DP-S002 (E002)

Solved Challenges 1/2

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Boy Ice-cream Kth day

ID:10531 Solved By 658 Users

A boy can have either a chocolate(C) or an ice-cream(I) on a given day. But to avoid catching cold, his mom has prevented him from having ice-cream on consecutive days. As the boy was adamant, his mom gave a relaxation that on every Kth day, the boy can have ice-cream even if he ate ice-cream the previous day. The program must print the number of ways W in which the boy can have chocolate or ice-cream over the period of N days.

Boundary Condition(s):

1 <= N <= 50

2 <= K <= 100

Input Format:

The first line contains N and K separated by a space.

Output Format:

The first line contains W.

Example Input/Output 1:

Input:

3 2

Output:

6

Explanation:

The 6 ways to have over three days are

CCC

CCI

CIC

ICC

ICI

IIC (as K=2, on the second day ice-cream can be had even on successive days)

Max Execution Time Limit: 500 millisecs

Ambiance

C (gcc 8.x)

X

Reset

```
1 #include<stdio.h>
 2 #include<stdlib.h>
   #define UUL unsigned long long int
   int main()
 4
 5
 6
        int n,k;
 7
        scanf("%d%d", &n,&k);
8
        UUL chocos[n+1];
9
        UUL icecream[n+1];
        chocos[1] = icecream[1] = 1;
10
11
12
        for(int days=2;days<=n;days++)</pre>
13
            chocos[days] = chocos[days-1] + icecream[days-1];
14
            icecream[days] = chocos[days-1];
15
            if(days%k == 0)
16
17
            {
                icecream[days] += icecream[days-1];
18
19
20
        printf("%llu", chocos[n]+icecream[n]);
21
22
23
24 }
```

