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27082

Lab 07

Question 07

using System;

namespace ArrayOperations

{

class Program

{

static void Main()

{

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

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

int[] array1 = new int[size];

int[] array2 = new int[size];

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

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

{

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

}

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

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

{

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

    int scalarSum = 0;
    for (int i = 0; i < size; i++)
    {
        scalarSum += array1[i] + array2[i];
    }

    Console.WriteLine($"Scalar Sum: {scalarSum}");
```

```
int[] vectorSumArray = new int[size];
for (int i = 0; i < size; i++)
{
    vectorSumArray[i] = array1[i] + array2[i];
}

Console.WriteLine("Vector Sum:");
DisplayArray(vectorSumArray);
```

```
int[] vectorProductArray = new int[size];
for (int i = 0; i < size; i++)
{
    vectorProductArray[i] = array1[i] * array2[i];
}

Console.WriteLine("Vector Product:");
DisplayArray(vectorProductArray);
```

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

```

        {
            scalarProduct += array1[i] * array2[i];
        }

        Console.WriteLine($"Scalar Product: {scalarProduct}");

    }

    // Method to display the elements of an array
    static void DisplayArray(int[] arr)
    {
        foreach (int num in arr)
        {
            Console.Write(num + " ");
        }

        Console.WriteLine();
    }
}

```

Question 08

```

using System;

namespace AnimalDogApplication
{
    class Animal
    {
        public void DisplayAnimalInfo()
        {

```

```
        Console.WriteLine("I am an animal.");  
    }  
}
```

```
class Dog : Animal  
{  
    public void DisplayDogInfo()  
    {  
        Console.WriteLine("I have four legs.");  
    }  
}
```

```
class Program  
{  
    static void Main()  
    {  
        Animal animalObj = new Animal();  
  
        Dog dogObj = new Dog();  
  
        animalObj.DisplayAnimalInfo();  
        dogObj.DisplayDogInfo();  
    }  
}
```