



Smallest window in a string containing all the characters of another string

Difficulty: Hard Accuracy: 30.19% Submissions: 162K+ Points: 8

Given two strings **s** and **p**. Find the smallest window in the string **s** consisting of all the characters (including duplicates) of the string **p**. Return **-1** in case there is no such window present. In case there are multiple such windows of same length, return the one with the **least starting index**.

Note : All characters are in Lowercase alphabets.

Examples:

Input: s = "timetopractice", p = "toc"
Output: top rac
Explanation: "toprac" is the smallest substring in which "toc" can be found.

Input: s = "zoomlazapzo", p = "oza"
Output: apzo
Explanation: "apzo" is the smallest substring in which "oza" can be found.

Expected Time Complexity: $O(|s|)$

Expected Auxiliary Space: $O(n)$, $n = \text{len}(p)$

Constraints:

$1 \leq |s|, |p| \leq 10^5$

[Try more examples](#)

Seen this question in a real interview before ?

Yes

No

Company Tags

Flipkart Amazon Microsoft MakeMyTrip Google Streamoid Technologies
 Media.net Atlassian

Topic Tags

Related Interview Experiences

Related Articles

[Report An Issue](#)

If you are facing any issue on this page. Please let us know.

Discover your potential with Deutsche Bank. Innovate, grow, and succeed globally in your career

Java (1.8) Average Time: 30m

Start Timer

```
1- //{ Driver Code Starts
2- import java.util.*;
3- import java.lang.*;
4- import java.io.*;
5-
6- class GFG {
7-     public static void main (String[] args) {
8-         Scanner scan = new Scanner(System.in);
9-         int test = scan.nextInt();
10-
11-         while(test > 0){
12-             String s = scan.next();
13-             String t = scan.next();
14-
15-             System.out.println(new Solution().smallestWindow(s, t));
16-             test--;
17-         }
18-     }
19- }
20- //{ Driver Code Ends
21-
22-
23- class Solution
24- {
25-     //Function to find the smallest window in the string s consisting
26-     //of all the characters of string p.
27-     public static String smallestWindow(String s, String p)
28-     {
29-         if (s.length() < p.length()) return "-1";
30-
31-         // Frequency map for the pattern string
```



Custom Input

Compile & Run

Submit