A string is an object of type [String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) whose value is text. Internally, the text is stored as a sequential read-only collection of [Char](http://msdn.microsoft.com/en-us/library/vstudio/system.char.aspx) objects. There is no null-terminating character at the end of a C# string; therefore a C# string can contain any number of embedded null characters ('\0'). The [Length](http://msdn.microsoft.com/en-us/library/vstudio/system.string.length.aspx) property of a string represents the number of **Char** objects it contains, not the number of Unicode characters. To access the individual Unicode code points in a string, use the [StringInfo](http://msdn.microsoft.com/en-us/library/vstudio/system.globalization.stringinfo.aspx) object.

[string vs. System.String](javascript:void(0))

In C#, the **string** keyword is an alias for [String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx). Therefore, **String** and **string** are equivalent, and you can use whichever naming convention you prefer. The **String** class provides many methods for safely creating, manipulating, and comparing strings. In addition, the C# language overloads some operators to simplify common string operations. For more information about the keyword, see [string (C# Reference)](http://msdn.microsoft.com/en-us/library/vstudio/362314fe.aspx). For more information about the type and its methods, see [String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx).

[Declaring and Initializing Strings](javascript:void(0))

You can declare and initialize strings in various ways, as shown in the following example:

C#

// Declare without initializing.

string message1;

// Initialize to null.

string message2 = null;

// Initialize as an empty string.

// Use the Empty constant instead of the literal "".

string message3 = System.String.Empty;

//Initialize with a regular string literal.

string oldPath = "c:\\Program Files\\Microsoft Visual Studio 8.0";

// Initialize with a verbatim string literal.

string newPath = @"c:\Program Files\Microsoft Visual Studio 9.0";

// Use System.String if you prefer.

System.String greeting = "Hello World!";

// In local variables (i.e. within a method body)

// you can use implicit typing.

var temp = "I'm still a strongly-typed System.String!";

// Use a const string to prevent 'message4' from

// being used to store another string value.

const string message4 = "You can't get rid of me!";

// Use the String constructor only when creating

// a string from a char\*, char[], or sbyte\*. See

// System.String documentation for details.

char[] letters = { 'A', 'B', 'C' };

string alphabet = new string(letters);

Note that you do not use the [new](http://msdn.microsoft.com/en-us/library/vstudio/fa0ab757.aspx) operator to create a string object except when initializing the string with an array of chars.

Initialize a string with the [Empty](http://msdn.microsoft.com/en-us/library/vstudio/system.string.empty.aspx) constant value to create a new [String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) object whose string is of zero length. The string literal representation of a zero-length string is "". By initializing strings with the [Empty](http://msdn.microsoft.com/en-us/library/vstudio/system.string.empty.aspx) value instead of [null](http://msdn.microsoft.com/en-us/library/vstudio/edakx9da.aspx), you can reduce the chances of a [NullReferenceException](http://msdn.microsoft.com/en-us/library/vstudio/system.nullreferenceexception.aspx) occurring. Use the static[IsNullOrEmpty(String)](http://msdn.microsoft.com/en-us/library/vstudio/system.string.isnullorempty.aspx) method to verify the value of a string before you try to access it.

[Immutability of String Objects](javascript:void(0))

String objects are *immutable*: they cannot be changed after they have been created. All of the [String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx)methods and C# operators that appear to modify a string actually return the results in a new string object. In the following example, when the contents of s1 and s2 are concatenated to form a single string, the two original strings are unmodified. The **+=** operator creates a new string that contains the combined contents. That new object is assigned to the variable s1, and the original object that was assigned to s1 is released for garbage collection because no other variable holds a reference to it.

C#

string s1 = "A string is more ";

string s2 = "than the sum of its chars.";

// Concatenate s1 and s2. This actually creates a new

// string object and stores it in s1, releasing the

// reference to the original object.

s1 += s2;

System.Console.WriteLine(s1);

// Output: A string is more than the sum of its chars.

Because a string "modification" is actually a new string creation, you must use caution when you create references to strings. If you create a reference to a string, and then "modify" the original string, the reference will continue to point to the original object instead of the new object that was created when the string was modified. The following code illustrates this behavior:

C#

string s1 = "Hello ";

string s2 = s1;

s1 += "World";

System.Console.WriteLine(s2);

//Output: Hello

For more information about how to create new strings that are based on modifications such as search and replace operations on the original string, see [How to: Modify String Contents (C# Programming Guide)](http://msdn.microsoft.com/en-us/library/vstudio/ms228599.aspx).

[Regular and Verbatim String Literals](javascript:void(0))

Use regular string literals when you must embed escape characters provided by C#, as shown in the following example:

C#

string columns = "Column 1\tColumn 2\tColumn 3";

//Output: Column 1 Column 2 Column 3

string rows = "Row 1\r\nRow 2\r\nRow 3";

/\* Output:

Row 1

Row 2

Row 3

\*/

string title = "\"The \u00C6olean Harp\", by Samuel Taylor Coleridge";

//Output: "The Æolean Harp", by Samuel Taylor Coleridge

Use verbatim strings for convenience and better readability when the string text contains backslash characters, for example in file paths. Because verbatim strings preserve new line characters as part of the string text, they can be used to initialize multiline strings. Use double quotation marks to embed a quotation mark inside a verbatim string. The following example shows some common uses for verbatim strings:

C#

string filePath = @"C:\Users\scoleridge\Documents\";

//Output: C:\Users\scoleridge\Documents\

string text = @"My pensive SARA ! thy soft cheek reclined

Thus on mine arm, most soothing sweet it is

To sit beside our Cot,...";

/\* Output:

My pensive SARA ! thy soft cheek reclined

Thus on mine arm, most soothing sweet it is

To sit beside our Cot,...

\*/

string quote = @"Her name was ""Sara.""";

//Output: Her name was "Sara."

[String Escape Sequences](javascript:void(0))

|  |  |  |  |
| --- | --- | --- | --- |
| **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 | |
| \x | Unicode escape sequence similar to "\u" except with variable length. | \x0041 = "A" | |
| **Note Note** | | |
| At compile time, verbatim strings are converted to ordinary strings with all the same escape sequences. Therefore, if you view a verbatim string in the debugger watch window, you will see the escape characters that were added by the compiler, not the verbatim version from your source code. For example, the verbatim string @"C:\files.txt" will appear in the watch window as "C:\\files.txt". | | |

[Format Strings](javascript:void(0))

A format string is a string whose contents can be determined dynamically at runtime. You create a format string by using the static [Format](http://msdn.microsoft.com/en-us/library/vstudio/system.string.format.aspx) method and embedding placeholders in braces that will be replaced by other values at runtime. The following example uses a format string to output the result of each iteration of a loop:

C#

class FormatString

{

static void Main()

{

// Get user input.

System.Console.WriteLine("Enter a number");

string input = System.Console.ReadLine();

// Convert the input string to an int.

int j;

System.Int32.TryParse(input, out j);

// Write a different string each iteration.

string s;

for (int i = 0; i < 10; i++)

{

// A simple format string with no alignment formatting.

s = System.String.Format("{0} times {1} = {2}", i, j, (i \* j));

System.Console.WriteLine(s);

}

//Keep the console window open in debug mode.

System.Console.ReadKey();

}

}

One overload of the [WriteLine](http://msdn.microsoft.com/en-us/library/vstudio/system.console.writeline.aspx) method takes a format string as a parameter. Therefore, you can just embed a format string literal without an explicit call to the method. However, if you use the [WriteLine](http://msdn.microsoft.com/en-us/library/vstudio/system.diagnostics.trace.writeline.aspx) method to display debug output in the Visual Studio **Output** window, you have to explicitly call the [Format](http://msdn.microsoft.com/en-us/library/vstudio/system.string.format.aspx) method because [WriteLine](http://msdn.microsoft.com/en-us/library/vstudio/system.diagnostics.trace.writeline.aspx) only accepts a string, not a format string. For more information about format strings, see[Formatting Types](http://msdn.microsoft.com/en-us/library/vstudio/26etazsy.aspx).

