

PromptScratchpadOur Solution(s)Video ExplanationRun Code

Solution 1Solution 2

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 class Program {
4     // O(n^2) time | O(1) space
5     func longestPalindromicSubstring(string: String) -> String {
6         var currentLongest = [0, 1]
7
8         for i in 1 ..< string.count {
9             var oddLeftIndex = i - 1
10            var oddRightIndex = i + 1
11            let odd = getLongestPalindromeFrom(string: string, leftIndex: &oddLeftIndex, rightIndex: &oddRightIndex)
12
13            var evenLeftIndex = i - 1
14            var evenRightIndex = i
15            let even = getLongestPalindromeFrom(string: string, leftIndex: &evenLeftIndex, rightIndex: &evenRightIndex)
16
17            var temporaryLongest = [Int]()
18
19            if let oddFirst = odd.first, let oddLast = odd.last, let evenFirst = even.first, let evenLast = even.last {
20                if oddLast - oddFirst > evenLast - evenFirst {
21                    temporaryLongest = odd
22                } else {
23                    temporaryLongest = even
24                }
25            }
26
27            if let temporaryFirst = temporaryLongest.first, let temporaryLast = temporaryLongest.last {
28                if temporaryLast - temporaryFirst > currentLongest.last - currentLongest.first {
29                    currentLongest = temporaryLongest
30                }
31            }
32        }
33
34        let firstIndex = string.index(string.startIndex, offsetBy: currentLongest.first!)
35        let lastIndex = string.index(string.startIndex, offsetBy: currentLongest.last!)
36        let result = String(string[firstIndex ..< lastIndex])
37
38        return result
39    }
40
41    func getLongestPalindromeFrom(string: String, leftIndex: inout Int, rightIndex: inout Int) -> [Int] {
42        while leftIndex >= 0, rightIndex < string.count {
43            let leftStringIndex = string.index(string.startIndex, offsetBy: leftIndex)
44            let rightStringIndex = string.index(string.startIndex, offsetBy: rightIndex)
45
46            if string[leftStringIndex] != string[rightStringIndex] {
47                break
48            }
49
50            leftIndex -= 1
51            rightIndex += 1
52        }
53
54        return [leftIndex + 1, rightIndex]
55    }
56 }
57
```

Your SolutionsRun Code

Solution 1Solution 2Solution 3

```
1 class Program {
2     func longestPalindromicSubstring(string: String) -> String {
3         // Write your code here.
4         return ""
5     }
6 }
7
```

Custom OutputRaw OutputSubmit Code

Run or submit code when you're ready.