Our Solution(s) Run Code

Solution 1 Solution 2 Solution 3

```
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using System.Collections.Generic;

public class Program {
  // O(n^2) time | O(n) space
  public static int NumberOfBinaryTreeTopologies(int n) {
    List<int> cache = new List<int>();
    cache.Add(1);
    for (int m = 1; m < n + 1; m++) {
      int numberOfTrees = 0;
      for (int leftTreeSize = 0; leftTreeSize < m; leftTreeSize++) {
        int rightTreeSize = m - 1 - leftTreeSize;
        int numberOfLeftTrees = cache[leftTreeSize];
        int numberOfRightTrees = cache[rightTreeSize];
        numberOfTrees += numberOfLeftTrees * numberOfRightTrees;
      }
      cache.Add(numberOfTrees);
    }
    return cache[n];
  }
}

```

Your Solutions Run Code

Solution 1 Solution 2 Solution 3

```
public class Program {
  public static int NumberOfBinaryTreeTopologies(int n) {
    // Write your code here.
    return -1;
  }
}

```

Our Tests

Custom Output Submit Code

Run or submit code when you're ready.