You are given an array of integers. Sort it in such a way that if a comes before bthen the sum of digits of a is less than or equal to the sum of digits of b. If two numbers have the same sum of digits, the smaller one (in the regular sense) should come first. For example 4 and 13 have the same sum of digits, however 4 < 13 thus 4 comes before 13 in any digitalSum sorting where both are present.

**Example**

For a = [13, 20, 7, 4], the output should be  
digitalSumSort(a) = [20, 4, 13, 7].

**Input/Output**

* **[time limit] 3000ms (cs)**
* **[input] array.integer a**

Array of positive integers.

*Guaranteed constraints:*  
4 ≤ a.length ≤ 20,  
1 ≤ a[i] ≤ 1000.

* **[output] array.integer**

**[C#] Syntax Tips**

// Prints help message to the console

// Returns a string

string helloWorld(string name) {

Console.Write("This prints to the console when you Run Tests");

return "Hello, " + name;

}

<https://codefights.com/challenge/WDZikM6GYf5QsW8Xg/solutions>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

namespace ConsoleApplication1

{

class Program

{

static int[] digitalSumSort(int[] a)

{

int[] sum\_dig = new int[a.Length];

for (int i = 0; i < a.Length; i++)

{

sum\_dig[i] = a[i].ToString().Sum(e => e - '0');

}

//Array.Sort(sum\_dig, a);

for (int i = 0; i < a.Length - 1; i++)

{

for (int j = i + 1; j < a.Length; j++)

{

if (sum\_dig[i] > sum\_dig[j])

{

int temp = sum\_dig[i];

sum\_dig[i] = sum\_dig[j];

sum\_dig[j] = temp;

int temp2 = a[i];

a[i] = a[j];

a[j] = temp2;

}

else if (sum\_dig[i] == sum\_dig[j])

{

if (a[i] > a[j])

{

int temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

}

return a;

}

static void Main()

{

//int[] a = { 13, 20, 7, 4 };

//digitalSumSort(a) = [20, 4, 13, 7]

int[] a = { 100, 22, 4, 11, 31, 103 };

//[100, 11, 4, 22, 31, 103]

foreach (int elem in digitalSumSort(a))

{

Console.Write(elem + " ");

}

//int n = 123;

//int sum = n.ToString().Sum(e => e - '0');

//Console.WriteLine(sum);

Console.ReadLine();

}

}

}