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Question Description

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1. You are given an integer n, which represents the length of binary string.

2. You are also given an integer k, which represents the number of adjacent 1's

in the binary string.

3. You have to print the number of binary strings of length n with k adjacent 1's.

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package Strings;

import java.util.Scanner;

public class Pep\_JavaIP\_3Strings\_99CountBinaryStringsWithKAdjacentOnes {

public static void main(String[] args) {

Scanner scn = new Scanner(System.in);

int n = scn.nextInt();

int k = scn.nextInt();

System.out.println(count\_seq(n, k));

}

public static int count\_seq(int n, int k) {

// dp[i][j][l] => represents number of subsequences formed from i digits

// with j adjacent 1's ending with l digit.

int[][][] dp = new int[n + 1][k + 1][2];

dp[1][0][0] = 1;

dp[1][0][1] = 1;

// return the total strings ending with 0 and 1 containing k 1's.

return dp[n][k][0] + dp[n][k][1];

}

}

/\*

Test cases:

5 2

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6

6 4

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2

10 4

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Source: https://www.geeksforgeeks.org/count-binary-strings-k-times-appearing-adjacent-two-set-bits/

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