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using System;

public class HelloWorld

{

static int[] num = new int[] {12,23,20,19,18,4,1,30};

public static void Main(string[] args)

{

//Console.WriteLine("Elements before Sorting");

//PrintElements();

//SelectionSort();

//BubbleSort();

//InsertionSort();

//Console.WriteLine("\nElements after Sorting");

//PrintElements();

for(int i= 0;i<20;i++)

{

Console.Write(FibSeriesUsingIterative(i) + " " );

}

Console.Write("\nFib Series\n");

for(int i= 0;i<20;i++)

{

Console.Write(Fib(i) + " ");

}

}

static void PrintElements()

{

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

{

Console.Write(num[i]+ " " );

}

}

static void SelectionSort()

{

int temp;

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

{

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

{

temp = num[i];

num[i] = num[j];

num[j] = temp;

}

}

}

static void BubbleSort()

{

int temp;

int length = num.Length;

for(int i = 0; i<length-1 ;i++)

{

for(int j = 0; j<length-i-1; j++)

{

if(num[j] > num[j+1])

{

temp = num[j];

num[j] = num[j+1];

num[j+1] = temp;

}

}

}

}

static void InsertionSort()

{

int temp, j = 0;

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

{

temp = num[i];

j = i-1;

while(j>=0 && num[j] > temp)

{

num[j+1] = num[j];

j = j-1;

}

num[j+1] = temp;

}

}

static int FibSeriesUsingIterative(int n)

{

int i, a, b, f;

if(n <= 1)

return n;

else

{

a = 0;

b = 1;

f = 0;

for(i = 2; i <= n; i++)

{

f = a + b;

a = b;

b = f;

}

}

return f;

}

static int Fib(int n)

{

if(n<=1)

return n;

else

return Fib(n-1) + Fib(n-2);

}

static int Factorial(int n)

{

if(n==1)

return 1;

else

return n \* Factorial(n-1);

}

}