Count All Strings Having Balanced Brackets

Given a positive even integer number N. The task is to find the count of all possible strings that have N balanced open and close brackets.

For example:

N = 4, which means the string contains four brackets. First combination is [][] and second combination is [[]].
Another combination (balanced) is not possible.
Final output is 2.

Example 1:

Input

6 - Value of N

Output

5

Explanation:

N = 6.
First combination is [][][], second combination is [[]][], third combination is [][[]], fourth combination is [[[]]] and fifth combination is [[][]].
Here, 6 brackets are there in each string as per the given number, and each string has 3 pairs of opening and closing brackets.
The final output is 5.

Example 2:

Input

8 - Value of N

Output

14

Explanation:

N = 8.

First combination is [[[[]]]], second combination is [[[][]]], third combination is [[[]][]],
fourth combination is [[[]]][], fifth combination is [[][[]]], sixth combination is [[][][]],
seventh combination is [[][]][], eighth combination is [[]][[]], ninth combination is [[]][][],
tenth combination is [][[[]]], eleventh combination is [][[][]], twelfth combination is
[][[]][], thirteenth combination is [][][[]] and fourteenth combination is [][][][].
Here, 8 brackets are there in each string as per the given number, and each string
has 4 pairs of opening and closing brackets.
The final output is 14.

Constraints:

2 <= N <= 50

The input format for testing:

The candidate has to write the code to accept positive integers (even numbers) only.

The output format for testing:

- The output should be a single integer number only.
- If the input value violates the given constraints, the system should display the
  output message as "Invalid Input".
- Additional messages in output will result in the failure of test cases.