Problem #821 : Shortest distance to a character (Easy)

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<https://leetcode.com/problems/shortest-distance-to-a-character/>

My Solution:

<https://leetcode.com/problems/shortest-distance-to-a-character/discuss/1054966/Simple-Python-3-Solution-Runtime-beats-93.15>

1. Let n be the length of s.
2. Initialize c\_array to an empty list.
3. Iterate through s and get append the index of the character in s to c\_array if the character matches c.
4. Initialize the result array res to an empty list.
5. Initialize j to 1.
6. Iterate through s and do the following:  
   (1) If the index of the character in s is less than or equal to the first character in c\_array, then get the difference and append it to res.  
   (2) if the index of the character in s is greater than the last character in c\_array, then get the difference and append it to res.  
   (3) If the index of the character in s is between element in c\_array with index j and element in c\_array with index j-1, then find the minimum of the difference of the index of character in s and the two elements in c\_array. Also check if index of s is equal to as element of c\_array with index j. If so increment j by 1.
7. Finally return res.

class Solution:

def shortestToChar(self, s: str, c: str) -> List[int]:

n = len(s)

c\_array = []

for i in range(n):

if s[i] == c:

c\_array.append(i)

res = []

j = 1

for i in range(n):

if i <= c\_array[0]:

res.append(c\_array[0] - i)

elif i >= c\_array[-1]:

res.append(i - c\_array[-1])

elif i <= c\_array[j] and i >= c\_array[j-1]:

res.append(min(c\_array[j] - i, i - c\_array[j-1]))

if i == c\_array[j]:

j += 1

return res