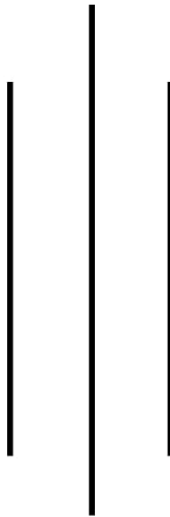


Kathmandu Bernhardt College

Bafal, Kalanki

Kathmandu, Nepal

Lab Report: 01



Dot Net Technology

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Department of Computer Application

Lab Date: 2078-03-17

Submission Date: 2078-03-22

Signature:

1. Write a console program that obtains three int values from the user and displays the total.

Introduction: The simplest method to get input from the user is by using the `ReadLine()` method of the `Console` class. However, `Read()` and `ReadKey()` are also available for getting input from the user. They are also included in `Console` class.

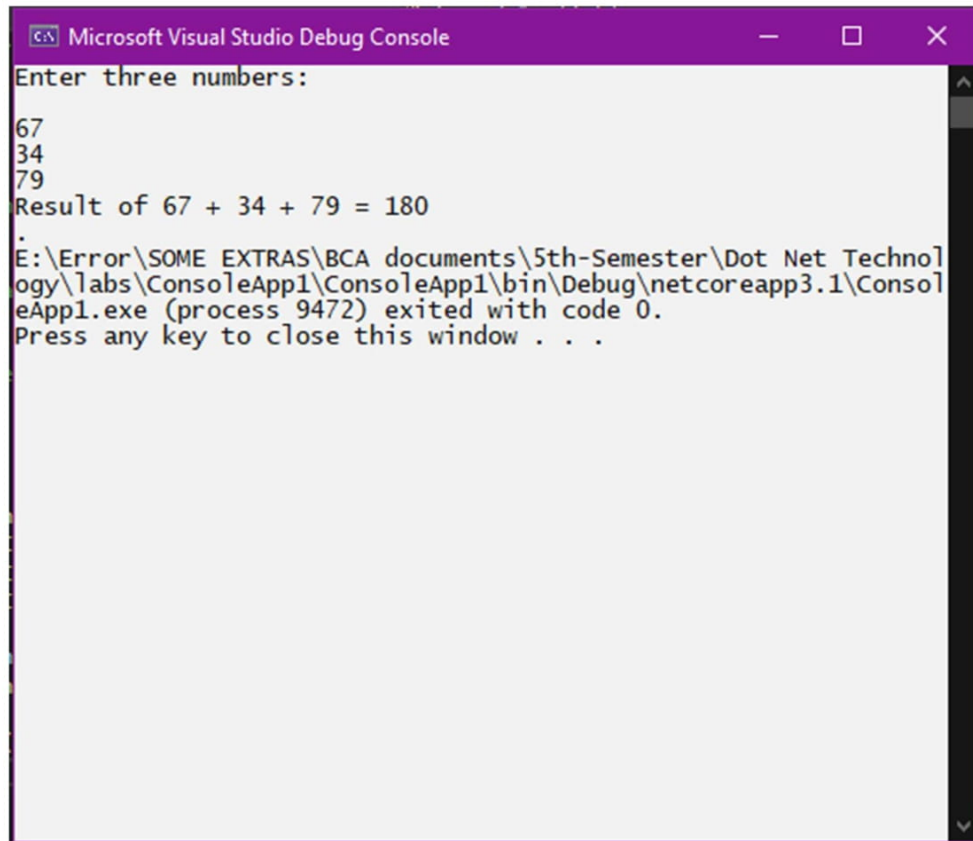
Syntax:

`dataType identifier = Console.ReadLine()`

Code:

```
using System;
namespace ConsoleApp2
{
    class Lab1
    {
        static void Main(string [] args)
        {
            int n1, n2, n3, result;
            Console.WriteLine("Enter three numbers: \n");
            n1 = Convert.ToInt32(Console.ReadLine());
            n2 = Convert.ToInt32(Console.ReadLine());
            n3 = Convert.ToInt32(Console.ReadLine());
            result = n1 + n2 + n3;
            Console.WriteLine("Result of {0} + {1} + {2} = {3}",
                n1, n2, n3, result);
            Console.ReadKey();
        }
    }
}
```

Output 1:



```
Microsoft Visual Studio Debug Console
Enter three numbers:
67
34
79
Result of 67 + 34 + 79 = 180
.
E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe (process 9472) exited with code 0.
Press any key to close this window . . .
```

2. Write a program using conditional statements to check whether the character is vowel or consonant.

Introduction: A statement that can be executed based on a condition is known as a "Conditional statement". The statement is often a block of code. There are two types; conditional branching and looping.

