String Advanced

In C# we can create two types of string as Normal string and Verbatim String.

Normal String vs Verbatim String

Verbatim string literals start with @ where as for there is no special symbol for normal string.

In case of normal string escape sequences are processed.

In case of Verbatim string escape sequence are not processed.

Consider below example as.

```
string s1 = "Hello\tomorrow";          // Normal string
string s2 = @"Hello\tomorrow";         // Verbatim string

Console.WriteLine(s1);                 // Hello        omorrow
Console.WriteLine(s1);                 // Hello\tomorrow
```

String Escape Sequences

Escape sequence	Character name	Unicode encoding
\'	Single quote	0x0027
\"	Double quote	0x0022
\\	Backslash	0x005C
\0	Null	0x0000
\a	Alert	0x0007
\b	Backspace	0x0008
\f	Form feed	0x000C
\n	New line	0x000A
\r	Carriage return	0x000D
\t	Horizontal tab	0x0009
\U	Unicode escape sequence for surrogate pairs.	\Unnnnnnnn
\u	Unicode escape sequence	\u0041 = "A"
\v	Vertical tab	0x000B

There are multiple functions in string class that we can use directly.

Application program which demonstrates use of string functions.

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

namespace StringDemo
{
    class Program
    {
        static void Main(string[] args)
        {
            string a = "Marvellous";
            string b = "Infosystems";
            string c = "Marvellous";

            // Append to contents of 'b'
            b += a;

            Console.WriteLine(a == b);
            Console.WriteLine((object)a == (object)b);

            Console.WriteLine(a == c);
            Console.WriteLine((object)a == (object)c);

            string s1 = "Hello\tomorrow";       // Normal string
            string s2 = @"Hello\tomorrow";      // Verbatim string

            Console.WriteLine(s1);
            Console.WriteLine(s2);

            Console.WriteLine(s1.Length);
            Console.WriteLine(s2.Length);
```

```
string firstname;
string lastname;
firstname = "Piyush";
lastname = "Khairnar";

// Make String Clone
Console.WriteLine(firstname.Clone());

//Compare two string value and returns 0 for true and 1 for false
Console.WriteLine(firstname.CompareTo(lastname));

//Check whether specified value exists or not in string
Console.WriteLine(firstname.Contains("us"));

//Check whether specified value is the last character of string
Console.WriteLine(firstname.EndsWith("h"));

//Compare two string and returns true and false
Console.WriteLine(firstname.Equals(lastname));

//Returns HashCode of String
Console.WriteLine(firstname.GetHashCode());

//Returns type of string
Console.WriteLine(firstname.GetType());

//Returns type of string
Console.WriteLine(firstname.GetTypeCode());

//Returns the first index position of specified value the first index position of specified value
Console.WriteLine(firstname.IndexOf("s"));

//Returns the last index position of specified value
Console.WriteLine(firstname.LastIndexOf("s"));
```

```
            //Covert string into lower case
            Console.WriteLine(firstname.ToLower());

            //Convert string into Upper case
            Console.WriteLine(firstname.ToUpper());

            //Insert substring into string
            Console.WriteLine(firstname.Insert(0, "Hello"));

            //Check Whether string is in Unicode normalization
            Console.WriteLine(firstname.IsNormalized());

            //Returns the Length of String
            Console.WriteLine(firstname.Length);

            //Deletes all the characters from begining to specified index.
            Console.WriteLine(firstname.Remove(5));

            // Replace the character
            Console.WriteLine(firstname.Replace('P','A'));

            //Check wheter first character of string is same as specified value
            Console.WriteLine(firstname.StartsWith("P"));

            //Returns substring
            Console.WriteLine(firstname.Substring(1,4));

            //Converts an string into char array.
            Console.WriteLine(firstname.ToCharArray());

            //It removes starting and ending white spaces fromstring.
            Console.WriteLine(firstname.Trim());
        }
    }
}
```