C# - Striings

In C#,, you can use strrings as armay off characterrs,, Howeverr,, morre common practice is to use the **strring** keyworrd to declare a strring varriable. The strring keyworrd is an allias for the **System. Strring** class.

Creating a String Object

You can creatte strring object using one off the following methods -

- By assigning a strring litteral to a Strring varriable
- By using a Strring class constrructorr
- By using the strring concattenation operator ((+))
- By rrettrrijevijng a prroperrtty orr calllling a metthod that rretturns a sttrriing
- By callling a fronmattting method to convert a value or an object to its strring representation.

Properties of the String Class

The Sttrriing class has the ffolllowing two prroperrtiies -

SrNo	Propertty & Descripttion
1	Chars Getts the Charr objjectt att a speciffijed posijttijon ijn the currrentt Sturrijng objjectt
2	Lengtth Getts tthe numberr off charractterrs iin tthe currrrentt Sttrriing objjectt

Methods of the String Class

The Strring class has numerrous methods that help you in working with the strring objects. The following table provides some of the most commonly used methods –

Gijven bellow ijs the lijist of methods of the Strijng class.

Sr.,No.,	Metthods & Descripttion
1	public sttattic iintt Compare((sttriing sttrA,, sttriing sttrB))
	Comparres two speciffied strring objectts and returns an integer that indicates their relative position in the sort order.
2	public sttattiic iintt Compare((sttriing sttrA,, sttriing sttrB,, booli iignoreCase))
	Comparres two speciffied strring objects and returns an integer that indicates their relative position in the sort order. However,, it ignores case if the Boolean parameter is true.
3	public sttattic sttriing Concatt((sttriing sttr0,, sttriing sttr1))
	Concattenattes ttwo strriing objjectts
4	public stattic striing Concatt((striing str0,, striing str1,, striing str2))
	Concattenattes tthrree sttrriing objjectts.
5	public stattic striing Concatt((striing str0,, striing str1,, striing str2,, striing str3))
	Concattenattes ffourr sttrriing objjectts
6	publijic booli Conttaijns((sttrijng valjue))
	Retturms a vallue ijndijcattijng whetther tthe speciffijed Strning objject occurs withijn tthijs strning.
7	public stattic striing Copy((sttriing sttr))
	Crreattes a new Sttrriing objjectt wijtth tthe same vallue as tthe specijffijed sttrriing.
8	public void CopyTo((int sourcelindex,, char[[]] destrinatrion,, int destrinatrionlindex,, introduction)
	Copiles a speciffied numberr off characterrs from a speciffied positition off the Strring object to a speciffied positition in an armay off Unicode characters.
9	public booli EndsWijtth((sttrijng vallue))
	Detterrmijnes whettherr the end off the strriing objject mattches the special filed strriing.
10	publijic booli Equalis((sttrijng valjue))
	Detterrmiines whetther the current Strriing object and the speciffied Strriing object have the same value.
11	public sttattic booli Equalis((sttriing a,, sttriing b))

	Detterrmijnes whettherr ttwo specijffijed Sttrrijng objjectts have tthe same vallue.
12	public sttattiic sttriing Formatt((sttriing fformatt,, Objjectt arg0))
	Replaces one or morre from at littems in a speciffied strring with the strring representation off a speciffied object.
13	publijic ijntt lindexOff((char vallue))
	Retturns the zerro-based index off the ffirst occurrrence off the speciffied Unicode characterr in the current striing.
14	public iintt lindexOff((sttriing vallue))
	Retturns the zerro-based index off the ffirst occurrrence off the speciffied strring in this instance.
15	public iintt lindexOff((char vallue,, iintt sttarttlindex))
	Retturns the zerro-based index off the ffinst occurrrence off the speciffied Unicode character in this string, stanting search at the speciffied character position.
16	public iintt IIndexOff((sttriing vallue,, iintt sttarttlIndex))
	Retturns the zerro-based index off the ffinst occurrrence off the speciffied strning in this instance,, stanting searrch at the speciffied character position.
17	public int IndexOffAny((char[[]] anyOff))
	Retturns the zerrobased index off the finst occurrrence in this instance off any character in a speciffied armay off Unicode characters.
18	public iintt lindexOffAny((char[[]] anyOff,, iintt sttarttlindex))
	Retturns the zerro-based index off the finst occurrrence in this instance off any characterr in a speciffied armay off Unicode characters, starting search at the speciffied character position.
19	public sttriing linsertt((iintt sttarttlindex,, sttriing vallue))
	Retturns a new strning in which a speciffied strning is insented at a speciffied index position in the current strning object.
20	publijic sttattijc booli lisNuliliOrEmptty((sttrijng valjue))
	Indijcattes whettherr the speciffijed strrijng ijs nulll orr an Emptty strrijng.
21	public sttattic sttriing Joiin((sttriing separattor,, params sttriing[[]] vallue))
	Concattenattes all the elements off a string armay, using the speciffied separattor between each element.

