

Isomorphic Strings

Difficulty: **Easy**Accuracy: **34.21%**Submissions: **187K+**Points: **2**

Given two strings '**str1**' and '**str2**', check if these two strings are **isomorphic** to each other.

If the characters in str1 can be changed to get str2, then two strings, str1 and str2, are isomorphic. A character must be completely swapped out for another character while maintaining the order of the characters. A character may map to itself, but no two characters may map to the same character.

Example 1:

Input:`str1 = aab``str2 = xxy`**Output:**`1`**Explanation:**

There are two different characters in aab and xxy, i.e a and b with frequency 2 and 1 respectively.

Example 2:

Input:`str1 = aab``str2 = xyz`**Output:**`0`**Explanation:**

There are two different characters in aab but there are three different characters in xyz. So there won't be one to one mapping between str1 and str2.

Your Task:

You don't need to read input or print anything. Your task is to complete the function **areIsomorphic()** which takes the string **str1** and string **str2** as input

parameter and check if two strings are isomorphic. The function returns **true** if strings are isomorphic else it returns **false**.

Expected Time Complexity: $O(|str1| + |str2|)$.

Expected Auxiliary Space: $O(\text{Number of different characters})$.

Note: $|s|$ represents the length of string s .

Constraints:

$$1 \leq |str1|, |str2| \leq 10^5$$