[Substrings](javascript:void(0))

A substring is any sequence of characters that is contained in a string. Use the [Substring](http://msdn.microsoft.com/en-us/library/vstudio/system.string.substring.aspx) method to create a new string from a part of the original string. You can search for one or more occurrences of a substring by using the [IndexOf](http://msdn.microsoft.com/en-us/library/vstudio/system.string.indexof.aspx) method. Use the [Replace](http://msdn.microsoft.com/en-us/library/vstudio/system.string.replace.aspx) method to replace all occurrences of a specified substring with a new string. Like the [Substring](http://msdn.microsoft.com/en-us/library/vstudio/system.string.substring.aspx) method, [Replace](http://msdn.microsoft.com/en-us/library/vstudio/system.string.replace.aspx) actually returns a new string and does not modify the original string. For more information, see [How to: Search Strings Using String Methods (C# Programming Guide)](http://msdn.microsoft.com/en-us/library/vstudio/ms228630.aspx) and [How to: Modify String Contents (C# Programming Guide)](http://msdn.microsoft.com/en-us/library/vstudio/ms228599.aspx).

C#

string s3 = "Visual C# Express";

System.Console.WriteLine(s3.Substring(7, 2));

// Output: "C#"

System.Console.WriteLine(s3.Replace("C#", "Basic"));

// Output: "Visual Basic Express"

// Index values are zero-based

int index = s3.IndexOf("C");

// index = 7

[Accessing Individual Characters](javascript:void(0))

You can use array notation with an index value to acquire read-only access to individual characters, as in the following example:

C#

string s5 = "Printing backwards";

for (int i = 0; i < s5.Length; i++)

{

System.Console.Write(s5[s5.Length - i - 1]);

}

// Output: "sdrawkcab gnitnirP"

If the [String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) methods do not provide the functionality that you must have to modify individual characters in a string, you can use a [StringBuilder](http://msdn.microsoft.com/en-us/library/vstudio/system.text.stringbuilder.aspx) object to modify the individual chars "in-place", and then create a new string to store the results by using the [StringBuilder](http://msdn.microsoft.com/en-us/library/vstudio/system.text.stringbuilder.aspx) methods. In the following example, assume that you must modify the original string in a particular way and then store the results for future use:

C#

string question = "hOW DOES mICROSOFT wORD DEAL WITH THE cAPS lOCK KEY?";

System.Text.StringBuilder sb = new System.Text.StringBuilder(question);

for (int j = 0; j < sb.Length; j++)

{

if (System.Char.IsLower(sb[j]) == true)

sb[j] = System.Char.ToUpper(sb[j]);

else if (System.Char.IsUpper(sb[j]) == true)

sb[j] = System.Char.ToLower(sb[j]);

}

// Store the new string.

string corrected = sb.ToString();

System.Console.WriteLine(corrected);

// Output: How does Microsoft Word deal with the Caps Lock key?

[Null Strings and Empty Strings](javascript:void(0))

An empty string is an instance of a [System.String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) object that contains zero characters. Empty strings are used often in various programming scenarios to represent a blank text field. You can call methods on empty strings because they are valid [System.String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) objects. Empty strings are initialized as follows:

string s = String.Empty;

By contrast, a null string does not refer to an instance of a [System.String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) object and any attempt to call a method on a null string causes a [NullReferenceException](http://msdn.microsoft.com/en-us/library/vstudio/system.nullreferenceexception.aspx). However, you can use null strings in concatenation and comparison operations with other strings. The following examples illustrate some cases in which a reference to a null string does and does not cause an exception to be thrown:

C#

static void Main()

{

string str = "hello";

string nullStr = null;

string emptyStr = String.Empty;

string tempStr = str + nullStr;

// Output of the following line: hello

Console.WriteLine(tempStr);

bool b = (emptyStr == nullStr);

// Output of the following line: False

Console.WriteLine(b);

// The following line creates a new empty string.

string newStr = emptyStr + nullStr;

// Null strings and empty strings behave differently. The following

// two lines display 0.

Console.WriteLine(emptyStr.Length);

Console.WriteLine(newStr.Length);

// The following line raises a NullReferenceException.

//Console.WriteLine(nullStr.Length);

// The null character can be displayed and counted, like other chars.

string s1 = "\x0" + "abc";

string s2 = "abc" + "\x0";

// Output of the following line: \* abc\*

Console.WriteLine("\*" + s1 + "\*");

// Output of the following line: \*abc \*

Console.WriteLine("\*" + s2 + "\*");

// Output of the following line: 4

Console.WriteLine(s2.Length);

}

[Using StringBuilder for Fast String Creation](javascript:void(0))

String operations in .NET are highly optimized and in most cases do not significantly impact performance. However, in some scenarios such as tight loops that are executing many hundreds or thousands of times, string operations can affect performance. The [StringBuilder](http://msdn.microsoft.com/en-us/library/vstudio/system.text.stringbuilder.aspx) class creates a string buffer that offers better performance if your program performs many string manipulations. The [StringBuilder](http://msdn.microsoft.com/en-us/library/vstudio/system.text.stringbuilder.aspx) string also enables you to reassign individual characters, something the built-in string data type does not support. This code, for example, changes the content of a string without creating a new string:

C#

System.Text.StringBuilder sb = new System.Text.StringBuilder("Rat: the ideal pet");

sb[0] = 'C';

System.Console.WriteLine(sb.ToString());

System.Console.ReadLine();

//Outputs Cat: the ideal pet

In this example, a [StringBuilder](http://msdn.microsoft.com/en-us/library/vstudio/system.text.stringbuilder.aspx) object is used to create a string from a set of numeric types:

C#

class TestStringBuilder

{

static void Main()

{

System.Text.StringBuilder sb = new System.Text.StringBuilder();

// Create a string composed of numbers 0 - 9

for (int i = 0; i < 10; i++)

{

sb.Append(i.ToString());

}

System.Console.WriteLine(sb); // displays 0123456789

// Copy one character of the string (not possible with a System.String)

sb[0] = sb[9];

System.Console.WriteLine(sb); // displays 9123456789

}

}

[Strings, Extension Methods and LINQ](javascript:void(0))

Because the [String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) type implements [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/vstudio/9eekhta0.aspx), you can use the extension methods defined in the[Enumerable](http://msdn.microsoft.com/en-us/library/vstudio/system.linq.enumerable.aspx) class on strings. To avoid visual clutter, these methods are excluded from IntelliSense for the[String](http://msdn.microsoft.com/en-us/library/vstudio/system.string.aspx) type, but they are available nevertheless. You can also use LINQ query expressions on strings. For more information, see [LINQ and Strings](http://msdn.microsoft.com/en-us/library/vstudio/bb397915.aspx).

[Syntax](javascript:void(0))

C#

[**C++**](http://msdn.microsoft.com/en-us/library/system.string.aspx?cs-save-lang=1&cs-lang=cpp#code-snippet-1)

[**F#**](http://msdn.microsoft.com/en-us/library/system.string.aspx?cs-save-lang=1&cs-lang=fsharp#code-snippet-1)

[**VB**](http://msdn.microsoft.com/en-us/library/system.string.aspx?cs-save-lang=1&cs-lang=vb#code-snippet-1)

[SerializableAttribute]

[ComVisibleAttribute(true)]

public sealed class String : IComparable,

ICloneable, IConvertible, IComparable<string>, IEnumerable<char>,

IEnumerable, IEquatable<string>

The String type exposes the following members.

[Constructors](javascript:void(0))

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Description** |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [String(Char\*)](http://msdn.microsoft.com/en-us/library/6y4za026.aspx) | Initializes a new instance of the String class to the value indicated by a specified pointer to an array of Unicode characters. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [String(Char[])](http://msdn.microsoft.com/en-us/library/ttyxaek9.aspx) | Initializes a new instance of the String class to the value indicated by an array of Unicode characters. |
| Public methodSupported by the XNA Framework | [String(SByte\*)](http://msdn.microsoft.com/en-us/library/k9s9t975.aspx) | Initializes a new instance of the String class to the value indicated by a pointer to an array of 8-bit signed integers. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [String(Char, Int32)](http://msdn.microsoft.com/en-us/library/xsa4321w.aspx) | Initializes a new instance of the String class to the value indicated by a specified Unicode character repeated a specified number of times. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [String(Char\*, Int32, Int32)](http://msdn.microsoft.com/en-us/library/ms131423.aspx) | Initializes a new instance of the String class to the value indicated by a specified pointer to an array of Unicode characters, a starting character position within that array, and a length. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [String(Char[], Int32, Int32)](http://msdn.microsoft.com/en-us/library/ms131424.aspx) | Initializes a new instance of the String class to the value indicated by an array of Unicode characters, a starting character position within that array, and a length. |
| Public method | [String(SByte\*, Int32, Int32)](http://msdn.microsoft.com/en-us/library/ezh7k8d5.aspx) | Initializes a new instance of the String class to the value indicated by a specified pointer to an array of 8-bit signed integers, a starting position within that array, and a length. |
| Public method | [String(SByte\*, Int32, Int32, Encoding)](http://msdn.microsoft.com/en-us/library/9d876whe.aspx) | Initializes a new instance of the String class to the value indicated by a specified pointer to an array of 8-bit signed integers, a starting position within that array, a length, and an [Encoding](http://msdn.microsoft.com/en-us/library/system.text.encoding.aspx) object. |

