Unknown Title

Description

Description

Note

Note

Editorial

Editorial

Solutions

Solutions

Submissions

Submissions

Code

Code

Testcase

Testcase

Test Result

Test Result

Leet

Leet

76. Minimum Window Substring

Attempted◎

Hard

◇
Topics
🔒Companies
♀
Hint

Given two strings s and t of lengths m and n respectively, return *the **minimum window** of* s *such that every character in* t *(**including duplicates**) is included in the window*. If there is no such substring, return *the empty string* "".

The testcases will be generated such that the answer is **unique**.

Example 1:

Input: s = "ADOBECODEBANC", t = "ABC"
Output: "BANC"
Explanation: The minimum window substring "BANC" includes 'A', 'B', and 'C' from string t.

Example 2:

Input: s = "a", t = "a"
Output: "a"
Explanation: The entire string s is the minimum window.

Example 3:

Input: s = "a", t = "aa"
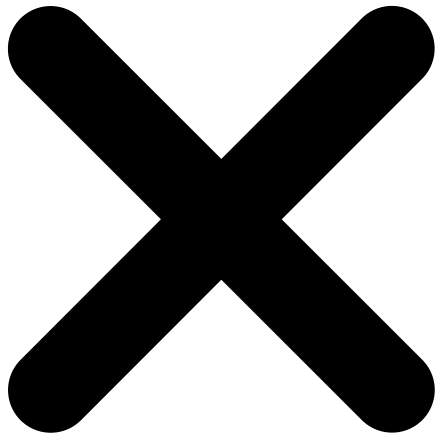**Output:** ""
Explanation: Both 'a's from t must be included in the window.
Since the largest window of s only has one 'a', return empty string.

Constraints:

- m == s.length
- n == t.length
- $1 <= m, n <= 10^5$
- s and t consist of uppercase and lowercase English letters.

Follow up: Could you find an algorithm that runs in O(m + n) time?

Seen this question in a real interview before?

1/5

Yes

No

Accepted

1,956,187/4.2M

Acceptance Rate

46.4%

🔒

Companies

⌄

💡

Hint 1

⌄

Use two pointers to create a window of letters in s, which would have all the characters from t.

💡

Hint 2

⌄

Expand the right pointer until all the characters of t are covered.

💡

Hint 3

⌄

Once all the characters are covered, move the left pointer and ensure that all the characters are still covered to minimize the subarray size.

💡

Hint 4

⌄

Continue expanding the right and left pointers until you reach the end of s.

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Discussion (303)

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💡 Discussion Rules

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1. Please don't post **any solutions** in this discussion.

2. The problem discussion is for asking questions about the problem or for sharing tips - anything except for solutions.

3. If you'd like to share your solution for feedback and ideas, please head to the solutions tab and post it there.

V K

Nov 10, 2021

Got this problem at FB yesterday.
I solved it sometime ago on leetcode but during the interview I failed to do it.
It was a second problem to solve, 20 mins left and all this time pressure+stress made me to panic.
I would expect that two problems in 45 mins would be Easy and Medium or worst case Medium/Medium but got Medium and Hard.
Moral of the story: don't expect that you will get the same complexity tasks like others usually get - I find it is sort of lottery. Prepare for worst to make it done! And don't stress or panic - it doesn't help. Good luck everyone!

Read more

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Fahim Shahriyar

Jan 31, 2023

It really feels bad when you come up with a solution spending hours, only to receive a TLE on the last test cases with a 10^5 input size!

Read more

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Akash Kandpal

Jan 14, 2019

Here are the other sliding window problems to practice:

https://leetcode.com/problems/sliding-window-maximum/
https://leetcode.com/problems/minimum-size-subarray-sum/
https://leetcode.com/problems/minimum-window-substring/
https://leetcode.com/problems/maximum-length-of-repeated-subarray/

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221

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bhanujggandhi

Jan 04, 2023

Do not maintain the string variable and update it every time you find a better minimum substring. **Instead maintain pointers and create substring only once, otherwise there will be TLE/MLE**

Read more

Tip

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Pratham Upadhyay

Aug 03, 2023

It feels amazing when you can solve a hard question all by yourself! It brings great happiness, right? If you managed to do it on your own, give yourself a thumbs-up! 🌟

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229

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Q

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codewhisperer__

Oct 23, 2022

😊😊😊 imagine getting this question in a live interview having never heard it before and answering it correctly on the spot in less than 45 minutes 😂😂😂😂😂😂

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Petia Davidova

Nov 27, 2019

I don't know if it is just me, but I am really tired of the poor explanations of LC problems. Quite often we do not have any input restrictions and bounds. In this problem we don't know if we expect duplicate characters in T, if we are looking for each distinct character of T in S, or literally every single one (i.e. T="aa" and S="a" - is this valid S or not...). Every time I need to submit my code to get to yet another failing test because there is some unmentioned restriction or requirement. In a real interview if this is the case I would ask clarifying questions, obviously this is not an option in this case. So annoying!
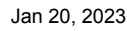
Read more

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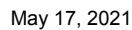
Q

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MyPing0

Jan 20, 2023

If you are stuck on the really long test cases, like #266, make sure you are using either .equals() or .intValue() when trying to compare the values in your HashMap's

https://stackoverflow.com/questions/4428774/why-java-does-not-see-that-integers-are-equal

Read more

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Ryan

May 17, 2021

Just be careful for object `Integer`, using `Integer.intValue()` to compare the value of it.