Syntax:

```
if (condition)
    <statements>;
else if (condition)
    <statements>;
    -----
else
```

Code: using System;
namespace ConsoleApp2 {
class Lab1 { static void Main(string [] args) {

```
    char ch;
    Console.WriteLine("Enter an alphabet a-z:");
    ch = Convert.ToChar(Console.ReadLine());
    int i = ch;
    if (i >= 48 && i <= 57)
    {
        Console.WriteLine("You have entered a number, please enter an alphabet.");
    }
    else
    {
        switch (ch)
        {
            case 'a':
                Console.WriteLine($"{ch} is vowel.");
                break;
```

case 'e':

```
Console.WriteLine($" {ch} is vowel.");  
break;
```

case 'i':

```
Console.WriteLine($" {ch} is vowel.");  
break;
```

case 'o':

```
Console.WriteLine($" {ch} is vowel.");  
break;
```

case 'u':

```
Console.WriteLine($" {ch} is vowel.");  
break;
```

default:

```
Console.WriteLine($" {ch} is not vowel, its consonant");  
break;
```

```
}
```

```
}
```

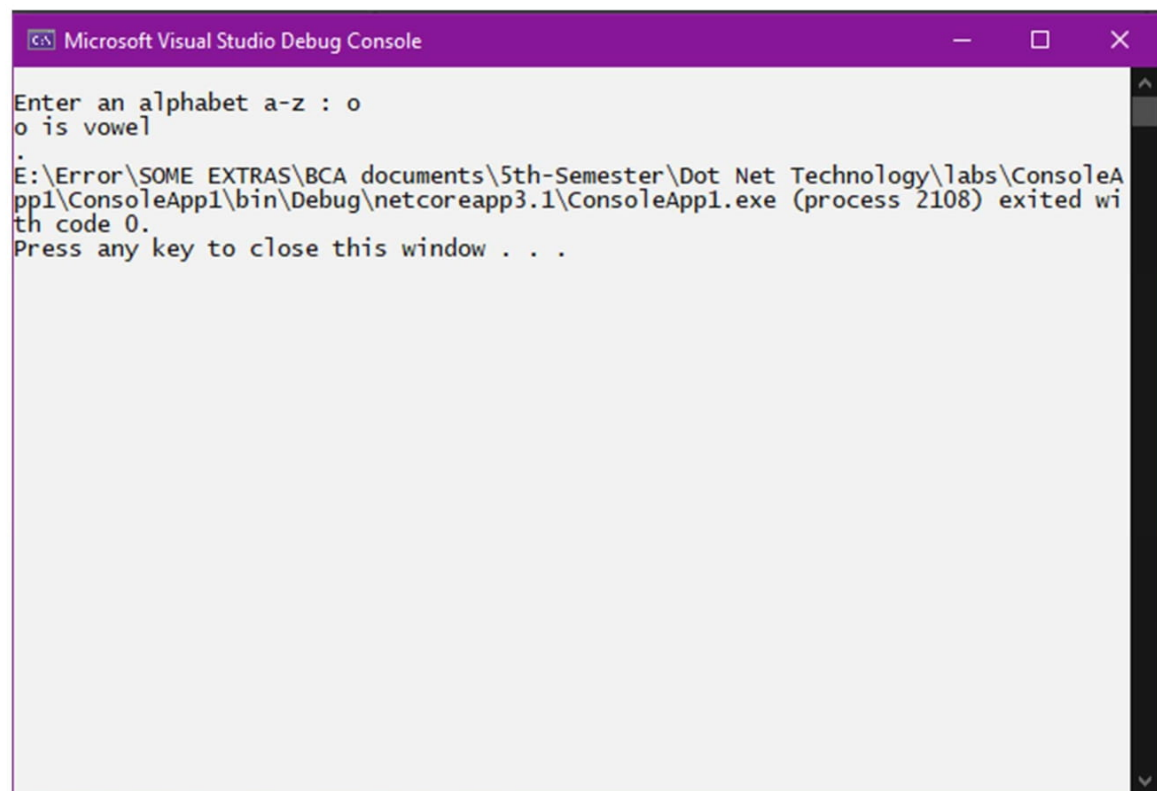
```
Console.ReadKey();
```

```
}
```

```
}
```

```
}
```