22	public stattic string Join ((string separattor,, string) value, int strattlindex, int count)) Concattenattes the speciffied elements off a string armay, using the speciffied separattor between each element.
23	public iintt LasttlindexOff((char vallue)) Retturms the zerrobased iindex posiittion off the lastt occurrrence off the speciiffied Unicode characterr wiithiin the currrentt strriingobjectt.
24	public iintt LasttlindexOff((sttriing vallue)) Retturms the zerro-based iindex posiittiion off the last occurrrence off a speciiffied striing witthiin the currrentt striing objjectt.
25	public sttriing Remove((iintt sttarttlindex)) Removes allil tthe characters iin tthe currrentt iinsttance,, begiinniing att a speciiffiied posiittiion and conttiinuiing tthrough tthe last posiittiion,, and returns tthe strriing.
26	public sttriing Remove((iintt sttarttlindex,, iintt countt)) Removes the speciffied numberr off characters in the current striing beginniing att a speciffied posittion and returns the striing.
27	public sttriing Repliace((char olidChar,, char newChar)) Repliaces all occurrrences off a speciffied Unicode characterr in the current stming object with the speciffied Unicode characterr and returns the new stming.
28	public sttriing Repliace((sttriing olidVallue,, sttriing newVallue)) Repliaces allil occurrrences off a speciiffiied sttriing in the currrentt sttriing objjectt wiitth the speciiffiied sttriing and retturns the new sttriing.
29	public striing[] Spliitt((params char[]] separattor)) Retturms a strriing armay that conttains the substrriings in the currrent strriing object, deliimitted by ellements off a speciffied Unicode character armay.
30	public sttriing[[]] Spliitt((char[[]] separattor,, iintt countt)) Returns a stming armay that contains the substriings in the current stming object, dellimitted by ellements off a speciffied Unicode character armay. The int parameter speciffies the maximum number off substriings to return.
31	publiic booll SttarttsWiitth((sttriing vallue))

	Detterrmijnes whettherr the begijnnijng off thijs strriing ijnstrance matrches the speciffijed strriing.
32	public char[[]] ToCharArray(()) Retturms a Uniicode charractterr armay wiitth allil tthe charractterrs iin tthe currrentt sttming objjectt
33	public char[[]] ToCharArray((iintt sttarttlIndex,, iintt llengtth)) Retturms a Uniicode charactterrarmay witth all the charactters in the currentt stming objectt,, sttartting ffrom the speciffied iindex and up to the speciffied llength
34	public sttriing ToLower(()) Retturrns a copy off tthiis sttrriing converrtted tto llowerrcase
35	public sttriing ToUpper(()) Retturrns a copy off tthiis sttrriing converrtted tto upperrcase
36	public sttriing Triim(()) Removes allil lleadiing and trailling whiitte-space characters ffrom the currentt Sttriing objjectt

You can viisiitt MSDN lliibrrarry fforr tthe compllette lliistt off metthods and Sttrriing cllass consttrructtorrs..

Examples

The ffolllowing example demonstrrattes some off the methods mentijoned above -

Compariing Striings

```
namespace StringApplication {
    class StringProg {
        static void Main(string[] args) {
            string str1 = "This is test";
            string str2 = "This is text";
            if (String.Compare(str1, str2) == 0) {
                Console.WriteLine(str1 + " and " + str2 + " are equal.");
            } else {
                Console.WriteLine(str1 + " and " + str2 + " are not equal.");
            }
            Console.ReadMey();
        }
}
```

When the above code iis compilled and executted,, litt prroduces the ffolllowing rresultt -

```
This is test and This is text are not equal.
```

Striing Contains Striing

```
using System;
namespace StringApplication {
    class StringProg {
        static void Main(string[] args) {
             string str = "This is test";
        if (str.Contains("test")) {
                 Console.WriteLine("The sequence 'test' was found.");
        }
        Console.ReadKey();
    }
}
```

When the above code is compilled and executed,, litt produces the ffolllowing rresultt -

```
The sequence 'test' was found.
```

Gettiing a Substriing

When the above code is compilled and executed,, litt prroduces the ffolllowing rresultt -

```
San Pedro
```

Joinning Striings

When the above code is compilled and executed,, litt prroduces the ffolllowing rresultt -

```
Down the way nights are dark

And the sun shines daily on the mountain top

I took a trip on a sailing ship

And when I reached Jamaica

I made a stop
```