STRINGS
1)Alternating Code

It is IPL Season and the first league match of Dhilip's favorite team, "Chennai Super Kings". The CSK team is playing at the IPL after 2 years and like all Dhoni lovers, Dhilip is also eagerly awaiting to see Dhoni back in action.

After waiting in long queues, Dhilip succeeded in getting the tickets for the big match. On the ticket, there is a letter-code that can be represented as a string of upper-case Latin letters.

Dhilip believes that the CSK Team will win the match in case exactly two different letters in the code alternate. Otherwise, he believes that the team might lose. Please see note section for formal definition of alternating code.

You are given a ticket code. Please determine, whether CSK Team will win the match or not based on Dhilip'sconviction. Print "YES" or "NO" (without quotes) corresponding to the situation.

Note:
Two letters **x, y** where **x != y** are said to be alternating in a code, if code is of form "**xyxyxy...**".

Input Format:

First and only line of the input contains a string S denoting the letter code on the ticket.

Output Format:

Output a single line containing "Yes" (without quotes) based on the conditions given and "No" otherwise.
Refer sample input and output for formatting specifications.

Sample Input1:

ABABAB

Sample Output1:

Yes

Sample Input2:

ABC

Sample Output2:

No

2) **Number Challenge**

Mike set off with great zeal to the "Kracker Jack Fun Fair 2017". There were numerous activities in the fair, though Mike being a math expert, liked to participate in the Number Challenge.

Mike was given a string **D** of numbers containing only digits 0's and 1's. His challenge was to make the number to have all the digits same. For that, he should change **exactly** one digit, i.e. from 0 to 1 or from 1 to 0. If it is possible to make all digits equal (either all 0's or all 1's) by flipping exactly 1 digit then he has to output "Yes", else print "No" (without quotes).

Write a program to help Mike win over his challenge.

Input Format:
First and only input contains a string D of numbers made of only digits 1's and 0's.

Output Format:
Output “Yes" or a "No", depending on whether its possible to make it all 0s or 1s or not.
Refer sample input and output for formatting specifications.

Sample Input1:
101
Sample Output1:
Yes

Sample Input2:
11
Sample Output2:
No

3)Wildcard Matching

Sunil is a little scientist. Sunil has planned to design a wildcard pattern matcher to exhibit at the "Young Inventors", a tech talent show organized at his school.
Sunil wanted to design the wildcard pattern matcher supporting the wildcard character **'?'**. The wildcard character '?' can be substituted by any single lower case English letter for matching. He has two strings **X** and **Y** of equal length, made up of lower case letters and the character '?'.
Sunil wants your help in designing the device, to know whether the strings **X** and **Y** can be matched or not. Write a program to check whether the given strings can be matched or not.

Input Format:

First line of the input contains the string ‘X’.
Second line of the input contains the string ‘Y’.

Output Format:
Output a single line with the word **"Yes"**(without quotes) if the strings can be matched, otherwise output "No"(without quotes).
Refer sample input and output for formatting specifications.

Sample Input1:
s?or?
sco??
Sample Output1:
Yes

Sample Input2:
stor?
sco??
Sample Output2:
No

4)Caption Contest

Exeter Caption Contest is a competition open to all writers worldwide. The entrants will have one day to compose and submit a caption that will be based on the theme posted on the competition page.

Robin, a creative writer had penned two captions for the contest but he unknowingly misplaced them. After searching long, he managed to locate his captions, but some letters in them have become unreadable. The captions were in two very old sheets of paper, each of which originally contained a string of lowercase English letters. The strings on both the sheets have equal lengths.

Robin would like to estimate the *difference* between these strings. Let's assume that the first string is named **S1**, and the second **S2**. The unreadable symbols are specified with the question mark symbol `'?'`. The *difference* between the strings equals to the number of positions **i**, such that $\mathbf{S1}_i$ is not equal to $\mathbf{S2}_i$, where $\mathbf{S1}_i$ and $\mathbf{S2}_i$ denote the symbol at the **i** th position in **S1** and **S2**, respectively.

Robin would like to know the minimal and the maximal difference between the two strings, if he changes all unreadable symbols to lowercase English letters. Robin is not an expertise in programming and so he needs your help solving this problem!

