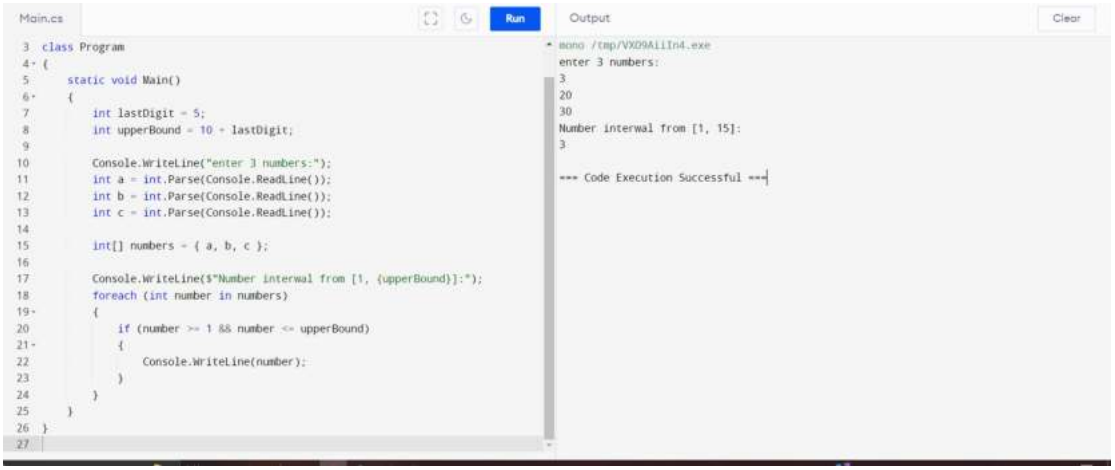
Практична 2.

Завдання 1.

```
using System;


class Program
{
    static void Main()
    {
        int lastDigit = 5;
        int upperBound = 10 + lastDigit;


        Console.WriteLine("enter 3 numbers:");
        int a = int.Parse(Console.ReadLine());
        int b = int.Parse(Console.ReadLine());
        int c = int.Parse(Console.ReadLine());


        int[] numbers = { a, b, c };


        Console.WriteLine($"Number interwal from [1, {upperBound}]:");
        foreach (int number in numbers)
        {
            if (number >= 1 && number <= upperBound)
```

```
        {
            Console.WriteLine(number);
        }
    }
  }
}
```



Завдання 2.

```
using System;

class Program
{
   static void Main()
   {
```

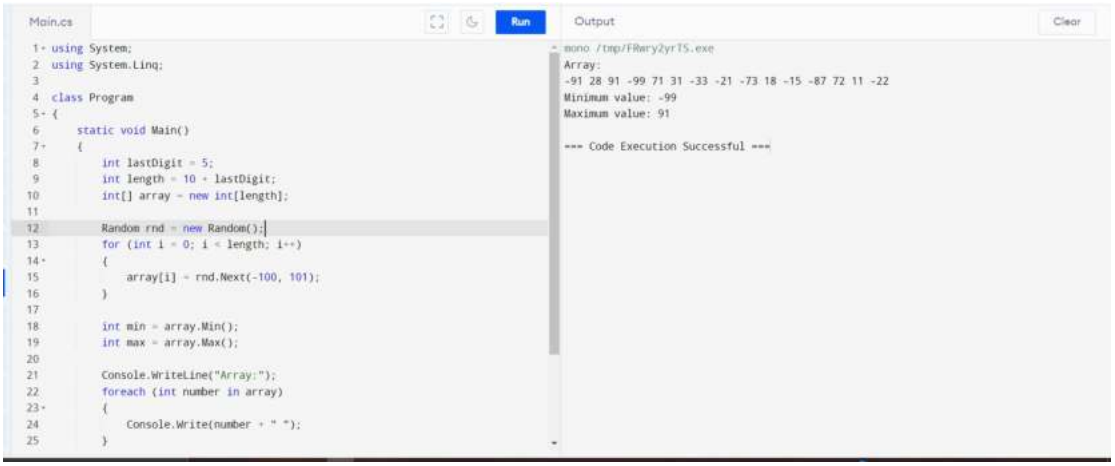
```
    Console.WriteLine("Enter the three sides of the triangle:");
    double a = double.Parse(Console.ReadLine());
    double b = double.Parse(Console.ReadLine());
    double c = double.Parse(Console.ReadLine());

    if (IsValidTriangle(a, b, c))
    {
        double perimeter = a + b + c;
        double s = perimeter / 2;
        double area = Math.Sqrt(s * (s - a) * (s - b) * (s - c));

        Console.WriteLine($"Perimeter of the triangle: {perimeter}");
        Console.WriteLine($"Area of the triangle: {area}");
        Console.WriteLine($"Type of the triangle: {GetTriangleType(a, b, c)}");
    }
    else
    {
        Console.WriteLine("This is not a valid triangle.");
    }
}

static bool IsValidTriangle(double a, double b, double c)
```

```
    {
        return a + b > c && a + c > b && b + c > a;
    }

    static string GetTriangleType(double a, double b, double c)
    {
        if (a == b && b == c)
            return "Equilateral";
        else if (a == b || b == c || a == c)
            return "Isosceles";
        else
            return "Scalene";
    }
}
```

Завдання 3.

```
using System;
using System.Linq;

class Program
{
    static void Main()
    {
        int lastDigit = 5;
        int length = 10 + lastDigit;
        int[] array = new int[length];

        Random rnd = new Random();
        for (int i = 0; i < length; i++)
        {
            array[i] = rnd.Next(-100, 101);
        }

        int min = array.Min();
        int max = array.Max();
```

```
        Console.WriteLine("Array:");
        foreach (int number in array)
        {
            Console.Write(number + " ");
        }
        Console.WriteLine();

        Console.WriteLine($"Minimum value: {min}");
        Console.WriteLine($"Maximum value: {max}");
    }
}
```



Завдання 4.

```
using System;
```

```
using System.Linq;

class Program
{
    static void Main()
    {
        int lastDigit = 5;
        int length = 10 + lastDigit;
        int[] X = new int[length];

        Random rnd = new Random();
        for (int i = 0; i < length; i++)
        {
            X[i] = rnd.Next(-100, 101);
        }

        Console.WriteLine("Enter the number M:");
        int M = int.Parse(Console.ReadLine());

        int[] Y = X.Where(n => Math.Abs(n) > M).ToArray();

        Console.WriteLine("Array X:");
        foreach (int number in X)
        {
```

```
            Console.Write(number + " ");
        }
        Console.WriteLine();

        Console.WriteLine($"Number M: {M}");

        Console.WriteLine("Array Y:");
        foreach (int number in Y)
        {
            Console.Write(number + " ");
        }
        Console.WriteLine();
    }
}
```