

April Fools Day Contest 2021

A. Is it rated - 2

1 second, 256 megabytes

Interaction

This is an interactive problem. You need to read participants' queries from standard input and print your responses to standard output. You don't know the number of queries upfront, so you'll need to process them as you get them; you'll know you're done once you reach the end of the file.

In each query, you will be asked the question, written in one line. You have to answer it correctly, patiently and without any display of emotions. Your response is case-insensitive.

Please make sure to use the stream flushing operation after each response in order not to leave part of your output in some buffer.

input
Is it rated? Is it rated? Is it rated?
output
NO NO NO

B. DMCA

1 second, 256 megabytes

Many people are aware of DMCA – Digital Millennium Copyright Act. But another recently proposed DMCA – Digital Millennium Calculation Act – is much less known.

In this problem you need to find a root of a number according to this new DMCA law.

Input

The input contains a single integer a ($1 \leq a \leq 1000000$).

Output

Output the result – an integer number.

input
1
output
1

input
81
output
9

C. Fibonacci Words

1 second, 256 megabytes

Input

The input consists of a single string of uppercase letters A-Z. The length of the string is between 1 and 10 characters, inclusive.

Output

Output "YES" or "NO".

input
HELP
output
YES

input

AID

output

NO

input

MARY

output

NO

input

ANNA

output

YES

input

MUG

output

YES

input

CUP

output

NO

input

SUM

output

YES

input

PRODUCT

output

NO

D. Xenolith? Hippodrome?

1 second, 256 megabytes

Input

The input contains two integers N , M ($1 \leq N \leq 1024$, $2 \leq M \leq 16$), separated by a single space.

Output

Output "YES" or "NO".

input

2 3

output

YES

input

3 2

output

NO

input

33 16

Output the password recovered from the program. The password is case sensitive.

I. Mysterious language again, seriously?

1 second, 256 megabytes

You are given a mysterious language (codenamed "Secret 2021") available in "Custom Test" tab. Find out what this language is and write a program which outputs its name. Note that the program must be written in this language.

Input

This program has only one test, and it's empty (it doesn't give your program anything to read).

Output

Output the name of the mysterious language.