

Solution:

Imagine we need to compare two strings efficiently by representing them as numbers. We achieve this using a technique called hashing. By hashing the strings, we can compare them in constant time.

Our approach involves using rolling hash functions to preprocess the string T and its reverse. We then use a brute force method to check each possible value of i . For each i , we split the string into three parts: the first i characters, the last $n - i$ characters, and the middle section. We then check if the concatenation of the first i characters and the last $n - i$ characters is equal to the reverse of the middle section. If they match, we have found our answer.