Output 2:



```
Microsoft Visual Studio Debug Console

Enter an alphabet a-z : o
o is vowel
.
E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\ConsoleA
pp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe (process 2108) exited wi
th code 0.
Press any key to close this window . . .
```

3. Write a console program that print the string with double quotation marks around each word in a string.
 "Welcome" "to" "the" "DotNet" "Technology".

Introduction : A verbatim string is created using a special symbol @ which is known as a verbatim identifier. If a string contains @ as a prefix followed by double quotes, then Compiler identifies that string as a verbatim string and compile that string.

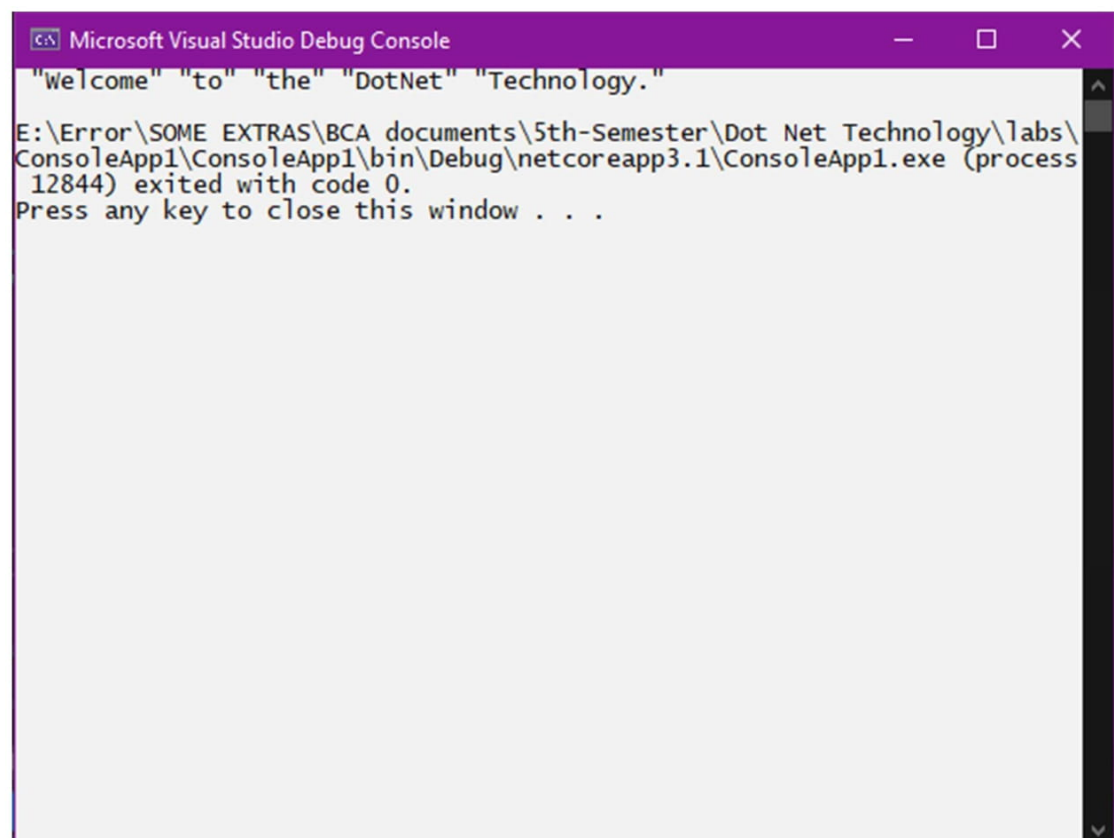
Syntax :

dataType variable_name = @ " " "required-string" " " ;

Code :

```
using system;
namespace ConsoleApp2 {
    class Lab1 {
        static void Main(string [] args) {
            string line = @ " " "Welcome" " " "to" " " "the" " "
                " " "Dot" " " "Net" " " "Technology." " " ;
            Console.WriteLine (line);
        }
    }
}
```

Output 3:



```
Microsoft Visual Studio Debug Console
"Welcome" "to" "the" "DotNet" "Technology."
E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\
ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe (process
12844) exited with code 0.
Press any key to close this window . . .
```


4. Write a console program to accept 10 numbers from user in an array and find largest number.

Introduction : Arrays are used to store multiple values in a single variable, instead of declaring separate variables for each value. To declare an array, define the variable type with square brackets.

