

Problem B. [Building] Morse Code Palindromes

Source file name: Building.c, Building.cpp, Building.java, Building.py
Input: standard input
Output: standard output
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A **palindrome** is a word, number, phrase, or other sequence of characters which reads the same backward as forward, such as *madam* or *racecar* or *1881*. Phase palindromes ignore capitalization, punctuation, and word boundaries. For example:

Madam I'm Adam.

Morse code is a method used in telecommunication to encode text characters as standardized sequences of two different signal durations, called dots and dashes, or dits and dahs. Morse code is named after Samuel Morse, one of the inventors of the telegraph. The international morse code for letters and digits is (Note that the code for upper and lower case letters is the same.):

A	• —	M	— —	Y	— • — —
B	— • • •	N	— •	Z	— — • •
C	— • — •	O	— — —	0	— — — — —
D	— • •	P	• — — •	1	• — — — —
E	•	Q	— — • —	2	• • — — —
F	• • — •	R	• — •	3	• • • — —
G	— — •	S	• • •	4	• • • • —
H	• • • •	T	—	5	• • • • •
I	• •	U	• • —	6	— • • • •
J	• — — —	V	• • • —	7	— — • • •
K	— • —	W	• — —	8	— — — • •
L	• — • •	X	— • • —	9	— — — — •

A word, number or phrase is a **Morse Code Palindrome** if the morse code for the letters and digits in the word, number or phrase reads the same backwards or forwards (ignoring spaces between character codes. For example:



159

• ■ ■ ■ ■ • • • • ■ ■ ■ ■ ■ •

Footstool

• • ■ • ■ ■ ■ ■ ■ ■ ■ ■ ■ • • • ■ ■ ■ ■ ■ ■ ■ ■ ■ • ■ • •

Write a program which takes as input a string and determines if the string is a *Morse Code Palindrome*.

Input

The single input line contains a string of up to 80 characters, possibly including spaces and other non-alphanumeric printable characters.

Output

The single output line consists of the string **YES** if the input string (ignoring everything but letters and digits) is a *Morse Code Palindrome*. Otherwise the output line consists of the string **NO**. If there are no letters or digits in the input string, the output should be **NO**.

Input	Output
hello	NO
159	YES
Madam I'm Adam	NO
footstool	YES
SOS	YES