Minimum Window Substring

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Question | Solution

Total Accepted: **43120** Total Submissions: **223651** Difficulty: **Hard**

Given a string S and a string T, find the minimum window in S which will contain all the characters in T in complexity O(n).

For example,

S = `"ADOBECODEBANC"`

T = `"ABC"`

Minimum window is `"BANC"`.

Note:

If there is no such window in S that covers all characters in T, return the empty string `""`.

If there are multiple such windows, you are guaranteed that there will always be only one unique minimum window in S.

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Python

```
class Solution(object):
    def minWindow(self, s, t):
        """
        :type s: str
        :type t: str
        :rtype: str
        """
        hash = [-1 for i in range(128)]
        hash1= [0 for i in range(128)]
        hash2= [0 for i in range(128)]
        length = len(t)
```

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```
        for i in range(length):
            k=ord(t[i])
            hash[k]=0
            hash1[k]+=1
            hash2[k]+=1
        start=0;minstart=0;minend=2147483647
        for i in range(len(s)):
            k=ord(s[i])
            if hash[k]!=-1:
                if hash1[k]>0:
                    hash1[k]-=1
                    length-=1
                hash[k]+=1
                k=ord(s[start])
                while hash[k] > hash2[k] or hash[k]==-1:
                    if hash[k] > hash2[k]:hash[k]-=1
                    start+=1
                    k=ord(s[start])
                if length==0:
                    end=i
                    if minend-minstart > end-start:
                        minstart=start
                        minend=end
        if minend==2147483647:return ""
```

Custom Testcase

Run Code | Submit Solution

Submission Result: Accepted (/submissions/detail/42523220/)

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