Syntax :

```
string [] var_name = new string[provide_size_here];
```

Code:

```
using System;
```

```
namespace ConsoleApp2 {
```

```
    class Lab1 {
```

```
        static void Main(string [] args) {
```

```
            int [] arr = new int[10];
```

```
            int i;
```

```
            Console.WriteLine("\n Read and find highest number: \n");
```

```
            Console.WriteLine("\n");
```

```
            Console.WriteLine("Enter 10 numbers: \n");
```

```
            for (i=0; i<10; i++) {
```

```
                Console.WriteLine("Element {0} :", i);
```

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

```
            }
```

```
            Array.Sort(arr);
```

```
            Console.WriteLine("\n Greatest number : " +
```

```
arr[arr.Length - 1]);
```

```
            Console.ReadKey();
```

```
        }  
    }  
}
```

Output 4:



The screenshot shows a Windows console application window with a title bar containing the file path "E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\ConsoleApp1\ConsoleA...". The window has standard minimize, maximize, and close buttons. The console text is as follows:

```
Read and find the largest elements in an array:  
Enter 10 numbers:  
element - 0 : 43  
element - 1 : 54  
element - 2 : 65  
element - 3 : 76  
element - 4 : 34  
element - 5 : 23  
element - 6 : 12  
element - 7 : 44  
element - 8 : 76  
element - 9 : 90  
  
Greatest number among above:90
```

5. Write a console program to demonstrate following string operation substring, split and replace.

Introduction :

- Substring starts at a specified character position and continues to the end of the string.
- Split splits a string into a maximum number of substrings based on specified delimiting characters and, options.
- Replace returns a new string in which all occurrences of a specified unicode character are replaced with another one.

Syntax :

- `string Substring (int startIndex)`
- `string[] var2_name = var1_name.Split(string[], Int 32);`
- `string var_name2 = var_name1.Replace(string, string);`

Code:

```
using System;
namespace ConsoleApp2
{
    class Lab1
    {
        static void Main (string[] args)
        {
            string quote = "Everyone should have their mind
            blown once a day.";
            Console.WriteLine ($"--> Given sentence: \n{quote}");
            Console.WriteLine ("\n--> Using substring:");
            string cut = quote.Substring (0, 15);
            Console.WriteLine (cut);
        }
    }
}
```

```
Console.WriteLine("\n --> Using Split :");  
string [] s1 = quote.Split("their");  
foreach (string s in s1)  
{  
    Console.WriteLine(s);  
}
```

