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Started on	Friday, 18 October 2024, 1:57 PM
State	Finished
Completed on	Friday, 18 October 2024, 2:02 PM
Time taken	5 mins 41 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  long long int count_ways_to_sum(int n) {
3  if (n == 0) return 1;
4  if (n == 1) return 1;
5  if (n == 2) return 1;
6  long long int dp[n + 1];
7      dp[0] = 1;
8      dp[1] = 1;
9      dp[2] = 1;
10 for (int i = 3; i <= n; i++) {
11     dp[i] = dp[i - 1] + dp[i - 3];
12 }
13     return dp[n];
14 }
15 int main() {
16     int n;
17     scanf("%d", &n);
18     printf("%lld\n", count_ways_to_sum(n));
19     return 0;
20 }
21

```

	Input	Expected	Got	
✓	6	6	6	✓
✓	25	8641	8641	✓

	Input	Expected	Got	
✓	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 ▶