

I. Coins

time limit per test: 2 seconds🔔

memory limit per test: 256 megabytes

input: standard input

output: standard output

One day Vasya came across three Berland coins. They didn't have any numbers that's why Vasya didn't understand how their denominations differ. He supposed that if one coin is heavier than the other one, then it should be worth more. Vasya weighed all the three pairs of coins on pan balance scales and told you the results. Find out how the deminations of the coins differ or if Vasya has a mistake in the weighting results. No two coins are equal.

Input

The input data contains the results of all the weighting, one result on each line. It is guaranteed that every coin pair was weighted exactly once. Vasya labelled the coins with letters «A», «B» and «C». Each result is a line that appears as (letter)(> or < sign)(letter). For example, if coin "A" proved lighter than coin "B", the result of the weighting is A<B.

Output

It the results are contradictory, print Impossible. Otherwise, print without spaces the rearrangement of letters «A», «B» and «C» which represent the coins in the increasing order of their weights.

Examples

input	Copy
A>B C<B A>C	
output	Copy
CBA	

input	Copy
A<B B>C C>A	
output	Copy
ACB	

→ Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

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- Sheet #9 (General medium)
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Sheet #10 (General Hard)

Finished