CODEFORCES^β
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PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

A. Two Substrings

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given string s. Your task is to determine if the given string s contains two non-overlapping substrings "AB" and "BA" (the substrings can go in any order).

Input

The only line of input contains a string s of length between 1 and 10^5 consisting of uppercase Latin letters.

Output

Print "YES" (without the quotes), if string s contains two non-overlapping substrings "AB" and "BA", and "NO" otherwise.

Examples

input	Copy
ABA	

output	Copy
NO	

input	Copy
BACFAB	

output	Copy
YES	

input	Copy
AXBYBXA	

output	Copy
NO	

Note

In the first sample test, despite the fact that there are substrings "AB" and "BA", their occurrences overlap, so the answer is "NO".

In the second sample test there are the following occurrences of the substrings: **BA**CF**AB**.

In the third sample test there is no substring "AB" nor substring "BA".

Codeforces Round #306 (Div. 2)
Finished

→ **Virtual participation**

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest]

→ **Problem tags**

brute force   dp   implementation
strings   *1500

No tag edit access

→ **Contest materials**

- Announcement   ✕
- Tutorial   ✕

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