**6 kyu**

**Largest Cross Sum**

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C#

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Given a matrix, find the cross (row and column) with the largest sum of elements. Return the sum.

new int[][]

{

new int[] {1, 2, 3},

new int[] {4, 5, 6},

new int[] {7, 8, 9}

};

// Largest cross is the last column, {3, 6, 9}, with the last row, {7, 8, 9}.

// Sum of elements is 3 + 6 + 7 + 8 + 9 = 33, therefore Kata.LargestCrossSum(matrix) = 33

NOTE: the shared element of the column and row should only be counted once.

The matrix may not be square. All elements will be positive integers.

<https://www.codewars.com/kata/largest-cross-sum/csharp>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp1

{

class Program

{

public static int LargestCrossSum(int[][] matrix)

{

int filas = matrix.Length;

int cols = matrix[0].Length;

int[] f = new int[filas];

int[] c = new int[cols];

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

{

int sum = 0;

for (int j = 0; j < cols; j++)

{

sum += matrix[i][j];

}

f[i] = sum;

}

for (int j = 0; j < cols; j++)

{

int sum = 0;

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

{

sum += matrix[i][j];

}

c[j] = sum;

}

int sum\_cross = 0, max\_cross = 0;

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

{

for (int j = 0; j < cols; j++)

{

sum\_cross += f[i] + c[j];

sum\_cross -= matrix[i][j];

max\_cross = Math.Max(max\_cross, sum\_cross);

sum\_cross = 0;

}

}

return max\_cross;

}

static void Main(string[] args)

{

int[][] m = new int[][]

{

new int[] {1, 2, 3},

new int[] {4, 5, 6},

new int[] {7, 8, 9}

};

Console.WriteLine(LargestCrossSum(m));

Console.ReadLine();

}

}

}