[Top](http://msdn.microsoft.com/en-us/library/system.string.aspx#mainBody)

[Properties](javascript:void(0))

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Description** |
| Public propertySupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Chars](http://msdn.microsoft.com/en-us/library/system.string.chars.aspx) | Gets the [Char](http://msdn.microsoft.com/en-us/library/system.char.aspx) object at a specified position in the current String object. |
| Public propertySupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Length](http://msdn.microsoft.com/en-us/library/system.string.length.aspx) | Gets the number of characters in the current String object. |

[Top](http://msdn.microsoft.com/en-us/library/system.string.aspx#mainBody)

[Methods](javascript:void(0))

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Description** |
| Public methodSupported by the XNA Framework | [Clone](http://msdn.microsoft.com/en-us/library/system.string.clone.aspx) | Returns a reference to this instance of String. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Compare(String, String)](http://msdn.microsoft.com/en-us/library/84787k22.aspx) | Compares two specified String objects and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic memberSupported by the XNA Framework | [Compare(String, String, Boolean)](http://msdn.microsoft.com/en-us/library/zkcaxw5y.aspx) | Compares two specified String objects, ignoring or honoring their case, and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Compare(String, String, StringComparison)](http://msdn.microsoft.com/en-us/library/e6883c06.aspx) | Compares two specified String objects using the specified rules, and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic memberSupported by the XNA Framework | [Compare(String, String, Boolean, CultureInfo)](http://msdn.microsoft.com/en-us/library/hyxc48dt.aspx) | Compares two specified String objects, ignoring or honoring their case, and using culture-specific information to influence the comparison, and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic memberSupported by Portable Class Library | [Compare(String, String, CultureInfo, CompareOptions)](http://msdn.microsoft.com/en-us/library/cc190529.aspx) | Compares two specified String objects using the specified comparison options and culture-specific information to influence the comparison, and returns an integer that indicates the relationship of the two strings to each other in the sort order. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Compare(String, Int32, String, Int32, Int32)](http://msdn.microsoft.com/en-us/library/x7tax739.aspx) | Compares substrings of two specified String objects and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic memberSupported by the XNA Framework | [Compare(String, Int32, String, Int32, Int32, Boolean)](http://msdn.microsoft.com/en-us/library/1e058ek8.aspx) | Compares substrings of two specified String objects, ignoring or honoring their case, and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Compare(String, Int32, String, Int32, Int32, StringComparison)](http://msdn.microsoft.com/en-us/library/7aaf32ef.aspx) | Compares substrings of two specified String objects using the specified rules, and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic memberSupported by the XNA Framework | [Compare(String, Int32, String, Int32, Int32, Boolean, CultureInfo)](http://msdn.microsoft.com/en-us/library/3h045cx3.aspx) | Compares substrings of two specified String objects, ignoring or honoring their case and using culture-specific information to influence the comparison, and returns an integer that indicates their relative position in the sort order. |
| Public methodStatic member | [Compare(String, Int32, String, Int32, Int32, CultureInfo, CompareOptions)](http://msdn.microsoft.com/en-us/library/cc190416.aspx) | Compares substrings of two specified String objects using the specified comparison options and culture-specific information to influence the comparison, and returns an integer that indicates the relationship of the two substrings to each other in the sort order. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [CompareOrdinal(String, String)](http://msdn.microsoft.com/en-us/library/af26w0wa.aspx) | Compares two specified String objects by evaluating the numeric values of the corresponding [Char](http://msdn.microsoft.com/en-us/library/system.char.aspx)objects in each string. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [CompareOrdinal(String, Int32, String, Int32, Int32)](http://msdn.microsoft.com/en-us/library/es986b3k.aspx) | Compares substrings of two specified String objects by evaluating the numeric values of the corresponding [Char](http://msdn.microsoft.com/en-us/library/system.char.aspx) objects in each substring. |
| Public methodSupported by the XNA Framework | [CompareTo(Object)](http://msdn.microsoft.com/en-us/library/fkw3h78a.aspx) | Compares this instance with a specified [Object](http://msdn.microsoft.com/en-us/library/system.object.aspx) and indicates whether this instance precedes, follows, or appears in the same position in the sort order as the specified [Object](http://msdn.microsoft.com/en-us/library/system.object.aspx). |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [CompareTo(String)](http://msdn.microsoft.com/en-us/library/35f0x18w.aspx) | Compares this instance with a specified String object and indicates whether this instance precedes, follows, or appears in the same position in the sort order as the specified String. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(Object)](http://msdn.microsoft.com/en-us/library/khca9w90.aspx) | Creates the string representation of a specified object. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(Object[])](http://msdn.microsoft.com/en-us/library/k9c94ey1.aspx) | Concatenates the string representations of the elements in a specified [Object](http://msdn.microsoft.com/en-us/library/system.object.aspx) array. |
| Public methodStatic memberSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(IEnumerable<String>)](http://msdn.microsoft.com/en-us/library/dd784338.aspx) | Concatenates the members of a constructed [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) collection of type String. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(String[])](http://msdn.microsoft.com/en-us/library/0wkb0y3w.aspx) | Concatenates the elements of a specified String array. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(Object, Object)](http://msdn.microsoft.com/en-us/library/kbseaaft.aspx) | Concatenates the string representations of two specified objects. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(String, String)](http://msdn.microsoft.com/en-us/library/a6d350wd.aspx) | Concatenates two specified instances of String. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(Object, Object, Object)](http://msdn.microsoft.com/en-us/library/f8z7w96s.aspx) | Concatenates the string representations of three specified objects. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(String, String, String)](http://msdn.microsoft.com/en-us/library/5e285t1h.aspx) | Concatenates three specified instances of String. |
| Public methodStatic member | [Concat(Object, Object, Object, Object)](http://msdn.microsoft.com/en-us/library/4ewx19dc.aspx) | Concatenates the string representations of four specified objects and any objects specified in an optional variable length parameter list. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat(String, String, String, String)](http://msdn.microsoft.com/en-us/library/0eafbze3.aspx) | Concatenates four specified instances of String. |
| Public methodStatic memberSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Concat<T>(IEnumerable<T>)](http://msdn.microsoft.com/en-us/library/dd991828.aspx) | Concatenates the members of an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) implementation. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Contains](http://msdn.microsoft.com/en-us/library/dy85x1sa.aspx) | Returns a value indicating whether the specified String object occurs within this string. |
| Public methodStatic memberSupported by the XNA Framework | [Copy](http://msdn.microsoft.com/en-us/library/system.string.copy.aspx) | Creates a new instance of String with the same value as a specified String. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [CopyTo](http://msdn.microsoft.com/en-us/library/system.string.copyto.aspx) | Copies a specified number of characters from a specified position in this instance to a specified position in an array of Unicode characters. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [EndsWith(String)](http://msdn.microsoft.com/en-us/library/2333wewz.aspx) | Determines whether the end of this string instance matches the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [EndsWith(String, StringComparison)](http://msdn.microsoft.com/en-us/library/ms131430.aspx) | Determines whether the end of this string instance matches the specified string when compared using the specified comparison option. |
| Public method | [EndsWith(String, Boolean, CultureInfo)](http://msdn.microsoft.com/en-us/library/t9h2fbth.aspx) | Determines whether the end of this string instance matches the specified string when compared using the specified culture. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Equals(Object)](http://msdn.microsoft.com/en-us/library/fkfd9eh8.aspx) | Determines whether this instance and a specified object, which must also be a String object, have the same value. (Overrides [Object.Equals(Object)](http://msdn.microsoft.com/en-us/library/bsc2ak47.aspx).) |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Equals(String)](http://msdn.microsoft.com/en-us/library/858x0yyx.aspx) | Determines whether this instance and another specified String object have the same value. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Equals(String, String)](http://msdn.microsoft.com/en-us/library/1hkt4325.aspx) | Determines whether two specified String objects have the same value. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Equals(String, StringComparison)](http://msdn.microsoft.com/en-us/library/c64xh8f9.aspx) | Determines whether this string and a specified String object have the same value. A parameter specifies the culture, case, and sort rules used in the comparison. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Equals(String, String, StringComparison)](http://msdn.microsoft.com/en-us/library/t4411bks.aspx) | Determines whether two specified String objects have the same value. A parameter specifies the culture, case, and sort rules used in the comparison. |
