Ahan's Discussion Notes

Feb 9, 2021

This week: Basic data structures & problem solving

Announcements:

→ I'll be hosting a review session on time & space complexity: time & date TBA
Details will be posted on Piazza.
* Depending on interest

→ Will be answering ANY questions after discussion ends till 6:40PM
(I have a class at 6:40 :;)

→ Harris is hosting a session on networking Friday Feb 12 @ 6-6:30PM.
Check piazza post for details.

Problem: Valid Anagram

Input: two strings, s & t.

Output: boolean = { True, if strings are an anagram; False, otherwise

Example

s = "anagram"

t = "nagaram"

Output: True

Solution 1: Non-optimized

- Sort both strings
- Check if equal

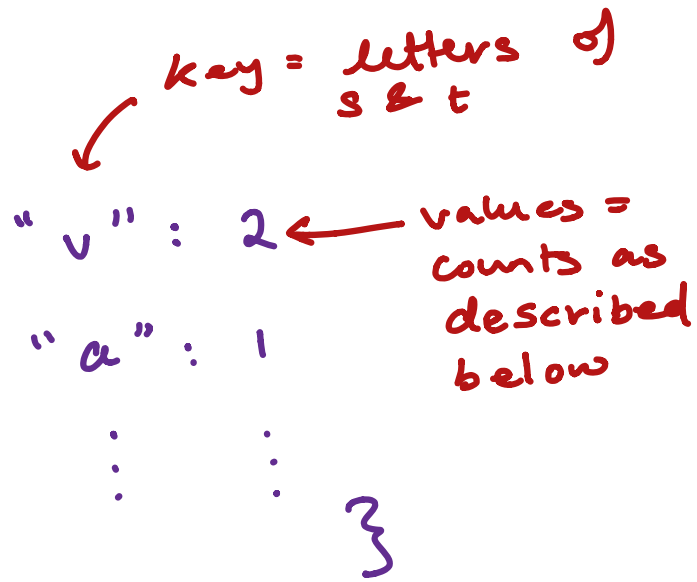
sorting

Time complexity: $O(n \log n)$

Space complexity: $O(1)$

Solution 2: Optimized

Hashmap !



- Put all letters of s and t to a hashmap.
- Add 1 to corresponding letter count when seen in s and subtract 1 when seen in t.
- Check if any hashmap counts are non-zero.

Time complexity: $O(n)$

Space complexity: $O(n)$