• C# LAB 05

Question 03

class Calculator

{

public double Add(double num1, double num2)

{

return num1 + num2;

}

public double Subtract(double num1, double num2)

{

return num1 - num2;

}

public double multiply(double num1, double num2)

{

return num1 \* num2;

}

public double divide(double num1, double num2)

{

return num1 / num2;

}

}

static void Main(string[] args)

{

{

Console.WriteLine("Select an operation:");

Console.WriteLine("1. Addition");

Console.WriteLine("2. Subtraction");

Console.WriteLine("3. Multiplication");

Console.WriteLine("4. Division");

int choice = int.Parse(Console.ReadLine());

if (choice == 1 || choice == 2 ||choice == 3 || choice == 4)

{

Console.WriteLine("Enter the first number:");

double num1 = double.Parse(Console.ReadLine());

Console.WriteLine("Enter the second number:");

double num2 = double.Parse(Console.ReadLine());

Calculator calculator = new Calculator();

switch (choice)

{

case 1:

double sum = calculator.Add(num1, num2);

Console.WriteLine($"The result of addition is: {sum}");

break;

case 2:

double difference = calculator.Subtract(num1, num2);

Console.WriteLine($"The result of subtraction is: {difference}");

break;

case 3:

double multiplication = calculator.multiply(num1, num2);

Console.WriteLine($"The result of multiplication is: {multiplication}");

break;

case 4:

double division = calculator.divide(num1, num2);

Console.WriteLine($"The result of division is: {division}");

break;

default:

Console.WriteLine("Invalid choice. Please select 1,2,3 or 4.");

break;

}

}

else

{

Console.WriteLine("Invalid choice. Please select 1,2,3 or 4.");

}

Console.ReadLine();

}

}

Question 05

class ArrayProcessor

{

private int[] array;

public ArrayProcessor(int[] array)

{

this.array = array;

}

public int GetMinValue()

{

int min = array[0];

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

{

if (array[i] < min)

{

min = array[i];

}

}

return min;

}

public int GetMaxValue()

{

int max = array[0];

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

{

if (array[i] > max)

{

max = array[i];

}

}

return max;

}

public double GetAverageValue()

{

int sum = 0;

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

{

sum += array[i];

}

return (double)sum / array.Length;

}

public int[] ReverseArray()

{

int[] reversedArray = new int[array.Length];

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

{

reversedArray[i] = array[array.Length - 1 - i];

}

return reversedArray;

}

}

static void Main()

{

int[] array = new int[10];

Console.WriteLine("Enter 10 elements for the array:");

for (int i = 0; i < 10; i++)

{

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

}

ArrayProcessor arrayProcessor = new ArrayProcessor(array);

int minValue = arrayProcessor.GetMinValue();

int maxValue = arrayProcessor.GetMaxValue();

double averageValue = arrayProcessor.GetAverageValue();

int[] reversedArray = arrayProcessor.ReverseArray();

Console.WriteLine("Minimum value: " + minValue);

Console.WriteLine("Maximum value: " + maxValue);

Console.WriteLine("Average value: " + averageValue);

Console.WriteLine("Reverse order of values:");

foreach (int num in reversedArray)

{

Console.Write(num + " ");

}

Console.ReadLine();

}