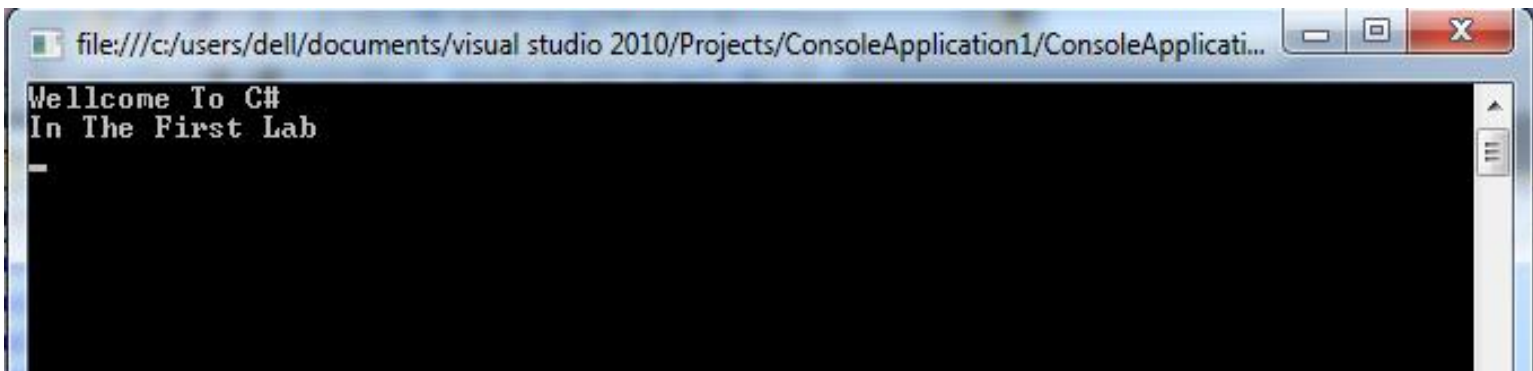


**Ex1:** In the first example, a welcome message will be printed as shown below:

```
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 window contains the following output:

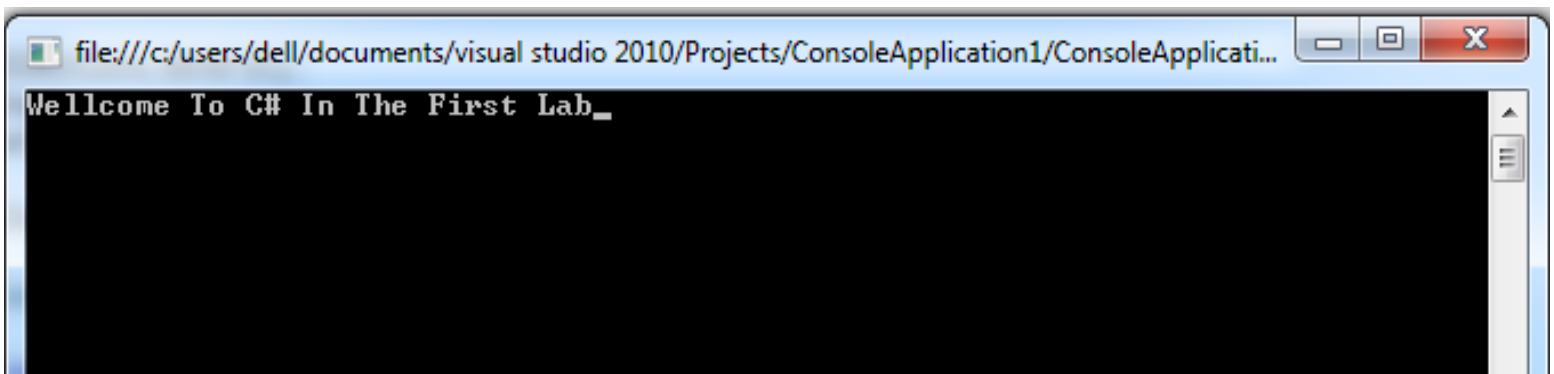
```
Wellcome To C#
In The First Lab
-
```

**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:**



**Note**

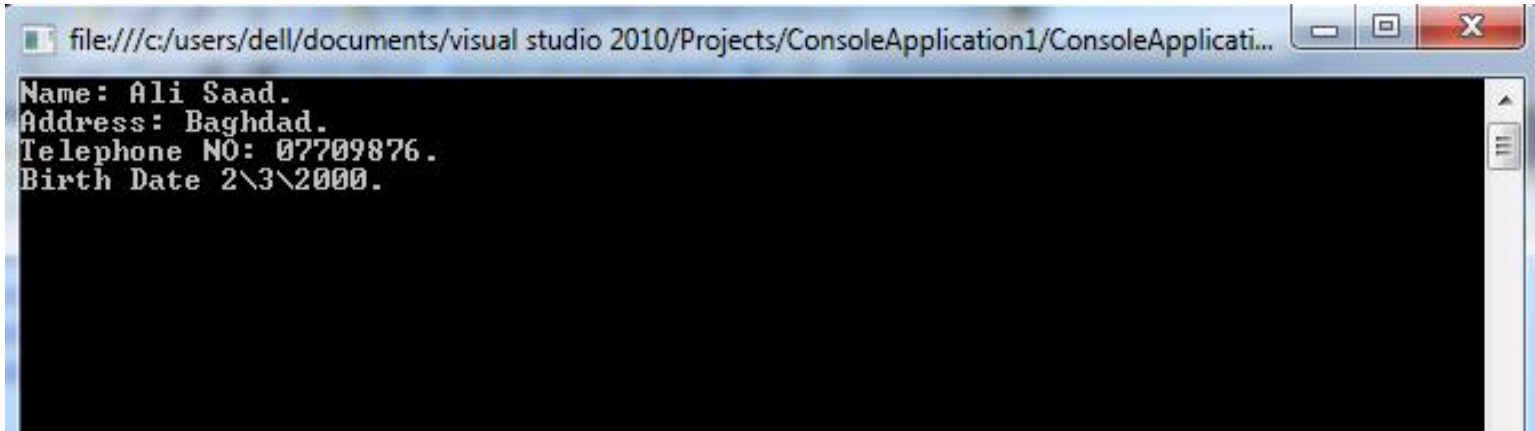
From above we can deduce **Console**.Write method prints the data without printing the new line after the message while **Console.WriteLine** method prints the message on the console screen as well as new line character after the message.

**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
<b>\n</b>	<b>New Line</b>
<b>\t</b>	<b>Horizontal tab</b>
<b>\v</b>	<b>Vertical tab</b>
<b>\'</b>	<b>Single quote</b>
<b>\"</b>	<b>Double quote</b>
<b>\\</b>	<b>Backslash</b>

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

A screenshot of a Windows console window titled "file:///c:/users/dell/documents/visual studio 2010/Projects/ConsoleApplication1/ConsoleApplicati...". The window displays the following text:

