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

PromptScratchpadOur Solution(s)Video ExplanationRun Code

```
Solution 1 Solution 2
                                Solution 3
 _{\rm 1} \, // Copyright @ 2020 AlgoExpert, LLC. All rights reserved.
    // O(n^2) time | O(n) space
     function numberOfBinaryTreeTopologies(n, cache = \{0: 1\}) {
      if (n in cache) return cache[n];
      let numberOfTrees = 0;
      for (let leftTreeSize = 0; leftTreeSize < n; leftTreeSize++) {
  const rightTreeSize = n - 1 - leftTreeSize;</pre>
         const numberOfLeftTrees = numberOfBinaryTreeTopologies(leftTreeSize, cache);
10
         const numberOfRightTrees = numberOfBinaryTreeTopologies(rightTreeSize, cache);
11
         numberOfTrees += numberOfLeftTrees * numberOfRightTrees;
12
13
      cache[n] = numberOfTrees;
14
15 }
      return numberOfTrees;
16
17 exports.numberOfBinaryTreeTopologies = numberOfBinaryTreeTopologies;
```