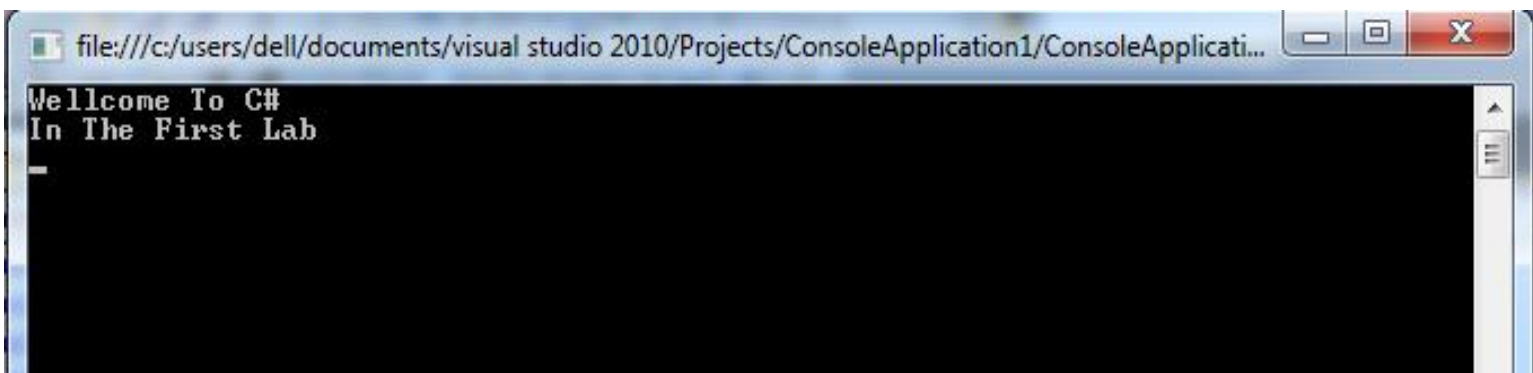


Ex1: In the first example, a welcome message will be printed as shown below:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            //this is the first program in the first lab
            Console.WriteLine("Wellcome To C# ");
            Console.WriteLine("In The First Lab");
            Console.Read();
        }
    }
}
```

The output:



The screenshot shows a console window titled "file:///c:/users/dell/documents/visual studio 2010/Projects/ConsoleApplication1/ConsoleApplicati...". The output displayed in the console is:

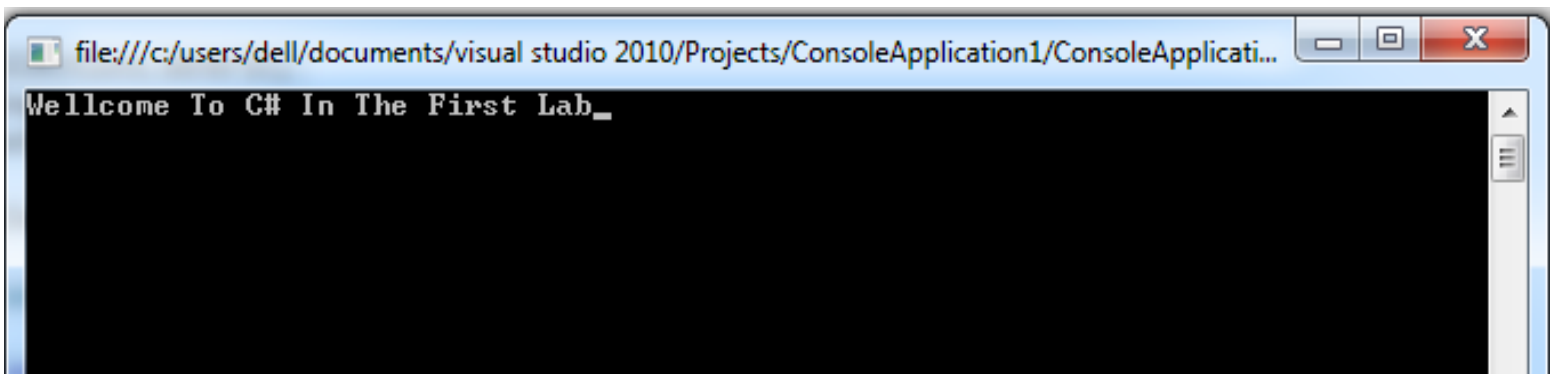
```
Wellcome To C#
In The First Lab
-
```

Ex2: Replace `Console.WriteLine` method in the previous example with `Console.Write` method, the output is as follow:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            //Exchange Console.WriteLine by Console.Write
            Console.Write("Wellcome To C# ");
            Console.Write("In The First Lab");
            Console.Read();
        }
    }
}
```

The output:



The screenshot shows a console window with the following text: "Wellcome To C# In The First Lab_". The window title bar indicates the file path: "file:///c:/users/dell/documents/visual studio 2010/Projects/ConsoleApplication1/ConsoleApplicati...".

