Started on	Friday, 8 November 2024, 9:11 PM
State	Finished
Completed on	Friday, 8 November 2024, 9:12 PM
Time taken	48 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 %)

```
#include <stdio.h>
#include <stdlib.h>

unsigned long long ways(int n) {

    unsigned long long dp[n + 1];


    dp[0] = 1;
    for (int i = 1; i <= n; i++) {
        dp[i] = 0;

        dp[i] += dp[i - 1];


        if (i >= 3) {
            dp[i] += dp[i - 3];
        }
    }

    return dp[n];
}

int main() {
    long long n;

```

```
    if (scanf("%lld", &n) != 1 || n < 0) {
        printf("Please enter a valid positive integer.\n");
        return 1;
    }

    unsigned long long result = ways(n);
    printf("%llu\n", result);
    return 0;
}
```

	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 ►