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

Prompt Scratchpad Our Solution(s) Video Explanation Run Code

Solution 1

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```
1\, // Copyright @ 2020 AlgoExpert, LLC. All rights reserved.
 3 #include <unordered_map>
 4 #include <vector>
 5 using namespace std;
 7 \ // \ O(n) \ time \ | \ O(min(n, a)) \ space
 8 string longestSubstringWithoutDuplication(string str) {
9
    unordered_map<char, int> lastSeen;
10
    vector<int> longest{0, 1};
     int startIdx = 0;
11
      for (int i = 0; i < str.length(); i++) {</pre>
12
       char character = str[i];
13
        if (lastSeen.find(character) != lastSeen.end()) {
14
          startIdx = max(startIdx, lastSeen[character] + 1);
15
16
17
        \textbf{if} \ (\texttt{longest[1] - longest[0]} \ < \ \texttt{i} \ + \ \texttt{1} \ - \ \texttt{startIdx}) \ \{
18
          longest = {startIdx, i + 1};
19
20
        lastSeen[character] = i;
21
      string result = str.substr(longest[0], longest[1] - longest[0]);
22
23
24 }
```