96. Unique Binary Search Trees ★

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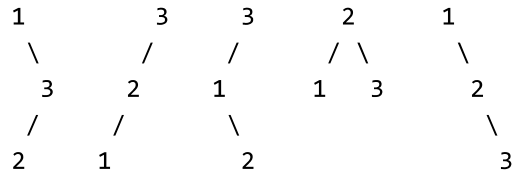
Total Accepted: **98945** Total Submissions: **252846** Difficulty: **Medium** Contributors: **Admin**

Notes

Given *n*, how many structurally unique **BST's** (binary search trees) that store values 1...*n*?

For example,

Given *n* = 3, there are a total of 5 unique BST's.



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C++ </>

```
1  class Solution {
2  public:
3      int numTrees(int n) {
4          static vector<int> f = { 1, 1 };
5          while (n >= f.size()) {
6              f.push_back(0);
7              for (int k = 1, i = f.size() - 1; k <= i; ++k) {
8                  f[i] += f[k - 1] * f[i - k];
9              }
10         }
11         return f[n];
12     }
13 };
```

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Notes