

Longest K unique characters substring

Given a string you need to print the size of the longest possible substring that has exactly K unique characters. If there is no possible substring then print -1.

Example 1:

```
Input:
S = "aabacbebebe", K = 3
Output: 7
Explanation: "cbebebe" is the longest
substring with K distinct characters.
```

Example 2:

```
Input:
S = "aaaa", K = 2
Output: -1
Explanation: There's no substring with K
distinct characters.
```

Your Task:

You don't need to read input or print anything. Your task is to complete the function **longestKSubstr()** which takes the string S and an integer K as input and returns the length of the longest substring with exactly K distinct characters. If there is no substring with exactly K distinct characters then return -1.

Expected Time Complexity: $O(|S|)$.

Expected Auxiliary Space: $O(1)$.

```
def longestKSubstr(self, s, k):
    # code here
    if k > len(s):
        return -1
    ans = 0
    i = -1
    j = -1
    freq = {}
    while True:
        f1, f2 = False, False
        while i < len(s) - 1:
            f1 = True
```

```

        i = i + 1
        ch = s[i]
        freq[ch] = freq.get(ch, 0) + 1
        if len(freq) < k:
            continue
        elif len(freq)==k:
            ans = max(ans , (i - j))
        else:
            break

    while j < i:
        f2 = True
        j = j + 1
        ch = s[j]
        freq[ch] = freq.get(ch, 0) - 1
        if freq[ch]==0:
            del freq[ch]
        if len(freq)> k:
            continue
        elif len(freq)==k:
            # ans = max(ans , (i - j))
            break

    if f1 is False and f2 is False:
        break

return ans if ans!=0 else -1

```