

# Editorial:

Let's consider indices as vertices of some graph and allowed pairs as 2-ways edges.

Then our graph can be divided in connected components.

The key observation: we can get any permutation of elements in one connected component. And obviously there is no way to swap to elements that belong to different components. Thus we get simple solution:

1. Find connected components in our graph.
2. For each component compare element in permutations P and Q. If these elements differ for at least one component then the answer is "NO" otherwise answer is "YES".