Note

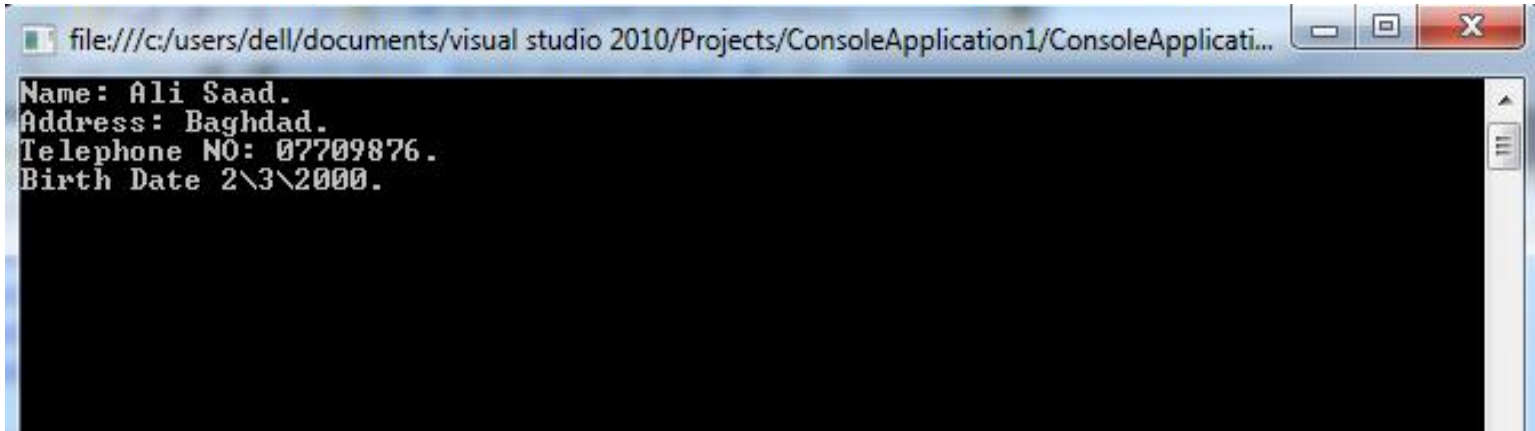
From above we can deduce **Console.WriteLine** method prints the data without printing the new line after the message while **Console.WriteLine** method prints the message on the console screen as well as new line character after the message.

HW: Write a VC# program to display your name and yours father name in one line using two statements, your department in the third line.

CHARACTER ESCAPE SEQUENCES

Escape Sequence	Description
\n	New Line
\t	Horizontal tab
\v	Vertical tab
\'	Single quote
\"	Double quote
\\	Backslash

EX3: Write a VC# program using one statement (**Console.Write**) that when executed will have the output as shown below:



```
file:///c:/users/dell/documents/visual studio 2010/Projects/ConsoleApplication1/ConsoleApplicati...
Name: Ali Saad.
Address: Baghdad.
Telephone NO: 07709876.
Birth Date 2\3\2000.
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            // \n and \\ in C#

            Console.WriteLine("Name: Ali Saad.\nAddress:
            Baghdad.\nTelephone NO: 07709876.\nBirth Date
            2\\3\\2000.");

            Console.Read();
        }
    }
}
```

EX4: Write C# program to display square using (*) as follows:

```
*   *   *
*       *
*   *   *
```

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            // \t in C#

            Console.WriteLine("*\t*\t*\n\n*\t\t*\n\n*\t*\t*");

            Console.Read();
        }
    }
}
```

Ex5: Suppose **x1** is an integer variable, **x2** is a double variable and **x3** is a decimal variable, assign 100 to **x1**, **x2** and **x3**. Find **y1**, **y2** and **y3**

$$y1 = \frac{x1}{3} , y2 = \frac{x2}{3} \text{ and } y3 = \frac{x3}{3}$$

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            /* Integer, double and decimal data type
               this is multi line command in VC#*/
            int x1 = 100;
            int y1 = x1 / 3;
            double x2 = 100;
            double y2 = x2 / 3;
            decimal x3 = 100;
            decimal y3=x3/3;

            Console.WriteLine("x1={0}\ny1={1}\nx2={2}\ny2={3}\n
x3={4}\ny3={5}", x1, y1, x2, y2, x3, y3);
            Console.Read();
        }
    }
}
```