| Public methodStatic memberSupported by the XNA Framework | [Format(String, Object)](http://msdn.microsoft.com/en-us/library/fht0f5be.aspx) | Replaces one or more format items in a specified string with the string representation of a specified object. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Format(String, Object[])](http://msdn.microsoft.com/en-us/library/b1csw23d.aspx) | Replaces the format item in a specified string with the string representation of a corresponding object in a specified array. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Format(IFormatProvider, String,Object[])](http://msdn.microsoft.com/en-us/library/1ksz8yb7.aspx) | Replaces the format items in a specified string with the string representations of corresponding objects in a specified array. A parameter supplies culture-specific formatting information. |
| Public methodStatic memberSupported by the XNA Framework | [Format(String, Object, Object)](http://msdn.microsoft.com/en-us/library/zf3d0ccc.aspx) | Replaces the format items in a specified string with the string representation of two specified objects. |
| Public methodStatic memberSupported by the XNA Framework | [Format(String, Object, Object, Object)](http://msdn.microsoft.com/en-us/library/d9t40k6d.aspx) | Replaces the format items in a specified string with the string representation of three specified objects. |
| Public methodSupported by the XNA Framework | [GetEnumerator](http://msdn.microsoft.com/en-us/library/system.string.getenumerator.aspx) | Retrieves an object that can iterate through the individual characters in this string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [GetHashCode](http://msdn.microsoft.com/en-us/library/system.string.gethashcode.aspx) | Returns the hash code for this string. (Overrides [Object.GetHashCode()](http://msdn.microsoft.com/en-us/library/system.object.gethashcode.aspx).) |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [GetType](http://msdn.microsoft.com/en-us/library/system.object.gettype.aspx) | Gets the [Type](http://msdn.microsoft.com/en-us/library/system.type.aspx) of the current instance. (Inherited from [Object](http://msdn.microsoft.com/en-us/library/system.object.aspx).) |
| Public methodSupported by the XNA Framework | [GetTypeCode](http://msdn.microsoft.com/en-us/library/system.string.gettypecode.aspx) | Returns the [TypeCode](http://msdn.microsoft.com/en-us/library/system.typecode.aspx) for class String. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(Char)](http://msdn.microsoft.com/en-us/library/kwb0bwyd.aspx) | Reports the zero-based index of the first occurrence of the specified Unicode character in this string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(String)](http://msdn.microsoft.com/en-us/library/k8b1470s.aspx) | Reports the zero-based index of the first occurrence of the specified string in this instance. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(Char, Int32)](http://msdn.microsoft.com/en-us/library/5xkyx09y.aspx) | Reports the zero-based index of the first occurrence of the specified Unicode character in this string. The search starts at a specified character position. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(String, Int32)](http://msdn.microsoft.com/en-us/library/7cct0x33.aspx) | Reports the zero-based index of the first occurrence of the specified string in this instance. The search starts at a specified character position. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(String, StringComparison)](http://msdn.microsoft.com/en-us/library/ms224425.aspx) | Reports the zero-based index of the first occurrence of the specified string in the current Stringobject. A parameter specifies the type of search to use for the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(Char, Int32, Int32)](http://msdn.microsoft.com/en-us/library/ms131434.aspx) | Reports the zero-based index of the first occurrence of the specified character in this instance. The search starts at a specified character position and examines a specified number of character positions. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(String, Int32, Int32)](http://msdn.microsoft.com/en-us/library/d93tkzah.aspx) | Reports the zero-based index of the first occurrence of the specified string in this instance. The search starts at a specified character position and examines a specified number of character positions. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(String, Int32, StringComparison)](http://msdn.microsoft.com/en-us/library/ms224424.aspx) | Reports the zero-based index of the first occurrence of the specified string in the current Stringobject. Parameters specify the starting search position in the current string and the type of search to use for the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOf(String, Int32, Int32, StringComparison)](http://msdn.microsoft.com/en-us/library/ms224423.aspx) | Reports the zero-based index of the first occurrence of the specified string in the current Stringobject. Parameters specify the starting search position in the current string, the number of characters in the current string to search, and the type of search to use for the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOfAny(Char[])](http://msdn.microsoft.com/en-us/library/11w09h50.aspx) | Reports the zero-based index of the first occurrence in this instance of any character in a specified array of Unicode characters. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOfAny(Char[], Int32)](http://msdn.microsoft.com/en-us/library/56y4ddbk.aspx) | Reports the zero-based index of the first occurrence in this instance of any character in a specified array of Unicode characters. The search starts at a specified character position. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IndexOfAny(Char[], Int32, Int32)](http://msdn.microsoft.com/en-us/library/6wh7x3fs.aspx) | Reports the zero-based index of the first occurrence in this instance of any character in a specified array of Unicode characters. The search starts at a specified character position and examines a specified number of character positions. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Insert](http://msdn.microsoft.com/en-us/library/system.string.insert.aspx) | Returns a new string in which a specified string is inserted at a specified index position in this instance. |
| Public methodStatic memberSupported by the XNA Framework | [Intern](http://msdn.microsoft.com/en-us/library/system.string.intern.aspx) | Retrieves the system's reference to the specified String. |
| Public methodStatic memberSupported by the XNA Framework | [IsInterned](http://msdn.microsoft.com/en-us/library/system.string.isinterned.aspx) | Retrieves a reference to a specified String. |
| Public method | [IsNormalized()](http://msdn.microsoft.com/en-us/library/0wcxb622.aspx) | Indicates whether this string is in Unicode normalization form C. |
| Public method | [IsNormalized(NormalizationForm)](http://msdn.microsoft.com/en-us/library/kcy08ww5.aspx) | Indicates whether this string is in the specified Unicode normalization form. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IsNullOrEmpty](http://msdn.microsoft.com/en-us/library/system.string.isnullorempty.aspx) | Indicates whether the specified string is **null** or an [Empty](http://msdn.microsoft.com/en-us/library/system.string.empty.aspx) string. |
| Public methodStatic memberSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IsNullOrWhiteSpace](http://msdn.microsoft.com/en-us/library/system.string.isnullorwhitespace.aspx) | Indicates whether a specified string is **null**, empty, or consists only of white-space characters. |
| Public methodStatic memberSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Join(String, IEnumerable<String>)](http://msdn.microsoft.com/en-us/library/dd783876.aspx) | Concatenates the members of a constructed [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) collection of type String, using the specified separator between each member. |
| Public methodStatic memberSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Join(String, Object[])](http://msdn.microsoft.com/en-us/library/dd988350.aspx) | Concatenates the elements of an object array, using the specified separator between each element. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Join(String, String[])](http://msdn.microsoft.com/en-us/library/57a79xd0.aspx) | Concatenates all the elements of a string array, using the specified separator between each element. |
| Public methodStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Join(String, String[], Int32, Int32)](http://msdn.microsoft.com/en-us/library/tk0xe5h0.aspx) | Concatenates the specified elements of a string array, using the specified separator between each element. |
| Public methodStatic memberSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Join<T>(String, IEnumerable<T>)](http://msdn.microsoft.com/en-us/library/dd992421.aspx) | Concatenates the members of a collection, using the specified separator between each member. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(Char)](http://msdn.microsoft.com/en-us/library/0w96zd3d.aspx) | Reports the zero-based index position of the last occurrence of a specified Unicode character within this instance. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(String)](http://msdn.microsoft.com/en-us/library/1wdsy8fy.aspx) | Reports the zero-based index position of the last occurrence of a specified string within this instance. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(Char, Int32)](http://msdn.microsoft.com/en-us/library/1tw91fa3.aspx) | Reports the zero-based index position of the last occurrence of a specified Unicode character within this instance. The search starts at a specified character position and proceeds backward toward the beginning of the string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(String, Int32)](http://msdn.microsoft.com/en-us/library/bc3z4t9d.aspx) | Reports the zero-based index position of the last occurrence of a specified string within this instance. The search starts at a specified character position and proceeds backward toward the beginning of the string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(String, StringComparison)](http://msdn.microsoft.com/en-us/library/ms224422.aspx) | Reports the zero-based index of the last occurrence of a specified string within the current Stringobject. A parameter specifies the type of search to use for the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(Char, Int32, Int32)](http://msdn.microsoft.com/en-us/library/ms131439.aspx) | Reports the zero-based index position of the last occurrence of the specified Unicode character in a substring within this instance. The search starts at a specified character position and proceeds backward toward the beginning of the string for a specified number of character positions. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(String, Int32, Int32)](http://msdn.microsoft.com/en-us/library/d0z3tk9t.aspx) | Reports the zero-based index position of the last occurrence of a specified string within this instance. The search starts at a specified character position and proceeds backward toward the beginning of the string for a specified number of character positions. