AlgoExpert Quad Layout Swift 12px Sublime Monokai 00:00:00

 Prompt
 Scratchpad
 Our Solution(s)
 Video Explanation

Run Code

```
Solution 1 Solution 2
                                Solution 3
 _{\rm 1} \, // Copyright @ 2020 AlgoExpert, LLC. All rights reserved.
    class Program {
         // Upper Bound: (O(n * (2n)!)/(n!(n + 1)!)) time | O(n) space func numberOfBinaryTreeTopologies(_ n: Int) -> Int {
             if n == 0 {
                 return 1
10
             var numberOfTopologies = 0
11
12
             for leftTreeSize in 0 ... < n \{
13
                 let rightTreeSize = n - 1 - leftTreeSize
14
15
                  let leftNumberOfTopologies = numberOfBinaryTreeTopologies(leftTreeSize)
16
                  let rightNumberOfTopologies = numberOfBinaryTreeTopologies(rightTreeSize)
17
                  numberOfTopologies += leftNumberOfTopologies * rightNumberOfTopologies
18
19
20
21
             return numberOfTopologies
22 }
23
```