EX6: Write a VC# program to compute the area and diameter of a circle when radius =10.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            /* computer the area and diameter for circle
            with radius =10*/
            const double pi = 3.14;
            double r=10, a, d;
            a = r * r * pi;
            d = 2 * r * pi;
            Console.WriteLine("Area={0}\nDiameter={1}", a, d);
            Console.Read();
        }
    }
}
```

The output:

file:///C:/Users/dell/documents/visual studio 2010/Projects/ConsoleApplicatio

```
Area=314
Diameter=62.8
```


Converting Numeric String to Their Internal Representation

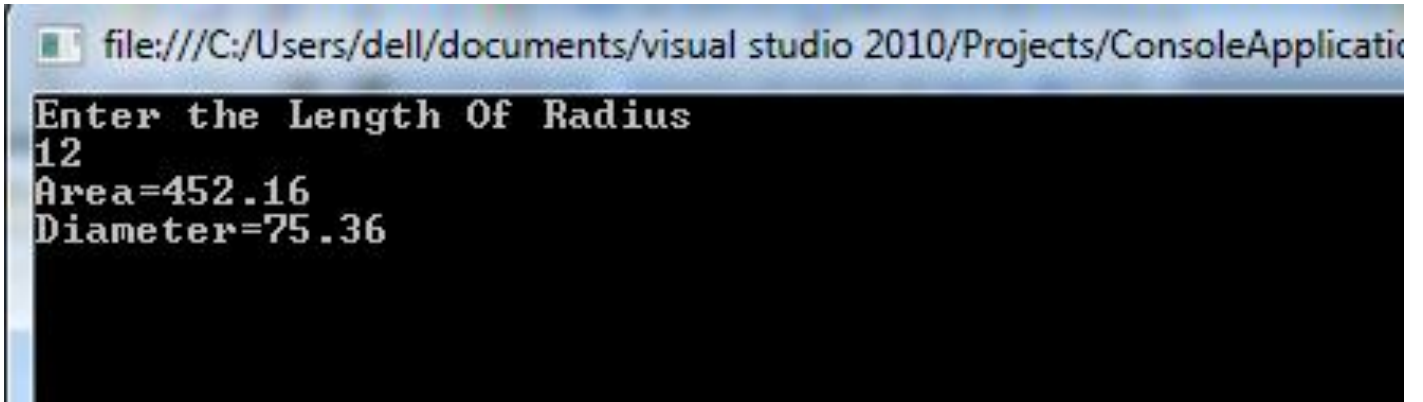
.Net Structure Name	C# Name
Decimal	decimal
Double	double
Int32	int

EX7: Solve the above example by using different values of radius

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            /* computer the area and diameter for circle
            with radius entered by user*/
            const double pi = 3.14;
            double r, a, d;
            Console.WriteLine("Enter the Length Of Radius");
            r = Double.Parse(Console.ReadLine());
            a = r * r * pi;
            d = 2 * r * pi;
            Console.WriteLine("Area={0}\nDiameter={1}", a, d);
            Console.Read();
        }
    }
}
```

The Output:



```
file:///C:/Users/dell/documents/visual studio 2010/Projects/ConsoleApplicatio
Enter the Length Of Radius
12
Area=452.16
Diameter=75.36
```

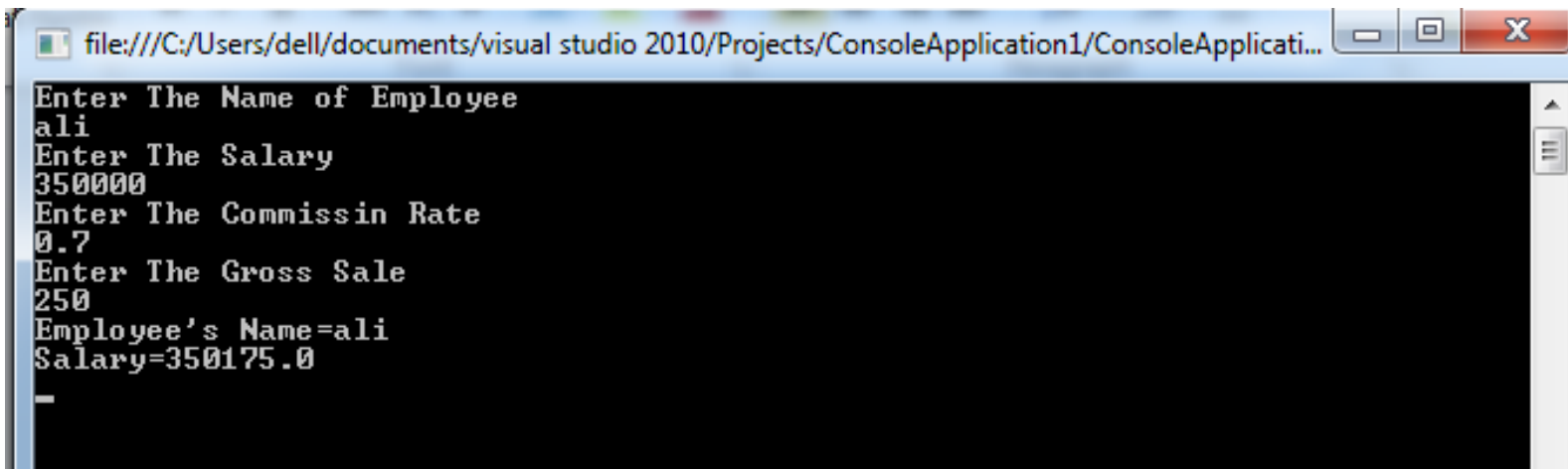
EX8: Write C# program to read the employee name and compute the salary with earning after reading commission rate and gross sales for one month.

