//Question 1

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace MinMax

{

class minMax

{

public int min(int[] brr, int no)

{

int i = 0;

int imin = brr[0];

for(i = 0;i < no; i++)

{

if (imin > brr[i])

{

imin = brr[i];

}

}

return imin;

}

public int max(int[] crr, int no)

{

int i = 0;

int imax = 0;

for(i = 0;i < no; i++)

{

if(imax < crr[i])

{

imax = crr[i];

}

}

return imax;

}

}

}

//Program.cs

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace MinMax

{

class Program

{

static void Main(string[] args)

{

int iNo = 10;

int i = 0;

Console.Write("Number Of elements : ");

iNo = Convert.ToInt32(Console.ReadLine());

int[] Arr = new Int32[iNo];

Console.WriteLine("\n Enter array Elmements : ");

for(i = 0;i < iNo; i++)

{

Arr[i] = Convert.ToInt32(Console.ReadLine());

}

minMax mm = new minMax();

Console.WriteLine("Maximum Number is : " + mm.max(Arr,iNo));

Console.WriteLine("Minimum Number is : " + mm.min(Arr, iNo));

}

}

}

//Question 2

//prime.cs

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Primeperfect

{

class Prime

{

public bool prime(int iNo)

{

int i = 0;

int ans = 0;

if (iNo < 0)

{

iNo = -iNo;

}

for (i = 2; i <= (iNo / 2); i++)

{

if (iNo % i == 0)

{

ans = 1;

break;

}

}

if (ans == 1)

{

return false;

}

else

{

return true;

}

}

}

}

//perfect.cs

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Primeperfect

{

class Perfect

{

public bool perfect(int no)

{

int i = 0, sum = 0, rem = 0;

for (i = 1; i <= (no - 1); i++)

{

rem = no % i;

if (rem == 0)

{

sum = sum + i;

}

}

if (sum == no)

{

return true;

}

else

{

return false;

}

}

}

}

//Program.cs

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace Primeperfect

{

class Program

{

static void Main(string[] args)

{

int iNo = 0;

bool iPrime, iPerfect;

Console.Write("Enter Number : ");

iNo = Convert.ToInt32(Console.ReadLine());

Prime pr = new Prime();

Perfect pf = new Perfect();

iPrime = pr.prime(iNo);

iPerfect = pf.perfect(iNo);

if(iPerfect == true)

{

Console.WriteLine(iNo + " Is a perfect Number.");

}

else

{

Console.WriteLine(iNo + " Is not a perfect Number.");

}

if(iPrime == true)

{

Console.WriteLine(iNo + " Is a Prime Number.");

}

else

{

Console.WriteLine(iNo + " Is not a Prime Number.");

}

}

}

}

//Question 3

//Arraysum

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace SumArray

{

public static class ArraySum

{

public static int SumArr(int[] brr,int no)

{

int i = 0, sum = 0;

for(i = 0;i < no; i++)

{

sum = sum + brr[i];

}

return sum;

}

}

}

//Program.cs

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace SumArray

{

class Program

{

static void Main(string[] args)

{

int iNo = 0,i = 0,iRet = 0;

Console.Write("Number of Elements : ");

iNo = Convert.ToInt32(Console.ReadLine());

int[] Arr = new int[iNo];

Console.Write("\nEnter Array Elements : \n");

for (i = 0;i < iNo; i++)

{

Arr[i] = Convert.ToInt32(Console.ReadLine());

}

iRet = ArraySum.SumArr(Arr, iNo);

Console.WriteLine("Sum of Array Ellmemnts is : " + iRet);

}

}

}

//Question 4

//Countcase.cs

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace CountCase

{

class casecount

{

public void count(string str)

{

int i = 0;

int upper = 0;

int lower = 0;

char ch = '\0';

//Console.Write(str.Length);

for(i = 0;i < str.Length; i++)

{

ch = str[i];

if((ch >= 'A') && (ch <= 'Z'))

{

upper++;

}

else if ((ch >= 'a') && (ch <= 'z'))

{

lower++;

}

}

Console.WriteLine("Upper Case Letter is : " + upper);

Console.WriteLine("Lower case Letter is : " + lower);

}

}

}

//Program.cs

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace CountCase

{

class Program

{

static void Main(string[] args)

{

string str;

Console.Write("Enter String : ");

str = Console.ReadLine();

casecount cc = new casecount();

cc.count(str);

}

}

}

//Question 5

//Program.cs

//Jagged Array

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace JaggedArray

{

class Program

{

static void Main(string[] args)

{

int row = 0, col = 0;

int i = 0, j = 0;

Console.Write("Enter Number of Row And column : ");

row = Convert.ToInt32(Console.ReadLine());

//col = Convert.ToInt32(Console.ReadLine());

int[][] Arr = new int[row][];

for(i = 0;i < row; i++)

{

Console.Write("Enter Number of Elements : ");

col = Convert.ToInt32(Console.ReadLine());

Arr[i] = new int[col];

for(j = 0;j< col; j++)

{

Arr[i][j] = Convert.ToInt32(Console.ReadLine());

}

}

for (i = 0; i < row; i++)

{

Console.Write(i+" : ");

Arr[i] = new int[col];

for (j = 0; j < col; j++)

{

Console.Write(Arr[i][j]+" ");

}

}

}

}

}