Grafs (2) P37001_en

Given a directed graph with n vertices and m arcs, we wish to know if there is a directed path between two given vertices.

Input

Input starts with the value of n and the n names of the vertices. Then comes the value of m and follow the m arcs, made up by the name of two vertices, without repetitions nor autoloops. Then follows a pair of vertices x, y. You can assume that x and y belong to the graph.

Output

Write "`yes`" o "`no`" according to whether there is or not a path from x to y.

Sample input 1	Sample output 1

<pre>8
bcn prs mad rom lsb ber lon dub
 	
10
bcn prs
prs mad
rom lsb
rom dub
ber lon
lsb dub
dub lsb
mad lon
bcn ber
ber bcn
 	
bcn mad</pre>
	yes

Sample input 2	Sample output 2

<pre>8
bcn prs mad rom lsb ber lon dub
 	
10
bcn prs
prs mad
rom lsb
rom dub
ber lon
lsb dub
dub lsb
mad lon
bcn ber
ber bcn
 	
rom bcn</pre>
	no

Problem information

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