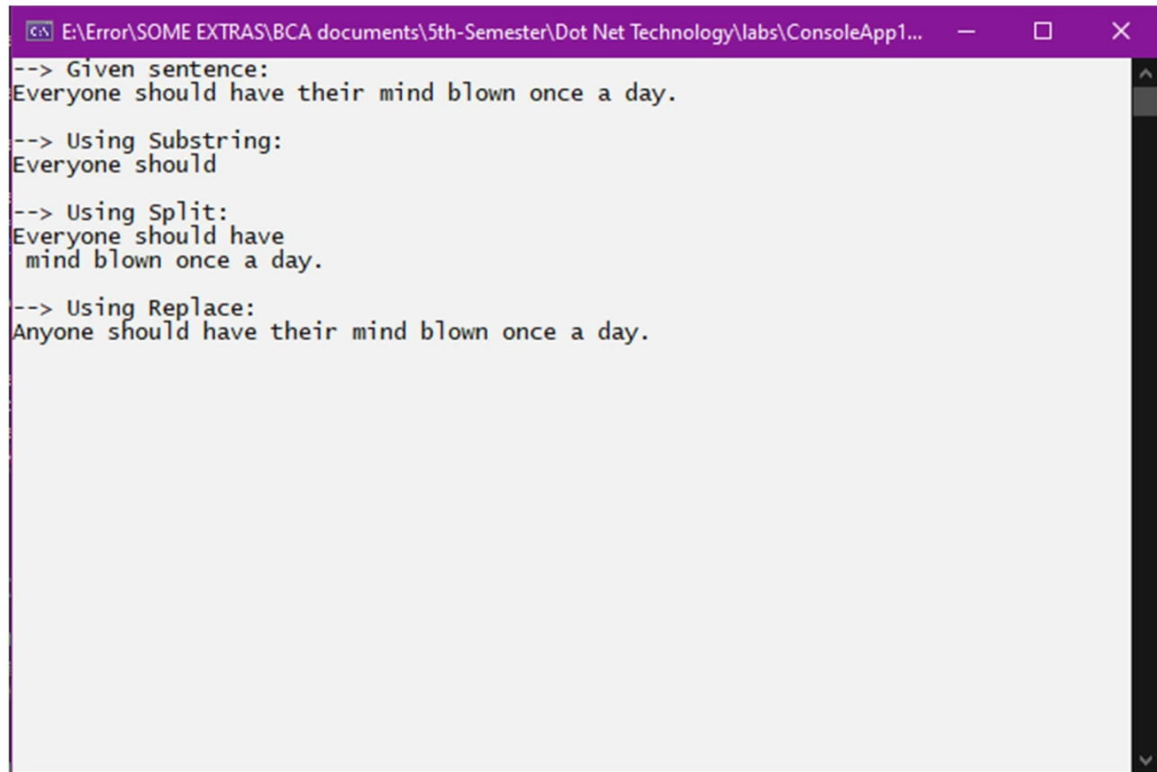
```
Console.WriteLine("\n --> Using Replace :");  
string s2 = quote.Replace("Everyone", "Anyone");  
Console.WriteLine(s2);  
Console.ReadKey();
```

```
}
```

```
}
```

```
}
```

Output 5:



```
E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\ConsoleApp1... --
--> Given sentence:
Everyone should have their mind blown once a day.
--> Using Substring:
Everyone should
--> Using Split:
Everyone should have
mind blown once a day.
--> Using Replace:
Anyone should have their mind blown once a day.
```

6. Write a console program to obtain 2 integer values and a operator (+, -, *, /) from users and display the result of the operations.

Introduction: Switch is a selection statement. It executes code of one of the conditions based on a pattern match with the specified match expression.

Syntax:

```
switch (expression) {
    case exp_val1:
        stmt ---
        break;
    case exp_val2:
        stmt ---
        break;
    default:
        stmt ---
        break;
}
```

Code:

```
using System;
namespace ConsoleApp2
{
    class Lab1
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter two numbers:");
            float n1 = float.Parse(Console.ReadLine());
            float n2 = float.Parse(Console.ReadLine());
```

```
Console.WriteLine("\n 1. Addition (+)");
```

```
Console.WriteLine("\n 2. Subtraction (-)");
```

```
Console.WriteLine("\n 3. Multiplication (*)");
```

```
Console.WriteLine("\n 4. Division (/)");
```

```
Console.WriteLine("Enter your choice: \n");
```

```
//Reading choice
```

```
char c = Convert.ToChar(Console.ReadLine());
```

```
switch (c) {
```

```
    case '+': Console.WriteLine("Add: " + (n1+n2));  
    break;
```

```
    case '-': Console.WriteLine("Subtract: " + (n1-n2));  
    break;
```

```
    case '*': Console.WriteLine("Multiply: " + (n1*n2));  
    break;
```

```
    case '/': Console.WriteLine("Divide: " + (n1/n2));  
    break;
```

```
    default: Console.WriteLine("\n Choose only 1 to 4.");  
    break;
```

```
}
```

```
Console.ReadKey();
```

```
}
```

```
}
```

```
}
```


Output 6:



The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar is purple and contains the text "Microsoft Visual Studio Debug Console" along with standard window control buttons. The console area is white and displays the following text:

```
Enter two numbers:  
456  
7  
1. Addition (+)  
2. Subtraction (-)  
3. Multiplication (*)  
4. Division (/)  
Enter your choice:  
/  
Division Of Two Numbers : 65.14286  
.  
E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\ConsoleApp1\ConsoleApp1\  
bin\Debug\netcoreapp3.1\ConsoleApp1.exe (process 892) exited with code 0.  
Press any key to close this window . . .
```


7. Write a console program to copy the elements of one array into another array.

Introduction: The values of 1st array is copied using for loop and both results are displayed.

