

# Problem: Append and Delete

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You have a string,  $s$ , of lowercase English alphabetic letters. You can perform two types of operations on  $s$ :

1. *Append* a lowercase English alphabetic letter to the end of the string.
2. *Delete* the last character in the string. Performing this operation on an empty string results in an empty string.

Given an integer,  $k$ , and two strings,  $s$  and  $t$ , determine whether or not you can convert  $s$  to  $t$  by performing *exactly*  $k$  of the above operations on  $s$ . If it's possible, print `Yes`; otherwise, print `No`.

## Input Format

The first line contains a string,  $s$ , denoting the initial string.

The second line contains a string,  $t$ , denoting the desired final string. The third line contains an integer,  $k$ , denoting the desired number of operations.

## Constraints

- $1 \leq k \leq 10^4$
- $1 \leq |s| \leq 10^4$
- $1 \leq |t| \leq 10^4$
- $s$  and  $t$  consist of lowercase English alphabetic letters.

## Output Format

Print `Yes` if you can obtain string  $t$  by performing exactly  $k$  operations on  $s$ ; otherwise, print `No`.

## Sample Input 0

```
hackerhappy
hackerrank
9
```

## Sample Output 0

```
Yes
```

## Explanation 0

We perform 4 delete operations to reduce string  $s$  to `hacker`. Next, we perform 5 append operations (i.e., `r`, `a`, `n`, and `k`), to get `hackerrank`. Because we were able to convert  $s$  to  $t$  by performing exactly 9 operations, we print `Yes`.

## Sample Input 1

```
aba
aba
```

**Sample Output 1**

Yes

**Explanation 1**

We perform delete operations to reduce string to the empty string (recall that, though the string will be empty after deletions, we can still perform a delete operation on an empty string to get the empty string). Next, we perform append operations (i.e., a, b, and a). Because we were able to convert to by performing exactly operations, we print Yes.

## Solution

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```
int main()
{
    string one, two;
    int operations, commonLength=0;

    cin>>one >>two >>operations;
    int length1=one.size();
    int length2=two.size();

    for(int i=0; i<one.size(); i++)
    {
        if(one[i]==two[i])
            { commonLength+=1;
            }
        else
            { break; }
    }

    if( length1+length2 - (2*commonLength) > operations )
        { cout<<"No"; }
    else if(((length1+length2 - (2*commonLength))%2 == operations%2)
        {cout<<"Yes";}
```

```
    else if(length1+length2+1<=operations)
        {cout<<"Yes";}
    else
        {cout<<"No";}

    return 0;
}
```

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