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	
output 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	
YES	
input	
26 5	
output	
NO	

E. Cakewalk

1 second, 256 megabytes

A mouse encountered a nice big cake and decided to take a walk across it, eating the berries on top of the cake on its way. The cake is rectangular, neatly divided into squares; some of the squares have a berry in them, and some don't.

The mouse is in a bit of a hurry, though, so once she enters the cake from its northwest corner (the top left cell in the input data), she will only go east (right) or south (down), until she reaches the southeast corner (the bottom right cell). She will eat every berry in the squares she passes through, but not in the other squares.

The mouse tries to choose her path so as to maximize the number of berries consumed. However, her haste and hunger might be clouding her judgement, leading her to suboptimal decisions...

Innut

The first line of input contains two integers H and W ($1 \leq H, W \leq 5$), separated by a space, — the height and the width of the cake.

The next H lines contain a string of W characters each, representing the squares of the cake in that row: '.' represents an empty square, and '*' represents a square with a berry.

Output

Output the number of berries the mouse will eat following her strategy.

input		
4 3		
*		
*		
•••		
output		
3		

input			
4 4 .* * *			
output			
2			

input			
3 4 ** *			
• • • •			
output			
1			

input			
5 5*			
**			
**			

output	
1	

F. Math

1 second, 256 megabytes



*The two images are equivalent, feel free to use either one.

Input

The input contains a single integer a ($-100 \le a \le 100$).

Output

Output the result – an integer number.

```
input

output

1
```

G. Encoded message

1 second, 256 megabytes

Input

The first line of the input contains a single integer N ($1 \le N \le 24$). The next N lines contain 5 space-separated integers each. The first three integers will be between 0 and 2, inclusive. The last two integers will be between 0 and 3, inclusive. The sum of the first three integers will be equal to the sum of the last two integers.

Output

Output the result – a string of lowercase English letters.

```
input

1
1 0 0 1 0

output
a
```



H. L BREAK into program

1 second, 256 megabytes

Hack the program and get the password hidden in it.

Input

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

Output

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.

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