Syntax:

```
int [] 1st-array-name = new int [size];
for (i = --- ) {
    2nd-array = 1st-array-name[i];
}
```

Code:

```
using System;
namespace ConsoleApp2
{
    class Lab1
    {
        static void Main (string [] args)
        {
            int [] first = new int [15];

            Console.WriteLine ("Enter number of elements: \n");
            int num = Convert.ToInt32 (Console.ReadLine());

            Console.WriteLine ("\n Enter elements of 1st array: \n");
            for (int i = 0; i < num; i++)
            {
                first [i] = Convert.ToInt32 (Console.ReadLine());
            }
        }
    }
}
```

```
int [] second = new int [num];
```

```
for (int i=0; i < num; i++)
```

```
{  
    second[i] = first[i];  
}
```

```
// Display 1st Array
```

```
Console.WriteLine("\n Elements of 1st Array: \n");
```

```
for (int i=0; i < num; i++) {  
    Console.Write(first[i] + " ");  
}
```

```
Console.WriteLine();
```

```
// Display 2nd Array
```

```
Console.WriteLine("\n The copied array elements are: \n");
```

```
for (int i=0; i < num; i++) {  
    Console.Write(second[i] + " ");  
}
```

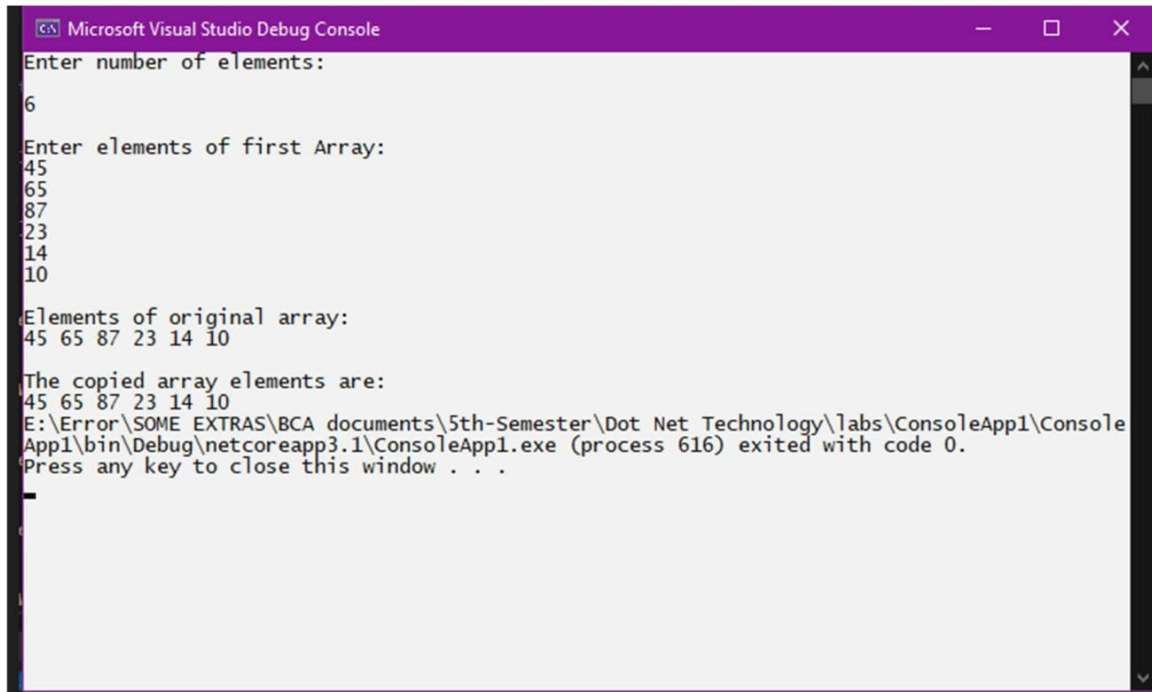
```
Console.ReadKey();
```

```
}
```

```
}
```

```
}
```

Output 7:



```
Microsoft Visual Studio Debug Console
Enter number of elements:
6
Enter elements of first Array:
45
65
87
23
14
10
Elements of original array:
45 65 87 23 14 10
The copied array elements are:
45 65 87 23 14 10
E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\ConsoleApp1\Console
App1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe (process 616) exited with code 0.
Press any key to close this window . . .
```

8. Write a console program to implement namespace student in C#.

Introduction: A namespace is a domain for type names. Types are typically organized into hierarchical namespaces, making them easier to find and avoid conflicts.

