

[Dashboard](#) / [My courses](#) / [CS23331-DAA-2023-CSE](#) / [Dynamic Programming](#) / [1-DP-Playing with Numbers](#)

<b>Started on</b>	Wednesday, 20 November 2024, 6:09 PM
<b>State</b>	Finished
<b>Completed on</b>	Wednesday, 20 November 2024, 6:53 PM
<b>Time taken</b>	44 mins 14 secs
<b>Grade</b>	<b>10.00</b> out of 10.00 ( <b>100%</b> )

## 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  int main() {
4      int n;
5      scanf("%d", &n);
6
7      long long dp[n + 1];
8
9      dp[0] = 1;
10     dp[1] = 1;
11     dp[2] = 1;
12     dp[3] = 2;
13
14     for (int i = 4; i <= n; i++) {
15         dp[i] = dp[i - 1] + dp[i - 3];
16     }
17
18     printf("%lld\n", dp[n]);
19
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 ▶