Read more

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mstuebs

Feb 03, 2024
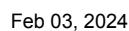
I hope these testcases are useful to you :-) Check my repo for even larger TCs.
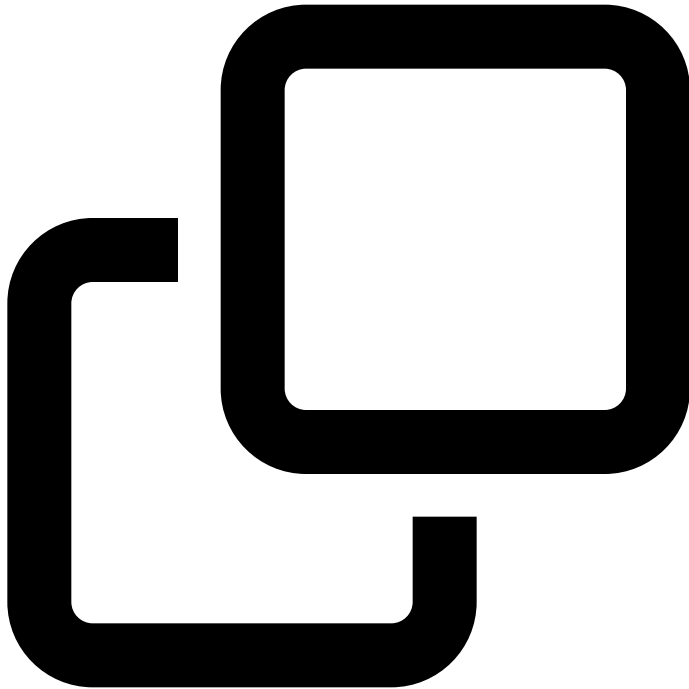
```
"e"
"Y"
"g"
"g"
"zxgsxsczeymhaqkerxyumpjazzjfqsgRVJWEHWXNOUOpsorapwtdlyhxoplpvyVCQYSOGYAXNjwnpnrivyftoalcqnkptmudwpic"
"OVUCOQNYXSWOHGEYWAJXVNR"
"zzzzzzzz"
"zzzzzzzzz"
"HRULTrctorlsshmgtarxadgosylsmxsorskzqfdkujoJQTUHzRLPPyjllmvqopolorblqrijdpytjzxxvnyqihohrszawlvetnrgcnr
"HRULTPQPJA"
"RBCPEYZQBMHUMPFLRRUELWUXBLNRTZHLKZMKBEQPNRLTVVYMZJQGVWRHBQCYFMMVCCZXBGDFZJVVYKWXVSNRNIUQNPKCETURLVQBVZN
"RBCPEYZQBMHUMPFLRRUELWUXBLNRTZHLKZMKBEQPNRLTVVYMZJQGVWRHBQCYFMMVCCZXBGDFZJVVYKWXVSNRNIUQNPKCETURLVQBVZN
"ABCllBBBBBlllllllABCDEFAAAllBBBBllZ"
"ABAAACDEFZ"
"ZSLDMKRUWQRDUHYZPEKTCSFOCIBQJVFZRBQVLNDVLHYKELDIHFOWMLDWCZTSTDJFKZOIQOGZYCOMCDBCMMQQURWNQNEKHSMLZMHPXVF
```

"AhxByySKjQEmNdfgyqVhLuXKELUmNwBKnoxXMeOQOxqphcmftZkiqyzGOEUmtLhrBCbYkWNGrFhTaeWxrdNnwGFDFnVWHtXdJXUFqoE
"GBFVFKDDGMWULCRMCITORHONDWEYEHLZWHCPUKIVIVKTCRIRRVIZCRKPZBEEHHICQCJXNJLMTYECQWVJVTJIBBTXCERINNDCJSJJXHN

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```java
import java.util.HashMap;

public class Solution {

    public String minWindow(String s, String t) {

        //base case

        if(t == "")

            return "";

        //creates and initializes variables

        HashMap<Character, Integer> tCount = new HashMap<>();

        HashMap<Character, Integer> window = new HashMap<>();

        int have = 0;

        int need = 0;

        int[] res = {-1, -1};

        int resLen = Integer.MAX_VALUE;
```

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You must run your code first

😎

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FindHeaderBarSize

FindTabBarSize

FindBorderBarSize