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(String, Int32, StringComparison)](http://msdn.microsoft.com/en-us/library/ms224420.aspx) | Reports the zero-based index of the last occurrence of a specified string within the current Stringobject. The search starts at a specified character position and proceeds backward toward the beginning of the string. A parameter specifies the type of comparison to perform when searching for the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOf(String, Int32, Int32, StringComparison)](http://msdn.microsoft.com/en-us/library/ms224421.aspx) | Reports the zero-based index position of the last occurrence of a specified string within this instance. The search starts at a specified character position and proceeds backward toward the beginning of the string for the specified number of character positions. A parameter specifies the type of comparison to perform when searching for the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOfAny(Char[])](http://msdn.microsoft.com/en-us/library/1d15dfa1.aspx) | Reports the zero-based index position of the last occurrence in this instance of one or more characters specified in a Unicode array. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOfAny(Char[], Int32)](http://msdn.microsoft.com/en-us/library/5kbkt4sh.aspx) | Reports the zero-based index position of the last occurrence in this instance of one or more characters specified in a Unicode array. The search starts at a specified character position and proceeds backward toward the beginning of the string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [LastIndexOfAny(Char[], Int32, Int32)](http://msdn.microsoft.com/en-us/library/81kkcfd4.aspx) | Reports the zero-based index position of the last occurrence in this instance of one or more characters specified in a Unicode array. The search starts at a specified character position and proceeds backward toward the beginning of the string for a specified number of character positions. |
| Public method | [Normalize()](http://msdn.microsoft.com/en-us/library/8eaxk1x2.aspx) | Returns a new string whose textual value is the same as this string, but whose binary representation is in Unicode normalization form C. |
| Public method | [Normalize(NormalizationForm)](http://msdn.microsoft.com/en-us/library/ebza6ck1.aspx) | Returns a new string whose textual value is the same as this string, but whose binary representation is in the specified Unicode normalization form. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [PadLeft(Int32)](http://msdn.microsoft.com/en-us/library/0zk6ydzx.aspx) | Returns a new string that right-aligns the characters in this instance by padding them with spaces on the left, for a specified total length. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [PadLeft(Int32, Char)](http://msdn.microsoft.com/en-us/library/92h5dc07.aspx) | Returns a new string that right-aligns the characters in this instance by padding them on the left with a specified Unicode character, for a specified total length. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [PadRight(Int32)](http://msdn.microsoft.com/en-us/library/34d75d7s.aspx) | Returns a new string that left-aligns the characters in this string by padding them with spaces on the right, for a specified total length. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [PadRight(Int32, Char)](http://msdn.microsoft.com/en-us/library/36f2hz3a.aspx) | Returns a new string that left-aligns the characters in this string by padding them on the right with a specified Unicode character, for a specified total length. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Remove(Int32)](http://msdn.microsoft.com/en-us/library/9ad138yc.aspx) | Returns a new string in which all the characters in the current instance, beginning at a specified position and continuing through the last position, have been deleted. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Remove(Int32, Int32)](http://msdn.microsoft.com/en-us/library/d8d7z2kk.aspx) | Returns a new string in which a specified number of characters in the current this instance beginning at a specified position have been deleted. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Replace(Char, Char)](http://msdn.microsoft.com/en-us/library/czx8s9ts.aspx) | Returns a new string in which all occurrences of a specified Unicode character in this instance are replaced with another specified Unicode character. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Replace(String, String)](http://msdn.microsoft.com/en-us/library/fk49wtc1.aspx) | Returns a new string in which all occurrences of a specified string in the current instance are replaced with another specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Split(Char[])](http://msdn.microsoft.com/en-us/library/b873y76a.aspx) | Returns a string array that contains the substrings in this instance that are delimited by elements of a specified Unicode character array. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Split(Char[], Int32)](http://msdn.microsoft.com/en-us/library/c1bs0eda.aspx) | Returns a string array that contains the substrings in this instance that are delimited by elements of a specified Unicode character array. A parameter specifies the maximum number of substrings to return. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Split(Char[], StringSplitOptions)](http://msdn.microsoft.com/en-us/library/ms131448.aspx) | Returns a string array that contains the substrings in this string that are delimited by elements of a specified Unicode character array. A parameter specifies whether to return empty array elements. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Split(String[], StringSplitOptions)](http://msdn.microsoft.com/en-us/library/tabh47cf.aspx) | Returns a string array that contains the substrings in this string that are delimited by elements of a specified string array. A parameter specifies whether to return empty array elements. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Split(Char[], Int32, StringSplitOptions)](http://msdn.microsoft.com/en-us/library/ms131450.aspx) | Returns a string array that contains the substrings in this string that are delimited by elements of a specified Unicode character array. Parameters specify the maximum number of substrings to return and whether to return empty array elements. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Split(String[], Int32, StringSplitOptions)](http://msdn.microsoft.com/en-us/library/1bwe3zdy.aspx) | Returns a string array that contains the substrings in this string that are delimited by elements of a specified string array. Parameters specify the maximum number of substrings to return and whether to return empty array elements. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [StartsWith(String)](http://msdn.microsoft.com/en-us/library/baketfxw.aspx) | Determines whether the beginning of this string instance matches the specified string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [StartsWith(String, StringComparison)](http://msdn.microsoft.com/en-us/library/ms131452.aspx) | Determines whether the beginning of this string instance matches the specified string when compared using the specified comparison option. |
| Public method | [StartsWith(String, Boolean, CultureInfo)](http://msdn.microsoft.com/en-us/library/6k0axhx9.aspx) | Determines whether the beginning of this string instance matches the specified string when compared using the specified culture. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Substring(Int32)](http://msdn.microsoft.com/en-us/library/hxthx5h6.aspx) | Retrieves a substring from this instance. The substring starts at a specified character position and continues to the end of the string. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Substring(Int32, Int32)](http://msdn.microsoft.com/en-us/library/aka44szs.aspx) | Retrieves a substring from this instance. The substring starts at a specified character position and has a specified length. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [ToCharArray()](http://msdn.microsoft.com/en-us/library/ezftk57x.aspx) | Copies the characters in this instance to a Unicode character array. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [ToCharArray(Int32, Int32)](http://msdn.microsoft.com/en-us/library/2c7h58e5.aspx) | Copies the characters in a specified substring in this instance to a Unicode character array. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [ToLower()](http://msdn.microsoft.com/en-us/library/e78f86at.aspx) | Returns a copy of this string converted to lowercase. |
| Public methodSupported by the XNA Framework | [ToLower(CultureInfo)](http://msdn.microsoft.com/en-us/library/s8z5yt00.aspx) | Returns a copy of this string converted to lowercase, using the casing rules of the specified culture. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [ToLowerInvariant](http://msdn.microsoft.com/en-us/library/system.string.tolowerinvariant.aspx) | Returns a copy of this String object converted to lowercase using the casing rules of the invariant culture. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [ToString()](http://msdn.microsoft.com/en-us/library/8tc6ws5s.aspx) | Returns this instance of String; no actual conversion is performed. (Overrides [Object.ToString()](http://msdn.microsoft.com/en-us/library/system.object.tostring.aspx).) |
| Public methodSupported by the XNA Framework | [ToString(IFormatProvider)](http://msdn.microsoft.com/en-us/library/29dxe1x2.aspx) | Returns this instance of String; no actual conversion is performed. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [ToUpper()](http://msdn.microsoft.com/en-us/library/ewdd6aed.aspx) | Returns a copy of this string converted to uppercase. |
| Public methodSupported by the XNA Framework | [ToUpper(CultureInfo)](http://msdn.microsoft.com/en-us/library/24kc78ka.aspx) | Returns a copy of this string converted to uppercase, using the casing rules of the specified culture. |
| Public methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [ToUpperInvariant](http://msdn.microsoft.com/en-us/library/system.string.toupperinvariant.aspx) | Returns a copy of this String object converted to uppercase using the casing rules of the invariant culture. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Trim()](http://msdn.microsoft.com/en-us/library/t97s7bs3.aspx) | Removes all leading and trailing white-space characters from the current String object. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Trim(Char[])](http://msdn.microsoft.com/en-us/library/d4tt83f9.aspx) | Removes all leading and trailing occurrences of a set of characters specified in an array from the current String object. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [TrimEnd](http://msdn.microsoft.com/en-us/library/system.string.trimend.aspx) | Removes all trailing occurrences of a set of characters specified in an array from the current Stringobject. |
| Public methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [TrimStart](http://msdn.microsoft.com/en-us/library/system.string.trimstart.aspx) | Removes all leading occurrences of a set of characters specified in an array from the current Stringobject. |

