* LAB 07

Question 07

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp12

{

internal class Program

{

static void Main(string[] args)

{

Console.WriteLine("Enter the size of the arrays:");

int size = Convert.ToInt32(Console.ReadLine());

int[] arr1 = new int[size];

int[] arr2 = new int[size];

Console.WriteLine("Enter values for Array 1:");

InputValues(arr1);

Console.WriteLine("Enter values for Array 2:");

InputValues(arr2);

int[] vectorSum = CalculateVectorSum(arr1, arr2);

int[] vectorProduct = CalculateVectorProduct(arr1, arr2);

Console.WriteLine("Scalar Sum : " + CalculateScalarSum(arr1) + " + " + CalculateScalarSum(arr2));

Console.WriteLine("Vector Sum :");

DisplayArray(vectorSum);

Console.WriteLine("Vector Product :");

DisplayArray(vectorProduct);

Console.WriteLine("Scalar Product : " + CalculateScalarProduct(vectorProduct));

Console.ReadLine();

}

static void InputValues(int[] array)

{

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

{

Console.Write($"Value {i + 1}: ");

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

}

}

static void DisplayArray(int[] array)

{

foreach (int num in array)

{

Console.Write(num + " ");

}

Console.WriteLine();

}

static int CalculateScalarSum(int[] array)

{

int sum = 0;

foreach (int num in array)

{

sum += num;

}

return sum;

}

static int[] CalculateVectorSum(int[] arr1, int[] arr2)

{

int[] result = new int[arr1.Length];

for (int i = 0; i < arr1.Length; i++)

{

result[i] = arr1[i] + arr2[i];

}

return result;

}

static int[] CalculateVectorProduct(int[] arr1, int[] arr2)

{

int[] result = new int[arr1.Length];

for (int i = 0; i < arr1.Length; i++)

{

result[i] = arr1[i] \* arr2[i];

}

return result;

}

static int CalculateScalarProduct(int[] array)

{

int product = 1;

foreach (int num in array)

{

product \*= num;

}

return product;

}

}

}

Question 08

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp12

{

internal class Program

{

static void Main(string[] args)

{

animal Animal = new animal();

dog Dog = new dog();

Animal.DisplayAnimalInfo();

Dog.DisplayDogInfo();

Console.ReadLine();

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp12

{

internal class animal

{

public virtual void DisplayAnimalInfo()

{

Console.Write("I am Animal ");

}

}

}

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp12

{

internal class dog

{

public void DisplayDogInfo()

{

Console.Write("I have four legs. ");

}

}

}