BRH Punchihewa

26998

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();
}
```