Earnings=Commission Rate * Gross sales

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            /* The Program To Enter The Employee's Name
            and Compute The Salary */
            string n;
            decimal sa, er, cr, gs;
            Console.WriteLine("Enter The Name of Employee");
            n = Console.ReadLine();
            Console.WriteLine("Enter The Salary");
            sa = Convert.ToDecimal(Console.ReadLine());
            Console.WriteLine("Enter The Commissin Rate");
            cr = Convert.ToDecimal(Console.ReadLine());
            Console.WriteLine("Enter The Gross Sale");
            gs = Convert.ToDecimal(Console.ReadLine());
            er = gs * cr;
            sa = sa + er;
            Console.WriteLine("Employee's Name={0}\nSalary={1}", n, sa);
            Console.ReadLine();
        }
    }
}
```

The Output:



```
file:///C:/Users/dell/documents/visual studio 2010/Projects/ConsoleApplication1/ConsoleApplicati...
Enter The Name of Employee
ali
Enter The Salary
350000
Enter The Commissin Rate
0.7
Enter The Gross Sale
250
Employee's Name=ali
Salary=350175.0
-
```

Ex9: Solve the following equation:

$$z = \frac{\sqrt{3ab + 5}}{\left(\frac{2a + 5b}{3ac + 4}\right)^3}$$

```

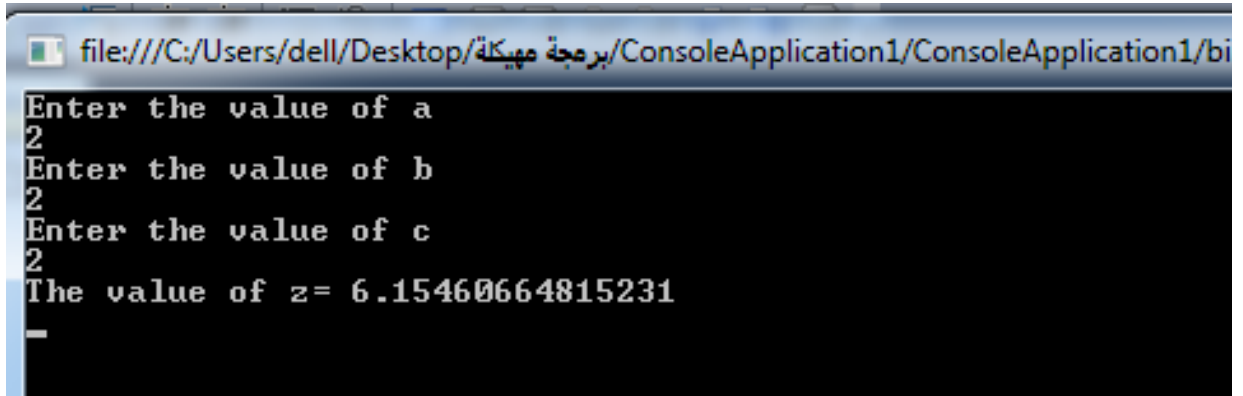
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
            double a, b, c, z,x,y;
            Console.WriteLine("Enter the value of a");
            a = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("Enter the value of b");
            b = Convert.ToDouble(Console.ReadLine());
            Console.WriteLine("Enter the value of c");
            c = Convert.ToDouble(Console.ReadLine());
            x = Math.Sqrt((3 * a * b) + 5);
            y = Math.Pow(((2 * a) + (5 * b)) / ((3 * a * c) + 4), 3);
            z = x / y;
            Console.WriteLine("The value of z= " + z);
            Console.ReadLine();

        }
    }
}

```

The Output:



```
file:///C:/Users/dell/Desktop/برمجة مهيكلة/ConsoleApplication1/ConsoleApplication1/bi
Enter the value of a
2
Enter the value of b
2
Enter the value of c
2
The value of z= 6.15460664815231
-
```