

A. Gennady and a Card Game

time limit per test

1 second

memory limit per test

256 megabytes

input

standard input

output

standard output

Gennady owns a small hotel in the countryside where he lives a peaceful life. He loves to take long walks, watch sunsets and play cards with tourists staying in his hotel. His favorite game is called "Mau-Mau".

To play Mau-Mau, you need a pack of 52 cards. Each card has a suit (Diamonds — D, Clubs — C, Spades — S, or Hearts — H), and a rank (2, 3, 4, 5, 6, 7, 8, 9, T, J, Q, K, or A).

At the start of the game, there is one card on the table and you have five cards in your hand. You can play a card from your hand if and only if it has the same rank or the same suit as the card on the table.

In order to check if you'd be a good playing partner, Gennady has prepared a task for you. Given the card on the table and five cards in your hand, check if you can play at least one card.

Input

The first line of the input contains one string which describes the card on the table. The second line contains five strings which describe the cards in your hand.

Each string is two characters long. The first character denotes the rank and belongs to the set {2,3,4,5,6,7,8,9,T,J,Q,K,A}. The second character denotes the suit and belongs to the set {D,C,S,H}.

All the cards in the input are different.

Output

If it is possible to play a card from your hand, print one word "YES". Otherwise, print "NO".

You can print each letter in any case (upper or lower).

Examples

input

Copy

AS

2H 4C TH JH AD

output

Copy

YES

input

Copy

2H

3D 4C AC KD AS

output

Copy

NO

input

Copy

4D

AS AC AD AH 5H

output

Copy

YES

Note

In the first example, there is an Ace of Spades (AS) on the table. You can play an Ace of Diamonds (AD) because both of them are Aces.

In the second example, you cannot play any card.

In the third example, you can play an Ace of Diamonds (AD) because it has the same suit as a Four of Diamonds (4D), which lies on the table.