[Top](http://msdn.microsoft.com/en-us/library/system.string.aspx#mainBody)

[Operators](javascript:void(0))

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Description** |
| Public operatorStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Equality](http://msdn.microsoft.com/en-us/library/system.string.op_equality.aspx) | Determines whether two specified strings have the same value. |
| Public operatorStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Inequality](http://msdn.microsoft.com/en-us/library/system.string.op_inequality.aspx) | Determines whether two specified strings have different values. |

[Top](http://msdn.microsoft.com/en-us/library/system.string.aspx#mainBody)

[Extension Methods](javascript:void(0))

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Description** |
| Public Extension MethodSupported by the XNA Framework | [Aggregate<Char>(Func<Char, Char, Char>)](http://msdn.microsoft.com/en-us/library/bb548651.aspx) | Overloaded. Applies an accumulator function over a sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Aggregate<Char, TAccumulate>(TAccumulate, Func<TAccumulate, Char, TAccumulate>)](http://msdn.microsoft.com/en-us/library/bb549218.aspx) | Overloaded. Applies an accumulator function over a sequence. The specified seed value is used as the initial accumulator value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Aggregate<Char, TAccumulate, TResult>(TAccumulate, Func<TAccumulate, Char, TAccumulate>, Func<TAccumulate, TResult>)](http://msdn.microsoft.com/en-us/library/bb548744.aspx) | Overloaded. Applies an accumulator function over a sequence. The specified seed value is used as the initial accumulator value, and the specified function is used to select the result value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [All<Char>](http://msdn.microsoft.com/en-us/library/bb548541.aspx) | Determines whether all elements of a sequence satisfy a condition. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Any<Char>()](http://msdn.microsoft.com/en-us/library/bb337697.aspx) | Overloaded. Determines whether a sequence contains any elements. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Any<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb534972.aspx) | Overloaded. Determines whether any element of a sequence satisfies a condition.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [AsEnumerable<Char>](http://msdn.microsoft.com/en-us/library/bb335435.aspx) | Returns the input typed as [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx). (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [AsParallel()](http://msdn.microsoft.com/en-us/library/dd413237.aspx) | Overloaded. Enables parallelization of a query. (Defined by [ParallelEnumerable](http://msdn.microsoft.com/en-us/library/system.linq.parallelenumerable.aspx).) |
| Public Extension Method | [AsParallel<Char>()](http://msdn.microsoft.com/en-us/library/dd413602.aspx) | Overloaded. Enables parallelization of a query. (Defined by [ParallelEnumerable](http://msdn.microsoft.com/en-us/library/system.linq.parallelenumerable.aspx).) |
| Public Extension MethodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [AsQueryable()](http://msdn.microsoft.com/en-us/library/bb353734.aspx) | Overloaded. Converts an [IEnumerable](http://msdn.microsoft.com/en-us/library/system.collections.ienumerable.aspx) to an [IQueryable](http://msdn.microsoft.com/en-us/library/system.linq.iqueryable.aspx). (Defined by [Queryable](http://msdn.microsoft.com/en-us/library/system.linq.queryable.aspx).) |
| Public Extension Method | [AsQueryable<Char>()](http://msdn.microsoft.com/en-us/library/bb507003.aspx) | Overloaded. Converts a generic [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) to a generic [IQueryable<T>](http://msdn.microsoft.com/en-us/library/bb351562.aspx).(Defined by [Queryable](http://msdn.microsoft.com/en-us/library/system.linq.queryable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Int32>)](http://msdn.microsoft.com/en-us/library/bb548874.aspx) | Overloaded. Computes the average of a sequence of [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Nullable<Int32>>)](http://msdn.microsoft.com/en-us/library/bb548647.aspx) | Overloaded. Computes the average of a sequence of nullable [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Int64>)](http://msdn.microsoft.com/en-us/library/bb535036.aspx) | Overloaded. Computes the average of a sequence of [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Nullable<Int64>>)](http://msdn.microsoft.com/en-us/library/bb549137.aspx) | Overloaded. Computes the average of a sequence of nullable [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Single>)](http://msdn.microsoft.com/en-us/library/bb534635.aspx) | Overloaded. Computes the average of a sequence of [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Nullable<Single>>)](http://msdn.microsoft.com/en-us/library/bb549149.aspx) | Overloaded. Computes the average of a sequence of nullable [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Double>)](http://msdn.microsoft.com/en-us/library/bb534965.aspx) | Overloaded. Computes the average of a sequence of [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Nullable<Double>>)](http://msdn.microsoft.com/en-us/library/bb549213.aspx) | Overloaded. Computes the average of a sequence of nullable [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Decimal>)](http://msdn.microsoft.com/en-us/library/bb549067.aspx) | Overloaded. Computes the average of a sequence of [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Average<Char>(Func<Char, Nullable<Decimal>>)](http://msdn.microsoft.com/en-us/library/bb534737.aspx) | Overloaded. Computes the average of a sequence of nullable [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Cast<TResult>](http://msdn.microsoft.com/en-us/library/bb341406.aspx) | Casts the elements of an [IEnumerable](http://msdn.microsoft.com/en-us/library/system.collections.ienumerable.aspx) to the specified type. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Concat<Char>](http://msdn.microsoft.com/en-us/library/bb302894.aspx) | Concatenates two sequences. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Contains<Char>(Char)](http://msdn.microsoft.com/en-us/library/bb352880.aspx) | Overloaded. Determines whether a sequence contains a specified element by using the default equality comparer. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Contains<Char>(Char, IEqualityComparer<Char>)](http://msdn.microsoft.com/en-us/library/bb339118.aspx) | Overloaded. Determines whether a sequence contains a specified element by using a specified [IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx). (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Count<Char>()](http://msdn.microsoft.com/en-us/library/bb338038.aspx) | Overloaded. Returns the number of elements in a sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Count<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb535181.aspx) | Overloaded. Returns a number that represents how many elements in the specified sequence satisfy a condition. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [DefaultIfEmpty<Char>()](http://msdn.microsoft.com/en-us/library/bb360179.aspx) | Overloaded. Returns the elements of the specified sequence or the type parameter's default value in a singleton collection if the sequence is empty. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [DefaultIfEmpty<Char>(Char)](http://msdn.microsoft.com/en-us/library/bb355419.aspx) | Overloaded. Returns the elements of the specified sequence or the specified value in a singleton collection if the sequence is empty. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Distinct<Char>()](http://msdn.microsoft.com/en-us/library/bb348436.aspx) | Overloaded. Returns distinct elements from a sequence by using the default equality comparer to compare values. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Distinct<Char>(IEqualityComparer<Char>)](http://msdn.microsoft.com/en-us/library/bb338049.aspx) | Overloaded. Returns distinct elements from a sequence by using a specified[IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx) to compare values. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ElementAt<Char>](http://msdn.microsoft.com/en-us/library/bb299233.aspx) | Returns the element at a specified index in a sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ElementAtOrDefault<Char>](http://msdn.microsoft.com/en-us/library/bb494386.aspx) | Returns the element at a specified index in a sequence or a default value if the index is out of range. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Except<Char>(IEnumerable<Char>)](http://msdn.microsoft.com/en-us/library/bb300779.aspx) | Overloaded. Produces the set difference of two sequences by using the default equality comparer to compare values. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Except<Char>(IEnumerable<Char>, IEqualityComparer<Char>)](http://msdn.microsoft.com/en-us/library/bb336390.aspx) | Overloaded. Produces the set difference of two sequences by using the specified[IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx) to compare values. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [First<Char>()](http://msdn.microsoft.com/en-us/library/bb291976.aspx) | Overloaded. Returns the first element of a sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [First<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb535050.aspx) | Overloaded. Returns the first element in a sequence that satisfies a specified condition. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [FirstOrDefault<Char>()](http://msdn.microsoft.com/en-us/library/bb340482.aspx) | Overloaded. Returns the first element of a sequence, or a default value if the sequence contains no elements. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [FirstOrDefault<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb549039.aspx) | Overloaded. Returns the first element of the sequence that satisfies a condition or a default value if no such element is found. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey>(Func<Char, TKey>)](http://msdn.microsoft.com/en-us/library/bb534501.aspx) | Overloaded. Groups the elements of a sequence according to a specified key selector function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey>(Func<Char, TKey>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb534334.aspx) | Overloaded. Groups the elements of a sequence according to a specified key selector function and compares the keys by using a specified comparer. