

# Problem 340: Longest Substring with At Most K Distinct Characters

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 49.75%

**Paid Only:** Yes

**Tags:** Hash Table, String, Sliding Window

## Problem Description

Given a string `s` and an integer `k`, return \_the length of the longest\_ \_substring\_ \_of\_ `s` \_that contains at most\_ `k` \_\*\*distinct\*\* characters\_.

\*\*Example 1:\*\*

\*\*Input:\*\* s = "eceba", k = 2 \*\*Output:\*\* 3 \*\*Explanation:\*\* The substring is "ece" with length 3.

\*\*Example 2:\*\*

\*\*Input:\*\* s = "aa", k = 1 \*\*Output:\*\* 2 \*\*Explanation:\*\* The substring is "aa" with length 2.

\*\*Constraints:\*\*

\* `1 <= s.length <= 5 \* 104` \* `0 <= k <= 50`

## Code Snippets

C++:

```
class Solution {
public:
    int lengthOfLongestSubstringKDistinct(string s, int k) {
    }
```

```
};
```

**Java:**

```
class Solution {  
    public int lengthOfLongestSubstringKDistinct(String s, int k) {  
        }  
        }  
}
```

**Python3:**

```
class Solution:  
    def lengthOfLongestSubstringKDistinct(self, s: str, k: int) -> int:
```