Input Format:

The first line of the input contains a string **S1**.
The second line of the input contains a string **S2**.
Both strings consist of lowercase English letters and question marks in places where the symbols are unreadable.

Output Format:
Output the minimal and the maximal difference between two given strings separated with a single space.
Refer sample input and output for formatting specifications.

Sample Input1:
a?c
??b
Sample Output1:
1 3

Sample Input2:
???a
???a
Sample Output2:
0 3

5)Nela's Birthday and Colorfull Balloons

Nella is an eight-year-old princess who will inherit the kingdom of Castlehaven. It is her birthday today and her Dad, the King of Castlehaven has arranged for a grand party.Nella loves colorful balloons and so her Dad planned to decorate the entire palace with balloons of the colors that Nella loved. So he asked her about her color preferences. The sophisticated princess that Nella is, she likes only two colors — amber and brass. Her Dad bought*n* balloons, each of which was either amber or brass in color.

You are provided this information in a string s consisting of characters 'a' and 'b' only, where 'a' denotes that the balloon is amber, where 'b' denotes it being brass colored. When Nella saw the balloons, she was furious with anger as she wanted all the balloons of the same color. In her rage, she painted some of the balloons with the opposite color (i.e., she painted some amber ones brass and vice versa) to make all balloons appear to be the same color.

It took her a lot of time to do this, but you can probably show her the right way of doing so, thereby teaching her a lesson to remain calm in difficult situations, by finding out the minimum number of balloons needed to be painted in order to make all of them the same color.

Input Format:
The first and only line of input contains a string s.

Output Format:
Output a single line containing an integer — the minimum number of flips required.
Refer sample input and output for formatting specifications.

Sample Input1:

ab
Sample Output1:
1

Sample Input2:
bb
Sample Output2:

6)Little Authors

"Little Authors" Slogan Writing Competition was organized for School students at Orchids Senior School. Any student who is creative and effective in communicating ideas in short, yet powerful about any instant topic can participate in the competition. The important guideline for the contest is that the Slogan should contain a string where the number of occurrences of some character in it is equal to the sum of the numbers of occurrences of other characters in the string.

Write a program to help the event organizers to determine whether the submitted Slogans adhere to the given condition.

Input Format:

First and only line of input contains one string S consisting of lowercase letters.

Output Format:

Output a single line containing "Yes"(without quotes) if the string satisfies the condition given above or "No"(without quotes) otherwise.
Refer sample input and output for formatting specifications.

Sample Input1:

acab

Sample Output1:

Yes

Sample Input2:

abc

Sample Output2:

No

7)Fun with Words

"Juniors Network" Cartoon Channel is the favorite channel of all the kids in the city. As it is vacation time, the channel had introduced several new segments to engage the kids in a more creative manner. "Fun with Words" is one such activity involving English alphabets, where school kids were invited to participate.

Today on the show, the show host Santra briefed the kids about extinct languages and modern languages in the World. Extinct languages are languages that are no longer in use. Such languages were widely used before and no one could have ever imagined that they will become extinct at some point. On the happy side of things, a language may be extinct, but some of its words may continue to be used in other languages.

Santra now has acquired a dictionary of **N** words of an extinct language. She also knows **K** phrases used in modern languages. For each of the words of the forgotten language, the kids are to determine whether the word is still in use in any of these **K** modern phrases or not. Help them with the activity by writing a block of code.

Input Format:

First line of the input contains two space separated positive integers **N** and **K**.
The second line of the input contains **N** strings denoting a dictionary of the extinct language.
Each of the next **K** lines of the input starts with one positive integer **L** denoting the number of words in the corresponding phrase in modern languages. The integer is followed by **L** strings (not necessarily distinct) denoting the phrase.

Output Format:

Output a single line containing **N** tokens (space-separated): if the **i**th word of the dictionary exists in at least one phrase in modern languages, then you should output "Yes"(without quotes) as the **i**th token, otherwise "No"(without quotes).
Refer sample input and output for formatting specifications.

