

The GameE

Adam is playing a game with his son Abd-rabo. The game is simple, Adam just thinks about a word with 3 characters long and gives Abd-rabo the first 2 characters of it and asks him to guess the third. (Your favourite part) Abd-rabo needs your help guessing the third character known that the distance between the first 2 characters is the same as the distance between the last 2 characters in the word,

example of valid words: ABC ACE CBA XYZ ZYX and so on

Print the whole word

Notice that all characters are uppercase english alphabets from A to Z, 3rd character will not round

which means no input like (Y Z) or (B A)

Input

c1: character A..Z

c2: character A..Z

Output

One line with the three characters after each other

Example

Input:

A C

Output:

ACE