```
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

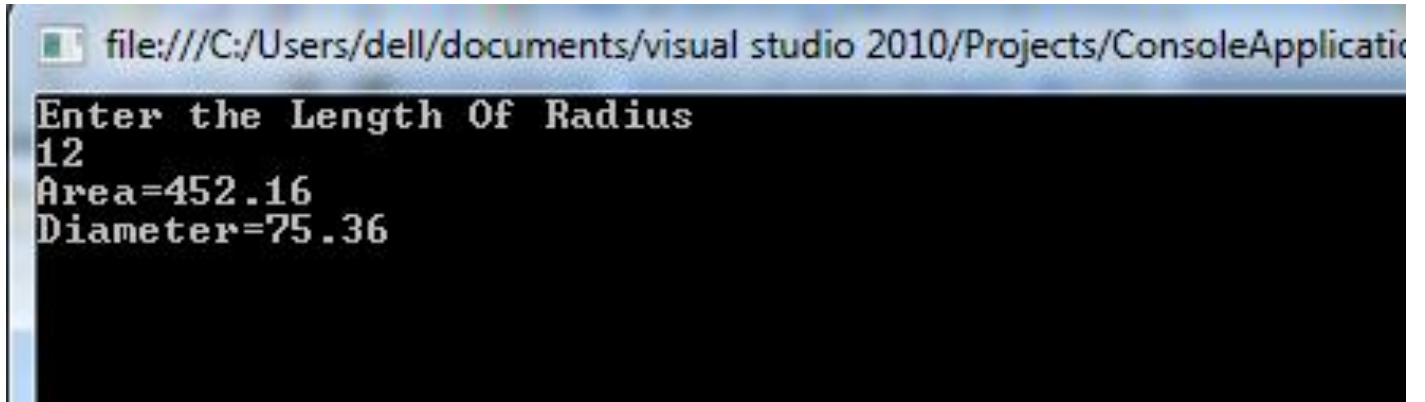
.Net Structure Name	C# Name
Decimal	decimal
Double	double
Int32	int