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey, TElement>(Func<Char, TKey>, Func<Char, TElement>)](http://msdn.microsoft.com/en-us/library/bb534304.aspx) | Overloaded. Groups the elements of a sequence according to a specified key selector function and projects the elements for each group by using a specified function.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey, TResult>(Func<Char, TKey>, Func<TKey, IEnumerable<Char>, TResult>)](http://msdn.microsoft.com/en-us/library/bb549393.aspx) | Overloaded. Groups the elements of a sequence according to a specified key selector function and creates a result value from each group and its key. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey, TElement>(Func<Char, TKey>, Func<Char, TElement>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb549272.aspx) | Overloaded. Groups the elements of a sequence according to a key selector function. The keys are compared by using a comparer and each group's elements are projected by using a specified function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey, TResult>(Func<Char, TKey>, Func<TKey, IEnumerable<Char>, TResult>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb549140.aspx) | Overloaded. Groups the elements of a sequence according to a specified key selector function and creates a result value from each group and its key. The keys are compared by using a specified comparer. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey, TElement, TResult>(Func<Char, TKey>, Func<Char, TElement>, Func<TKey, IEnumerable<TElement>, TResult>)](http://msdn.microsoft.com/en-us/library/bb534493.aspx) | Overloaded. Groups the elements of a sequence according to a specified key selector function and creates a result value from each group and its key. The elements of each group are projected by using a specified function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupBy<Char, TKey, TElement, TResult>(Func<Char, TKey>, Func<Char, TElement>, Func<TKey, IEnumerable<TElement>, TResult>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb535049.aspx) | Overloaded. Groups the elements of a sequence according to a specified key selector function and creates a result value from each group and its key. Key values are compared by using a specified comparer, and the elements of each group are projected by using a specified function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupJoin<Char, TInner, TKey, TResult>(IEnumerable<TInner>, Func<Char, TKey>, Func<TInner, TKey>, Func<Char, IEnumerable<TInner>, TResult>)](http://msdn.microsoft.com/en-us/library/bb534297.aspx) | Overloaded. Correlates the elements of two sequences based on equality of keys and groups the results. The default equality comparer is used to compare keys. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [GroupJoin<Char, TInner, TKey, TResult>(IEnumerable<TInner>, Func<Char, TKey>, Func<TInner, TKey>, Func<Char, IEnumerable<TInner>, TResult>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb535047.aspx) | Overloaded. Correlates the elements of two sequences based on key equality and groups the results. A specified [IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx) is used to compare keys.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Intersect<Char>(IEnumerable<Char>)](http://msdn.microsoft.com/en-us/library/bb460136.aspx) | Overloaded. Produces the set intersection of two sequences by using the default equality comparer to compare values. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Intersect<Char>(IEnumerable<Char>, IEqualityComparer<Char>)](http://msdn.microsoft.com/en-us/library/bb355408.aspx) | Overloaded. Produces the set intersection of two sequences by using the specified[IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx) to compare values. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Join<Char, TInner, TKey, TResult>(IEnumerable<TInner>, Func<Char, TKey>, Func<TInner, TKey>, Func<Char, TInner, TResult>)](http://msdn.microsoft.com/en-us/library/bb534675.aspx) | Overloaded. Correlates the elements of two sequences based on matching keys. The default equality comparer is used to compare keys. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Join<Char, TInner, TKey, TResult>(IEnumerable<TInner>, Func<Char, TKey>, Func<TInner, TKey>, Func<Char, TInner, TResult>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb549267.aspx) | Overloaded. Correlates the elements of two sequences based on matching keys. A specified [IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx) is used to compare keys. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Last<Char>()](http://msdn.microsoft.com/en-us/library/bb358775.aspx) | Overloaded. Returns the last element of a sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Last<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb549138.aspx) | Overloaded. Returns the last element of a sequence that satisfies a specified condition. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [LastOrDefault<Char>()](http://msdn.microsoft.com/en-us/library/bb301849.aspx) | Overloaded. Returns the last element of a sequence, or a default value if the sequence contains no elements. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [LastOrDefault<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb548915.aspx) | Overloaded. Returns the last element of a sequence that satisfies a condition or a default value if no such element is found. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [LongCount<Char>()](http://msdn.microsoft.com/en-us/library/bb353539.aspx) | Overloaded. Returns an [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) that represents the total number of elements in a sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [LongCount<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb548914.aspx) | Overloaded. Returns an [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) that represents how many elements in a sequence satisfy a condition. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>()](http://msdn.microsoft.com/en-us/library/bb347632.aspx) | Overloaded. Returns the maximum value in a generic sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Int32>)](http://msdn.microsoft.com/en-us/library/bb535031.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Nullable<Int32>>)](http://msdn.microsoft.com/en-us/library/bb549275.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum nullable [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Int64>)](http://msdn.microsoft.com/en-us/library/bb534740.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Nullable<Int64>>)](http://msdn.microsoft.com/en-us/library/bb549329.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum nullable [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Single>)](http://msdn.microsoft.com/en-us/library/bb534971.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Nullable<Single>>)](http://msdn.microsoft.com/en-us/library/bb549049.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum nullable [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Double>)](http://msdn.microsoft.com/en-us/library/bb549404.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Nullable<Double>>)](http://msdn.microsoft.com/en-us/library/bb548726.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum nullable [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Decimal>)](http://msdn.microsoft.com/en-us/library/bb548659.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char>(Func<Char, Nullable<Decimal>>)](http://msdn.microsoft.com/en-us/library/bb534331.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the maximum nullable [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Max<Char, TResult>(Func<Char, TResult>)](http://msdn.microsoft.com/en-us/library/bb534962.aspx) | Overloaded. Invokes a transform function on each element of a generic sequence and returns the maximum resulting value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>()](http://msdn.microsoft.com/en-us/library/bb352408.aspx) | Overloaded. Returns the minimum value in a generic sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Int32>)](http://msdn.microsoft.com/en-us/library/bb549416.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Nullable<Int32>>)](http://msdn.microsoft.com/en-us/library/bb548864.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum nullable [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Int64>)](http://msdn.microsoft.com/en-us/library/bb548736.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Nullable<Int64>>)](http://msdn.microsoft.com/en-us/library/bb534961.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum nullable [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Single>)](http://msdn.microsoft.com/en-us/library/bb549209.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Nullable<Single>>)](http://msdn.microsoft.com/en-us/library/bb549279.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum nullable [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Double>)](http://msdn.microsoft.com/en-us/library/bb534802.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Nullable<Double>>)](http://msdn.microsoft.com/en-us/library/bb549356.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum nullable [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Decimal>)](http://msdn.microsoft.com/en-us/library/bb548779.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char>(Func<Char, Nullable<Decimal>>)](http://msdn.microsoft.com/en-us/library/bb535043.aspx) | Overloaded. Invokes a transform function on each element of a sequence and returns the minimum nullable [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Min<Char, TResult>(Func<Char, TResult>)](http://msdn.microsoft.com/en-us/library/bb548741.aspx) | Overloaded. Invokes a transform function on each element of a generic sequence and returns the minimum resulting value. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [OfType<TResult>](http://msdn.microsoft.com/en-us/library/bb360913.aspx) | Filters the elements of an [IEnumerable](http://msdn.microsoft.com/en-us/library/system.collections.ienumerable.aspx) based on a specified type. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [OrderBy<Char, TKey>(Func<Char, TKey>)](http://msdn.microsoft.com/en-us/library/bb534966.aspx) | Overloaded. Sorts the elements of a sequence in ascending order according to a key.