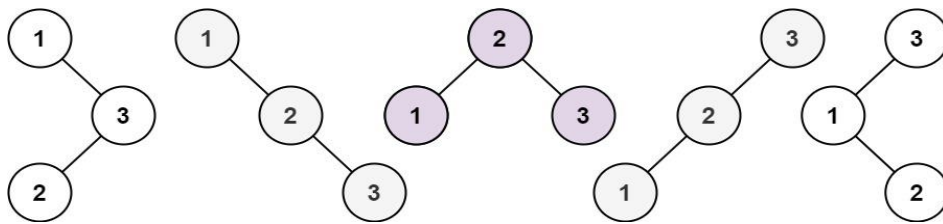


96. Unique Binary Search Trees

Given an integer n , return *the number of structurally unique **BST**'s (binary search trees) which has exactly n nodes of unique values from 1 to n .*

Example 1:



Input: $n = 3$

Output: 5

Example 2:

Input: $n = 1$

Output: 1

Constraints:

- $1 \leq n \leq 19$

```
class Solution(object):
    def numTrees(self, n):
        """
        :type n: int
        :rtype: int
        """
        dp = [0] * (n+1)
        dp[0] = 1
        for i in range(1, n+1):
            for j in range(i):
                dp[i] += dp[j] * dp[i-1-j]
        return dp[n]
```