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Started on	Sunday, 10 November 2024, 6:53 PM
State	Finished
Completed on	Sunday, 10 November 2024, 7:09 PM
Time taken	16 mins 47 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     if (n < 0) return 0;
5     if (n == 0) return 1;
6
7     long long dp[n + 1];
8     dp[0] = 1; // Base case
9
10    for (int i = 1; i <= n; i++) {
11        dp[i] = dp[i - 1];
12        if (i >= 3) {
13            dp[i] += dp[i - 3];
14        }
15    }
16
17    return dp[n];
18 }
19
20 int main() {
21     int n;
22     scanf("%d", &n);
23
24     long long result = countWays(n);
25     printf("%lld\n", result);
26

```

```
27 | return 0;  
28 | }
```

	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 ▶

