using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApplication1

{

class Program

{

static void printArr(int[] a, int n)

{

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

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

Console.WriteLine();

}

// Generating permutation using Heap Algorithm

static void permutation(int[] a, int size, int n)

{

if (size == 1)

printArr(a, n);

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

{

heapPermutation(a, size - 1, n);

if (size % 2 == 1)

{

int temp = a[0];

a[0] = a[size - 1];

a[size - 1] = temp;

}

else

{

int temp = a[i];

a[i] = a[size - 1];

a[size - 1] = temp;

}

}

}

public static void Main()

{

for (int i = 3; i < 15; i++)

{

int[] a = Enumerable.Range(1, i).ToArray<int>();

permutation(a, a.Length, a.Length);

}

}

}

}