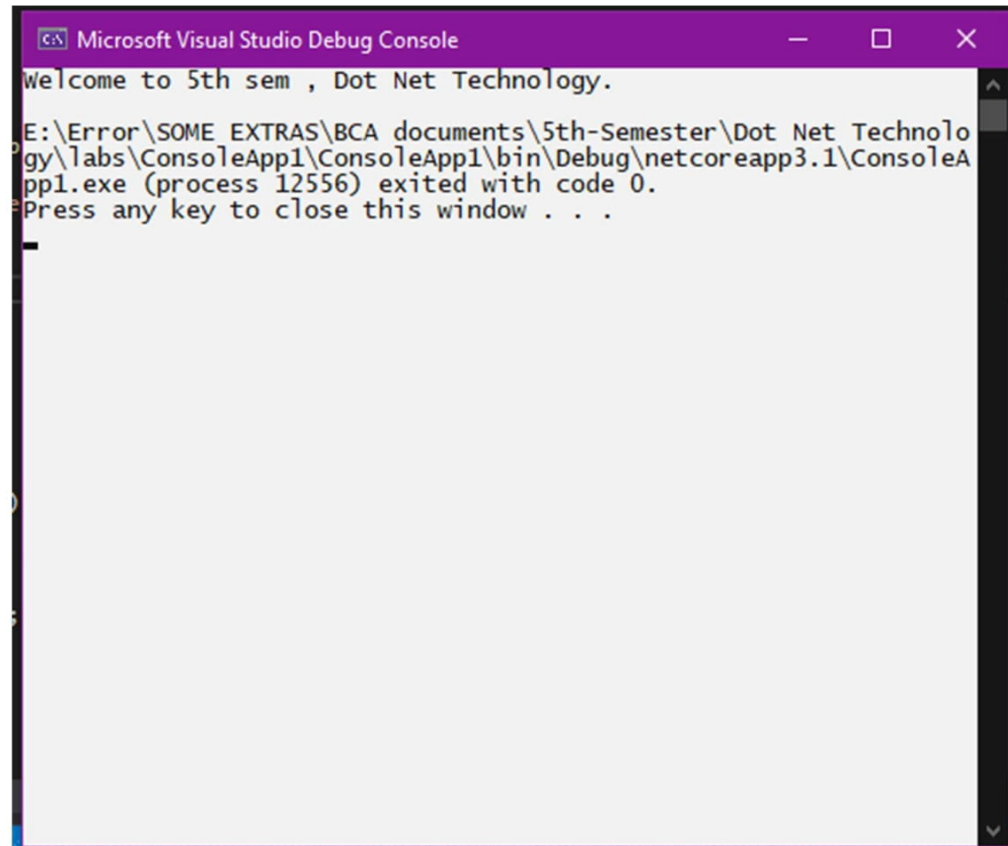
Syntax:

```
namespace Name1 {
    class ClassName {
        // Body of namespace
    }
}
namespace Name2 {
    // main method
}
```

Code:

```
using System;
namespace study {
    class Bca {
        static void syllabus() {
            Console.WriteLine("Welcome to 5th sem, Dot Net Technology.");
        }
    }
}
namespace student {
    class Ashish {
        static void Main (string [] args) {
            study.Bca.syllabus();
        }
    }
}
```

Output 8:



```
Microsoft Visual Studio Debug Console
Welcome to 5th sem , Dot Net Technology.
E:\Error\SOME EXTRAS\BCA documents\5th-Semester\Dot Net Technology\labs\ConsoleApp1\ConsoleApp1\bin\Debug\netcoreapp3.1\ConsoleApp1.exe (process 12556) exited with code 0.
Press any key to close this window . . .
```