Problem B: Nucleobases

Description

Nucleobases function as fundamental units of a genetic code (DNA or RNA). There are four primary nucleobases found in DNAs: adenine (A), cytosine (C), guanine (G), and thymine (T). Given a random sequence of letters, determine if the sequence contains only DNA nucleobases (A, C, G, and T).

Input

The only line of the input contains sequence of capital letters representing bases. It is guaranteed that the list is non-empty and does not exceed 1,000,000 letters.

Output

Print "YES" without quotes if the sequence contains only DNA nucleobases and "NO" otherwise.

NB: *Kindly note that your solution will be run at least five times. Each time, it will be tested against a different set of input. The first few test cases are given below to help you check your solution. The remaining tests can be seen from the contest page for this problem or the results page after you submit your solution*.

Test 1

Input	Output
ATTACCGGCG	YES

Test 2

Input	Output
ATTABCCGG	NO

Test 3

Input	Output
ATTACCGGCGATTACCGGCG	YES