Our Solution(s) Run Code

Solution 1 Solution 2 Solution 3

```python
# Copyright © 2020 AlgoExpert, LLC. All rights reserved.

# O(n^2) time | O(n) space
def numberOfBinaryTreeTopologies(n, cache={0: 1}):
    if n in cache:
        return cache[n]
    numberOfTrees = 0
    for leftTreeSize in range(n):
        rightTreeSize = n - 1 - leftTreeSize
        numberOfLeftTrees = numberOfBinaryTreeTopologies(leftTreeSize,
        numberOfRightTrees = numberOfBinaryTreeTopologies(rightTreeSiz
        numberOfTrees += numberOfLeftTrees * numberOfRightTrees
    cache[n] = numberOfTrees
    return numberOfTrees

```

Your Solutions Run Code

Solution 1 Solution 2 Solution 3

```python
def numberOfBinaryTreeTopologies(n):
    # Write your code here.
    pass

```

Our Tests

Custom Output Submit Code

Run or submit code when you're ready.