

Experiment 8

TASK - 1

NAME: SATYAM

UID : 20BCS9393

CLASS: 607A

SUBJECT: CC LAB

1. Aim:

Construct the array

2. Code :

```
#include <bits/stdc++.h>
using namespace std;

const int MOD =
1000000007; void print(long
arr[2][2]) { for (int i = 0; i <
2; i++) { for (int j = 0; j <
2; j++) {
    cout << i << ' ' << j << ' ' << arr[i][j] << endl;
}
}
}
long countArray(int n, int k, int x)
{ long ways[2][2]; ways[0][0] =
1; ways[0][1] = 0; bool
fillSecond = true; for (int i = 0; i
< n-1; i++) {
    ways[fillSecond][0] = (ways[!fillSecond][1] * (k - 1)) % MOD;
    ways[fillSecond][1] = (ways[!fillSecond][1] * (k - 2) + ways[!fillSecond][0]) % MOD;
    fillSecond = !fillSecond;
}

long answer;
if (x == 1) {
    answer = (ways[fillSecond][1] * (k - 1)) % MOD;
}
else {
    answer = (ways[fillSecond][1] * (k - 2) + ways[fillSecond][0]) % MOD;
}
return answer;
}
```

```

int main()
{   int n;
    int k;
    int x;
    cin >> n >> k >> x;
    long answer = countArray(n, k,
x);   cout << answer << endl;
return 0;
}

```

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Algorithms > Dynamic Programming > Construct the Array
Exit Full Screen View

You have earned 35.00 points!
You are now 134.57 points away from the 4th star for your problem solving badge.
51%
340.43/475

Congratulations

You solved this challenge. Would you like to challenge your friends?

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Test case 0
Test case 1
Test case 2
Test case 3
Test case 4
Test case 5
Test case 6

Compiler Message

Success

Input (stdin)
Download

1
4 3 2

Expected Output
Download

1
3