**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
```

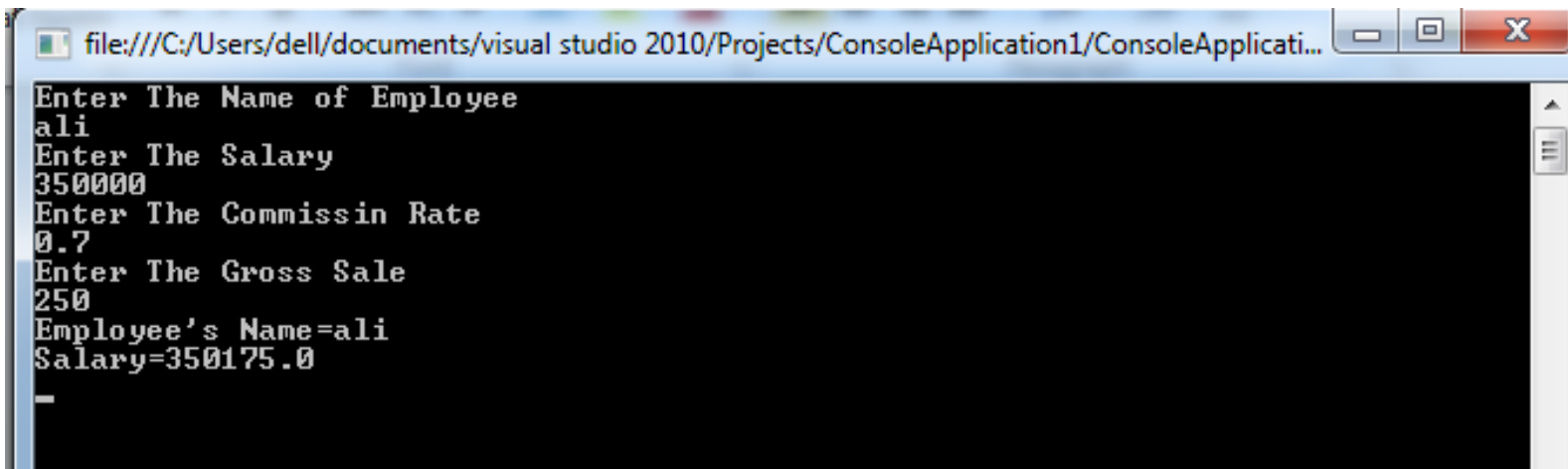
**EX8:** Write C# program to read the employee name and compute the salary with earning after reading commission rate and gross sales for one month.

**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 Commisnin Rate
0.7
Enter The Gross Sale
250
Employee's Name=ali
Salary=350175.0
-
```

**Ex9: Solve the following equation:**

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

```

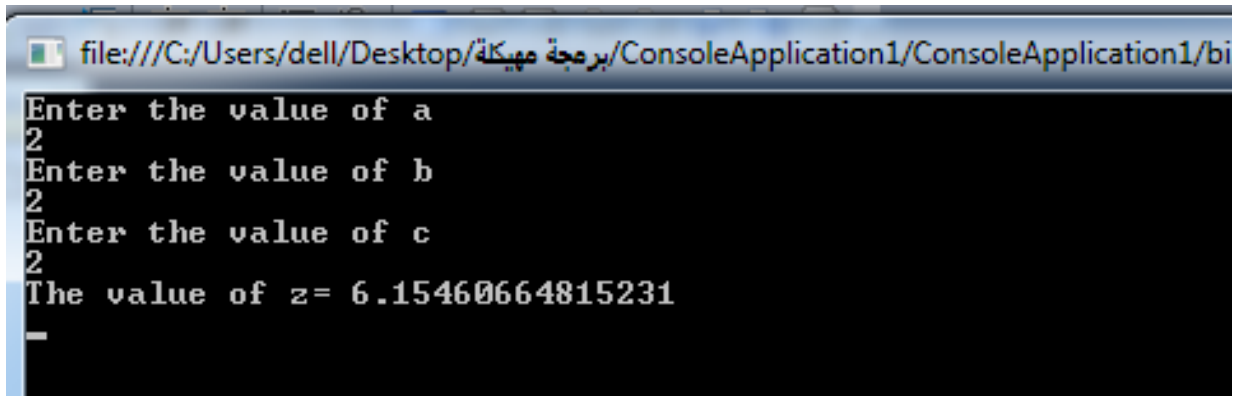
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

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
-
```