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https://codefights.com/img/coins_new.png2000

A sequence is said to be *Fibonacci-sorted* if elements at the indices corresponding to the [Fibonacci numbers](https://en.wikipedia.org/wiki/Fibonacci_number) are sorted.

The following sequence is formed by *Fibonacci numbers*:  
0, 1, 1, 2, 3, 5, 8, 13, 21, ......

Given a sequence, your task is to *Fibonacci-sort* it, i.e. sort elements at indices 0, 1, 2, 3, 5, etc in ascending order.

**Example**

For sequence = [6, 5, 4, 3, 2, 1, 0], the output should be  
FibonacciSort(sequence) = [1, 3, 4, 5, 2, 6, 0].

Elements at positions 0, 1, 2, 3 and 5 should be sorted. Those elements are 6, 5, 4, 3, and 1, and they should be placed at positions marked as ? in [?, ?, ?, ?, 2, ?, 0]. Thus, the final answer is [1, 3, 4, 5, 2, 6, 0].

**Input/Output**

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

A sequence of integers that should be *Fibonacci-sorted*.

*Constraints:*  
3 ≤ sequence.length ≤ 100,  
-1000 ≤ sequence[i] ≤ 1000.

* **[output] array.integer**

A *Fibonacci-sorted* sequence.

<https://codefights.com/challenge/QczEop25GyKxsRTjJ/main?utm_source=challengeOfTheDay&utm_medium=email&utm_campaign=email_notification>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

namespace ConsoleApplication1

{

class Program

{

static int[] FibonacciSort(int[] sequence)

{

int[] indices = { 0, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233 };

var sorted = new List<int>();

bool[] marcas = new bool[sequence.Length];

foreach (int i in indices)

{

if (i < sequence.Length)

{

sorted.Add(sequence[i]);

marcas[i] = true;

}

}

sorted.Sort();

//foreach (int elem in sorted)

//{

// Console.Write(elem + " ");

//}

//Console.WriteLine();

int[] ans = new int[sequence.Length];

int j = 0;

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

{

if (marcas[i])

{

ans[i] = sorted[j++];

}

else

{

ans[i]= sequence[i];

}

}

return ans;

}

static void Main(string[] args)

{

//List<int> fib = new List<int>();

//fib.Add(0);

//fib.Add(1);

//for (int i = 2; fib[i-1] <= 200; i++)

//{

// fib.Add(fib[i - 1] + fib[i - 2]);

//}

//foreach (int elem in fib)

//{

// Console.Write(elem + " ");

//}

int[] sequence = { -1, -2, -3, -4, -5, -6, -7, -8, -9, -10 };

// 0 1 2 3 5 8

int [] res = FibonacciSort(sequence);

foreach (int elem in res)

{

Console.Write(elem + " ");

}

//Console.WriteLine(Array.IndexOf(sequence, 1));

Console.ReadLine();

}

}

}