AlgoExpert Quad Layout C# 12px Sublime Monokai 00:00:00

Prompt Scratchpad Our Solution(s) Video Explanation Run Code

Solution 1

26

```
1\, // Copyright @ 2020 AlgoExpert, LLC. All rights reserved.
   using System;
 4 using System.Collections.Generic;
 6 public class Program {
     // O(n) time | O(min(n, a)) space
       \textbf{public static string } \texttt{LongestSubstringWithoutDuplication} (\textbf{string } \texttt{str}) \ \{
        Dictionary<char, int> lastSeen = new Dictionary<char, int>();
9
10
         int[] longest = {0, 1};
         int startIdx = 0;
11
         for (int i = 0; i < str.Length; i++) {</pre>
12
13
           char c = str[i];
            if (lastSeen.ContainsKey(c)) {
14
              startIdx = Math.Max(startIdx, lastSeen[c] + 1);
15
16
             \textbf{if} \ (\texttt{longest[1] - longest[0]} \ < \ \texttt{i + 1 - startIdx}) \ \{ \\
17
             longest = new int[] {startIdx, i + 1};
18
19
            lastSeen[c] = i;
20
21
         \textbf{string} \ \texttt{result} = \texttt{str.Substring}(\texttt{longest[0]}, \ \texttt{longest[1]} \ - \ \texttt{longest[0]});
22
23
24
25 }
```