Started on	Tuesday, 19 November 2024, 11:50 PM
State	Finished
Completed on	Tuesday, 19 November 2024, 11:54 PM
Time taken	4 mins 10 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>
int main(){
long long n;
scanf("%lld",&n);
long long dp[n+1];
dp[0]=1;
if(n>=1) dp[1]=1;
```

```
if(n>=2) dp[2]=1;
if(n>=3) dp[3]=2;
for(long long i=4;i<=n;i++){
dp[i]=dp[i-1];
if(i-3>=0){
dp[i]+=dp[i-3];
}
}
printf("%lld\n",dp[n]);
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 ▶