

Anagram

An anagram is word switch or word play. It is the result of rearranging the letters of a word or phrase to produce a new word or phrase, while using all the original letters only once.

In interviews, usually we are only bothered with words without spaces in them.

To determine if two strings are anagrams, there are a few approaches:

- Sorting both strings should produce the same resulting string.
 - This takes $O(n \cdot \log(n))$ time and $O(\log(n))$ space.
- If we map each character to a prime number and we multiply each mapped number together, anagrams should have the same multiple (prime factor decomposition).
 - This takes $O(n)$ time and $O(1)$ space. Examples: [Group Anagram](#)
- Frequency counting of characters will help to determine if two strings are anagrams.
 - This also takes $O(n)$ time and $O(1)$ space.

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