C# Lab 07

Question 07

using System;

class Program

{

static void Main()

{

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

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

int[] array1 = new int[size];

int[] array2 = new int[size];

int[] resultArray = new int[size];

Console.WriteLine("\nEnter values for the first array:");

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

{

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

array1[i] = int.Parse(Console.ReadLine());

}

Console.WriteLine("\nEnter values for the second array:");

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

{

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

array2[i] = int.Parse(Console.ReadLine());

}

int scalarSum = 0;

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

{

scalarSum += array1[i];

scalarSum += array2[i];

}

Console.WriteLine($"\nScalar Sum: {scalarSum}");

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

{

resultArray[i] = array1[i] + array2[i];

}

Console.WriteLine("\nVector Sum (Result Array):");

PrintArray(resultArray);

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

{

resultArray[i] = array1[i] \* array2[i];

}

Console.WriteLine("\nVector Product (Result Array):");

PrintArray(resultArray);

int scalarProductSum = 0;

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

{

resultArray[i] = array1[i] \* array2[i];

scalarProductSum += resultArray[i];

}

Console.WriteLine($"\nScalar Product (Result Array):");

PrintArray(resultArray);

Console.WriteLine($"\nSum of Values in Result Array: {scalarProductSum}");

}

static void PrintArray(int[] array)

{

Console.Write("[ ");

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

{

Console.Write($"{array[i]} ");

}

Console.WriteLine("]");

}

}

Question 08

using System;

class Animal

{

public void DisplayAnimal()

{

Console.WriteLine("I am an Animal");

}

}

class Dog : Animal

{

public void DisplayDog()

{

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

}

}

class Program

{

static void Main()

{

Animal animal = new Animal();

Dog dog = new Dog();

animal.DisplayAnimal();

dog.DisplayDog();

}

}