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Started on	Monday, 11 November 2024, 8:25 AM
State	Finished
Completed on	Monday, 11 November 2024, 8:32 AM
Time taken	6 mins 38 secs
Grade	10.00 out of 10.00 (100%)

Question 1

Correct

Mark 10.00 out of 10.00

Playing with Numbers:

Ram and Sita are playing with numbers by giving puzzles to each other. Now it was Ram term, so he gave Sita a positive integer 'n' and two numbers 1 and 3. He asked her to find the possible ways by which the number n can be represented using 1 and 3. Write any efficient algorithm to find the possible ways.

Example 1:**Input:** 6**Output:** 6**Explanation:** There are 6 ways to 6 represent number with 1 and 3

1+1+1+1+1+1

3+3

1+1+1+3

1+1+3+1

1+3+1+1

3+1+1+1

Input Format

First Line contains the number n

Output Format**Print: The number of possible ways 'n' can be represented using 1 and 3**

Sample Input

6

Sample Output

6

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2
3 long long countWays(int n) {
4     long long dp[n + 1];
5     dp[0] = 1;
6
7     for (int i = 1; i <= n; i++) {
8         dp[i] = 0;
9         if (i >= 1) dp[i] += dp[i - 1];
10        if (i >= 3) dp[i] += dp[i - 3];
11    }
12
13    return dp[n];
14 }
15
16 int main() {
17     int n;
18     scanf("%d", &n);
19
20     long long result = countWays(n);
21     printf("%lld", result);
22
23     return 0;
24 }
25
```

	Input	Expected	Got	
✓	6	6	6	✓
✓	25	8641	8641	✓
✓	100	24382819596721629	24382819596721629	✓

Passed all tests! ✓

Correct

Marks for this submission: 10.00/10.00.

◀ 5-Implementation of Quick Sort

Jump to...

2-DP-Playing with chessboard ▶