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C# Lab 07

Question 07.

Declare two single dimensional array with the size given by the user and find. Display the following,Scalar Sum (Adding values of each element of an array)Vector Sum (Adding values of each relative elements of an array and store them in third array)Vector Product (Multiply values of each relative elements of an array and store them in third array)Scalar Product (Multiply values of each relative elements of an array and store them in third array. After placing the values in third array add all the values)

Question 08.

Create a Console application with two added classes called “Animal” and “Dog”. “Dog” is the derived class of ‘Animal Class’ (Base Class). Inside the ‘Animal Class’ Create a method which for ‘Dog’ Class. Inside the method print “I am Animal”. Inside the “Dog Class” Create a method and display “I have four legs”. Inside the main method create relevant class object and Display as follows. “I am an animal I have four legs”.

Exercise 07

using System;

namespace ArrayOperations

{

class ArrayOperations

{

static void Main(string[] args)

{

Console.WriteLine("Enter the array size for the first array: ");

int arraySize1 = int.Parse(Console.ReadLine());

Console.WriteLine("Enter the array size for the second array: ");

int arraySize2 = int.Parse(Console.ReadLine());

int[] array1 = new int[arraySize1];

int[] array2 = new int[arraySize2];

for (int i = 0; i < array1.Length; i++)

{

array1[i] = 0;

}

for (int i = 0; i < array2.Length; i++)

{

array2[i] = 0;

}

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

for (int i = 0; i < array1.Length; i++)

{

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

}

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

for (int i = 0; i < array2.Length; i++)

{

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

}

int scalarSum = 0;

for (int i = 0; i < array1.Length; i++)

{

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

}

int[] vectorSum = new int[array1.Length];

for (int i = 0; i < array1.Length; i++)

{

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

}

int[] vectorProduct = new int[array1.Length];

for (int i = 0; i < array1.Length; i++)

{

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

}

int scalarProduct = 0;

for (int i = 0; i < array1.Length; i++)

{

scalarProduct += array1[i] \* array2[i];

}

Console.WriteLine("The scalar sum is: {0}", scalarSum);

Console.WriteLine("The vector sum is: {0}", vectorSum);

Console.WriteLine("The vector product is: {0}", vectorProduct);

Console.WriteLine("The scalar product is: {0}", scalarProduct);

}

}

}

Exercise 08

using System;

namespace Inheritance

{

class Animal

{

public void display()

{

Console.WriteLine("I am Animal");

}

}

class Dog : Animal

{

public void display()

{

base.display();

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

}

}

class MainClass

{

static void Main(string[] args)

{

Dog dog = new Dog();

dog.display();

}

}

}