Q12)

#include <iostream>

using namespace std;

class LinearEquation

{

int n, C;

int \*arr;

public:

int solutionsCount;

LinearEquation(int n, int C)

{

this->n = n;

this->C = C;

arr = new int[n];

solutionsCount = 0;

}

void display()

{

for (int i = 0; i < n; i++)

cout << arr[i] << " ";

cout << endl;

}

void solve(int xIdx)

{

if (xIdx == 0)

{

arr[xIdx] = C;

solutionsCount++;

display();

return;

}

for (int i = 0; i <= C; i++)

{

arr[xIdx] = i;

C -= i;

solve(xIdx - 1);

C += i;

}

}

};

int main()

{

int n, C;

cout << "Enter n and C" << endl;

cin >> n >> C;

LinearEquation l(n, C);

l.solve(n - 1);

cout << "Solutions Count : " << l.solutionsCount << endl;

return 0;

}