Sample Input 1:

3 2
piygu ezyfo rzotm
1 piygu
6 tefwz tefwz piygu ezyfo tefwz piygu

Sample Output 1:

Yes Yes No

Sample Input 2:

2 2

werft qwefr
2 fgrhr hrhrh
3 werft qwerfr rtygre

Sample Output 2:

Yes No

8)Peter at Challenger Series

The Table tennis Challenger Series is the springboard to fame for the future stars of professional table tennis. Peter is very passionate towards table tennis and made his debut in the first league match of the Series against a prominent player Horejsi.

Peter found some statistics of matches which described who won the points in order. A game shall be won by the player first scoring 11 points except in the case when both players have 10 points each, then the game shall be won by the first player subsequently gaining a lead of 2 points. Could you please help Peter find out who the winner was from the given statistics? (It is guaranteed that statistics represent always a valid, finished match.)

Input Format:

First and only line of the input consists of a binary string **S**, which describes a match. '0' means Peter lose a point, whereas '1' means he won the point.

Output Format:

Output on a separate line a string describing who won the match. If Peter won then print "Win" (without quotes), otherwise print "Lose" (without quotes).
Refer sample input and output for formatting specifications.

Sample Input 1:

0101111111111

Sample Output 1:

Win

Sample Input 2:

11100000000000

Sample Output 2:

Lose

9)Balls for Challenge

The Circoloco Children Carnival is the City's largest and successful event dedicated to children and families. The main focus at the carnival is the workshop arena where kids can participate in engaging and educational activities.

Charlie, a little boy accompanied by his Mom visited the fair, where he participated at the "Balls for Challenge" activity. He was given many balls of white and black colors. During the play, he arranged the balls into two rows both consisting of **N** number of balls. These two rows of balls are given to you in the form of strings **X, Y**. Both these string consist of 'W' and 'B', where 'W' denotes a white colored ball and 'B' a black colored.

Other than these two rows of balls, Charlie has an infinite supply of extra balls of each color. He wants to create another row of **N** balls, **Z** in such a way that the sum of hamming distance between **X** and **Z**, and hamming distance between **Y** and **Z** is maximized.

Hamming Distance between two strings **X** and **Y** is defined as the number of positions where the color of balls in row **X** differs from the row **Y** ball at that position. e.g. hamming distance between "WBB", "BWB" is 2, as at position 1 and 2, corresponding colors in the two strings differ. As there can be multiple such arrangements of row **Z**, Charlie wants you to find the lexicographically smallest arrangement which will maximize the above value.

Input Format:

First line of the input will contain a string **X** denoting the arrangement of balls in first row.
Second line of the input will contain the string **Y** denoting the arrangement of balls in second row.

Output Format:

Output a single line containing the string of length **N** denoting the arrangement of colors of the balls belonging to row **Z**.
Refer sample input and output for formatting specifications.

Sample Input 1:

WBWB
WBBB

Sample Output 1:

BWBW

Sample Input 2:

BBBW
BWBB

Sample Output 2:

WBWB

10)Casper at the Carnival

The Circoloco Children Carnival is the City's largest and successful event dedicated to children and families. Casper is a smart little boy who loves eating cookies and drinking fresh juices. He visits the carnival with his parents and is going to spend **N** minutes at the event ground. Each minute he either eats a cookie or drinks fresh juice. Cookies are very sweet and thus Casper's parents have instructed him to drink fresh juice in the next minute, after eating a cookie.

You are given whether he ate a cookie or drank fresh juice in each of the **N** minutes. Your task is to check if Casper followed his parents' instructions. That is, you need to verify whether after each eaten cookie he drinks fresh juice in the next minute.

Input Format:

The first line of the input contains an integer **N** denoting the number of minutes.
The second line of the input contains **N** space-separated strings $\mathbf{S}_1$, $\mathbf{S}_2$, ...,$\mathbf{S}_N$. The string $\mathbf{S}_i$ is either "cookie" (if Casper eats a cookie in the i-th minute) or "juice" (otherwise).

Output Format:

Output a single line containing the answer — "Yes"(without quotes) if Casper followed his parents' instructions, and "No"(without quotes) otherwise, both without the quotes.
Refer sample input and output for formatting specifications.

Sample Input1:

7
cookie juice juice cookie juice cookie juice

Sample Output1:

Yes

Sample Input 2:

5
cookie cookie juice juice juice

Sample Output 2:

No