You are given two integer arrays, source and target, both of length n. You are also given an array allowedSwaps where each allowedSwaps[i] = [ai, bi] indicates that you are allowed to swap the elements at index ai and index bi **(0-indexed)** of array source. Note that you can swap elements at a specific pair of indices **multiple** times and in **any** order.

The **Hamming distance** of two arrays of the same length, source and target, is the number of positions where the elements are different. Formally, it is the number of indices i for 0 <= i <= n-1 where source[i] != target[i] **(0-indexed)**.

Return *the****minimum Hamming distance****of*source*and*target*after performing****any****amount of swap operations on array*source*.*

**Example 1:**

**Input:** source = [1,2,3,4], target = [2,1,4,5], allowedSwaps = [[0,1],[2,3]]

**Output:** 1

**Explanation:** source can be transformed the following way:

- Swap indices 0 and 1: source = [2,1,3,4]

- Swap indices 2 and 3: source = [2,1,4,3]

The Hamming distance of source and target is 1 as they differ in 1 position: index 3.

**Example 2:**

**Input:** source = [1,2,3,4], target = [1,3,2,4], allowedSwaps = []

**Output:** 2

**Explanation:** There are no allowed swaps.

The Hamming distance of source and target is 2 as they differ in 2 positions: index 1 and index 2.

**Example 3:**

**Input:** source = [5,1,2,4,3], target = [1,5,4,2,3], allowedSwaps = [[0,4],[4,2],[1,3],[1,4]]

**Output:** 0

**Constraints:**

* n == source.length == target.length
* 1 <= n <= 105
* 1 <= source[i], target[i] <= 105
* 0 <= allowedSwaps.length <= 105
* allowedSwaps[i].length == 2
* 0 <= ai, bi <= n - 1
* ai != bi