Bahria University,
Karachi Campus

LAB EXPERIMENT NO.

8
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LIST OF TASKS

TASK NO.	OBJECTIVE
1	Write a program, which creates an array of 20 elements of type integer and initializes each of the elements with a value equal to the index of the element multiplied by 5. Print the elements to the console.
2	Write a program, which reads two arrays from the console and checks whether they are equal (two arrays are equal when they are of equal length and all of their elements, which have the same index, are equal).
3	Make a program in C# in which take 5 numbers from user and then give sum and avg. of them. Using arrays.

Submitted On:

December, 2021
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(Date: DD/MM/YY)

Task 1

Write a program, which creates an array of 20 elements of type integer and initializes each of the elements with a value equal to the index of the element multiplied by 5. Print the elements to the console.
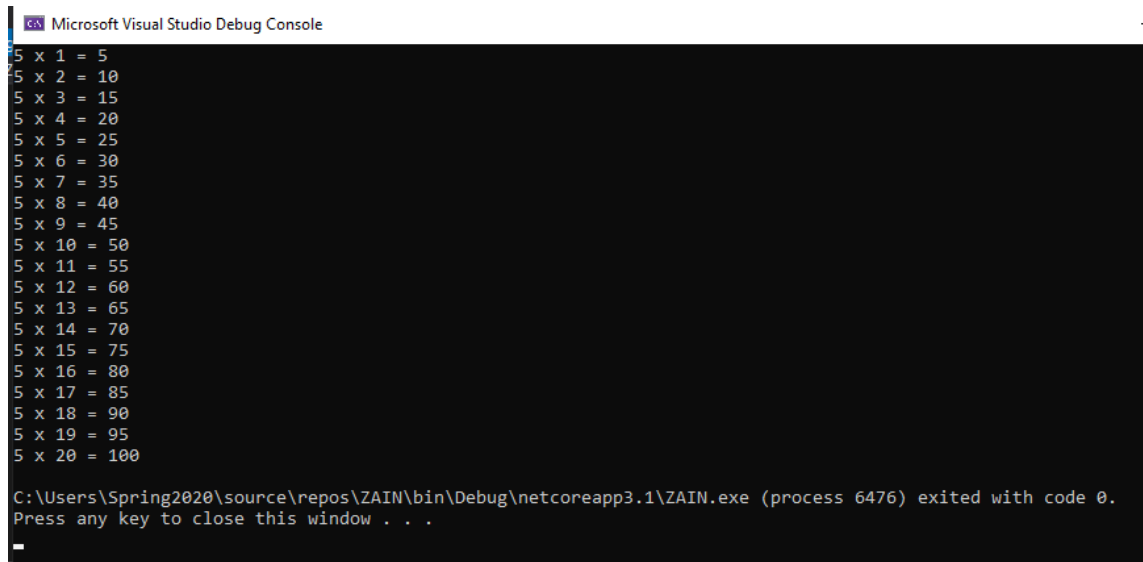
Solution:

```csharp
using System;

namespace ZAIN
{
    class Programusing System;

namespace ZAIN
{
    class Program
    {
        static void Main(string[] args)
        {
            int[] arr = new int[21];
            for(int i=1; i<arr.Length; i++)
            {
                arr[i] = i*5;
                Console.WriteLine("5 x {0} = {1}",i,arr[i]);
            }

        }
    }
}
```

Output:

```
Microsoft Visual Studio Debug Console                                          —

5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
5 x 11 = 55
5 x 12 = 60
5 x 13 = 65
5 x 14 = 70
5 x 15 = 75
5 x 16 = 80
5 x 17 = 85
5 x 18 = 90
5 x 19 = 95
5 x 20 = 100

C:\Users\Spring2020\source\repos\ZAIN\bin\Debug\netcoreapp3.1\ZAIN.exe (process 6476) exited with code 0.
Press any key to close this window . . .
```

Task 2

Write a program, which reads two arrays from the console and checks whether they are equal (two arrays are equal when they are of equal length and all of their elements, which have the same index, are equal).

Solution:

```csharp
using System;

namespace ZAIN
{
    class Program
    {
        static void Main(string[] args)
        {
            int i=0,n1,n2;

            Console.Write("Enter no of elements in array1: ");
            n1 = int.Parse(Console.ReadLine());
            Console.Write("Enter no of elements in array2: ");
            n2 = int.Parse(Console.ReadLine());
            int[] array1 = new int[n1];
            int[] array2 = new int[n2];

            bool equal = true;
            Console.WriteLine("Enter values of index in array 1: ");
            for (i = 0; i < n1; i++)
            {

                    array1[i] = int.Parse(Console.ReadLine());
            }
            Console.WriteLine("Enter values of index in array 2: ");
            for (i = 0; i < n2; i++)
                {

                    array2[i] = int.Parse(Console.ReadLine());
                }
            if(n1==n2)
            {
                for(i=0;i<array2.Length;i++)
                if (array1[i] != array2[i])
                {
                    equal = false;
                        Console.WriteLine("ARRAYS ARE NOT OF EQUAL");
                        break;

                }

            }
            else
            {
                Console.WriteLine("ARRAYS ARE NOT OF EQUAL");
            }
        }
    }
}
```

Output:

```
Microsoft Visual Studio Debug Console

Enter no of elements in array1: 6
Enter no of elements in array2: 6
Enter values of index in array 1:
1
1
1
2
2
6
Enter values of index in array 2:
1
1
1
2
2
2
ARRAYS ARE NOT OF EQUAL

C:\Users\Spring2020\source\repos\ZAIN\bin\Debug\netcoreapp3.1\ZAIN.exe (process 8720) exited with code 0.
Press any key to close this window . . .
```

Task 3
Make a program in C# in which take 5 numbers from user and then give sum and avg. of them using arrays.

Solution:

```csharp
using System;

namespace Lab_8_Task_3
{
    class Program
    {
        static void Main(string[] args)
        {
            double sum=0, avg;
            double[] val = new double[5];
            Console.WriteLine("Enter 5 values");
            for(int i=0; i<5; i++)
            {
                Console.Write("Enter Value # {0}: ",i+1);
                val[i] = Convert.ToDouble(Console.ReadLine());
                sum += val[i];
            }
            int l = val.Length;
            avg = sum / l;
            Console.WriteLine("SUM = {0} \nAVERAGE = {1:0.00} ",sum,avg);

        }
    }
}
```

Output:

```
Microsoft Visual Studio Debug Console
Enter 5 values
Enter Value # 1: 7
Enter Value # 2: 5
Enter Value # 3: 6
Enter Value # 4: 2
Enter Value # 5: 2
SUM = 22
AVERAGE = 4.40

E:\vs\Lab 8 Task 3\bin\Debug\net5.0\Lab 8 Task 3.exe (process 13780) exited with code 0.
Press any key to close this window . . .
```