-separated values (i.e., ava\nwel).

The stub code in the editor then prints ava as our first line of output and wel as our second line of output.

Submit your solution here: https://shorturl.at/aGMW5

A Multiplication Problem

You are with your favorite math professor, explaining how hard it is to do multiplication in your head. Luckily, you are smart enough to write a program to automate this for you.

Your task is simple, write a program that verifies if the multiplication of two given numbers $A*B$ is larger or equal to C.

Input Specification

First and only line contains 3 integers $0 \leq A, B, C \leq 10^{18}$.

Output Specification

Print Yes if the multiplication of A and B is larger or equal to CC and No otherwise.

Sample Input

```
10 10 100
```

Sample Output

```
Yes
```

Sample Input

```
6 7 43
```

Sample Output

```
No
```

Submit your solution here: https://shorturl.at/lpqsU