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [OrderBy<Char, TKey>(Func<Char, TKey>, IComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb549422.aspx) | Overloaded. Sorts the elements of a sequence in ascending order by using a specified comparer. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [OrderByDescending<Char, TKey>(Func<Char, TKey>)](http://msdn.microsoft.com/en-us/library/bb534855.aspx) | Overloaded. Sorts the elements of a sequence in descending order according to a key. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [OrderByDescending<Char, TKey>(Func<Char, TKey>, IComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb548916.aspx) | Overloaded. Sorts the elements of a sequence in descending order by using a specified comparer. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Reverse<Char>](http://msdn.microsoft.com/en-us/library/bb358497.aspx) | Inverts the order of the elements in a sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Select<Char, TResult>(Func<Char, TResult>)](http://msdn.microsoft.com/en-us/library/bb548891.aspx) | Overloaded. Projects each element of a sequence into a new form. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Select<Char, TResult>(Func<Char, Int32, TResult>)](http://msdn.microsoft.com/en-us/library/bb534869.aspx) | Overloaded. Projects each element of a sequence into a new form by incorporating the element's index. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SelectMany<Char, TResult>(Func<Char, IEnumerable<TResult>>)](http://msdn.microsoft.com/en-us/library/bb534336.aspx) | Overloaded. Projects each element of a sequence to an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) and flattens the resulting sequences into one sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SelectMany<Char, TResult>(Func<Char, Int32, IEnumerable<TResult>>)](http://msdn.microsoft.com/en-us/library/bb549142.aspx) | Overloaded. Projects each element of a sequence to an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx), and flattens the resulting sequences into one sequence. The index of each source element is used in the projected form of that element. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SelectMany<Char, TCollection, TResult>(Func<Char, Int32, IEnumerable<TCollection>>, Func<Char, TCollection, TResult>)](http://msdn.microsoft.com/en-us/library/bb534732.aspx) | Overloaded. Projects each element of a sequence to an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx), flattens the resulting sequences into one sequence, and invokes a result selector function on each element therein. The index of each source element is used in the intermediate projected form of that element. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SelectMany<Char, TCollection, TResult>(Func<Char, IEnumerable<TCollection>>, Func<Char, TCollection, TResult>)](http://msdn.microsoft.com/en-us/library/bb534631.aspx) | Overloaded. Projects each element of a sequence to an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx), flattens the resulting sequences into one sequence, and invokes a result selector function on each element therein. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SequenceEqual<Char>(IEnumerable<Char>)](http://msdn.microsoft.com/en-us/library/bb348567.aspx) | Overloaded. Determines whether two sequences are equal by comparing the elements by using the default equality comparer for their type. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SequenceEqual<Char>(IEnumerable<Char>, IEqualityComparer<Char>)](http://msdn.microsoft.com/en-us/library/bb342073.aspx) | Overloaded. Determines whether two sequences are equal by comparing their elements by using a specified [IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx). (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Single<Char>()](http://msdn.microsoft.com/en-us/library/bb155325.aspx) | Overloaded. Returns the only element of a sequence, and throws an exception if there is not exactly one element in the sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Single<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb535118.aspx) | Overloaded. Returns the only element of a sequence that satisfies a specified condition, and throws an exception if more than one such element exists. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SingleOrDefault<Char>()](http://msdn.microsoft.com/en-us/library/bb342451.aspx) | Overloaded. Returns the only element of a sequence, or a default value if the sequence is empty; this method throws an exception if there is more than one element in the sequence. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SingleOrDefault<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb549274.aspx) | Overloaded. Returns the only element of a sequence that satisfies a specified condition or a default value if no such element exists; this method throws an exception if more than one element satisfies the condition. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Skip<Char>](http://msdn.microsoft.com/en-us/library/bb358985.aspx) | Bypasses a specified number of elements in a sequence and then returns the remaining elements. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SkipWhile<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb549075.aspx) | Overloaded. Bypasses elements in a sequence as long as a specified condition is true and then returns the remaining elements. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [SkipWhile<Char>(Func<Char, Int32, Boolean>)](http://msdn.microsoft.com/en-us/library/bb549288.aspx) | Overloaded. Bypasses elements in a sequence as long as a specified condition is true and then returns the remaining elements. The element's index is used in the logic of the predicate function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Int32>)](http://msdn.microsoft.com/en-us/library/bb535184.aspx) | Overloaded. Computes the sum of the sequence of [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Nullable<Int32>>)](http://msdn.microsoft.com/en-us/library/bb548890.aspx) | Overloaded. Computes the sum of the sequence of nullable [Int32](http://msdn.microsoft.com/en-us/library/system.int32.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Int64>)](http://msdn.microsoft.com/en-us/library/bb534643.aspx) | Overloaded. Computes the sum of the sequence of [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Nullable<Int64>>)](http://msdn.microsoft.com/en-us/library/bb534314.aspx) | Overloaded. Computes the sum of the sequence of nullable [Int64](http://msdn.microsoft.com/en-us/library/system.int64.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Single>)](http://msdn.microsoft.com/en-us/library/bb549150.aspx) | Overloaded. Computes the sum of the sequence of [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Nullable<Single>>)](http://msdn.microsoft.com/en-us/library/bb548869.aspx) | Overloaded. Computes the sum of the sequence of nullable [Single](http://msdn.microsoft.com/en-us/library/system.single.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Double>)](http://msdn.microsoft.com/en-us/library/bb534734.aspx) | Overloaded. Computes the sum of the sequence of [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Nullable<Double>>)](http://msdn.microsoft.com/en-us/library/bb534653.aspx) | Overloaded. Computes the sum of the sequence of nullable [Double](http://msdn.microsoft.com/en-us/library/system.double.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Decimal>)](http://msdn.microsoft.com/en-us/library/bb549046.aspx) | Overloaded. Computes the sum of the sequence of [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) values that are obtained by invoking a transform function on each element of the input sequence. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Sum<Char>(Func<Char, Nullable<Decimal>>)](http://msdn.microsoft.com/en-us/library/bb534634.aspx) | Overloaded. Computes the sum of the sequence of nullable [Decimal](http://msdn.microsoft.com/en-us/library/system.decimal.aspx) values that are obtained by invoking a transform function on each element of the input sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Take<Char>](http://msdn.microsoft.com/en-us/library/bb503062.aspx) | Returns a specified number of contiguous elements from the start of a sequence.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [TakeWhile<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb534804.aspx) | Overloaded. Returns elements from a sequence as long as a specified condition is true. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [TakeWhile<Char>(Func<Char, Int32, Boolean>)](http://msdn.microsoft.com/en-us/library/bb548775.aspx) | Overloaded. Returns elements from a sequence as long as a specified condition is true. The element's index is used in the logic of the predicate function. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToArray<Char>](http://msdn.microsoft.com/en-us/library/bb298736.aspx) | Creates an array from a [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx). (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToDictionary<Char, TKey>(Func<Char, TKey>)](http://msdn.microsoft.com/en-us/library/bb549277.aspx) | Overloaded. Creates a [Dictionary<TKey, TValue>](http://msdn.microsoft.com/en-us/library/xfhwa508.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to a specified key selector function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToDictionary<Char, TKey>(Func<Char, TKey>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb548554.aspx) | Overloaded. Creates a [Dictionary<TKey, TValue>](http://msdn.microsoft.com/en-us/library/xfhwa508.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to a specified key selector function and key comparer. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToDictionary<Char, TKey, TElement>(Func<Char, TKey>, Func<Char, TElement>)](http://msdn.microsoft.com/en-us/library/bb548657.aspx) | Overloaded. Creates a [Dictionary<TKey, TValue>](http://msdn.microsoft.com/en-us/library/xfhwa508.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to specified key selector and element selector functions. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToDictionary<Char, TKey, TElement>(Func<Char, TKey>, Func<Char, TElement>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb548652.aspx) | Overloaded. Creates a [Dictionary<TKey, TValue>](http://msdn.microsoft.com/en-us/library/xfhwa508.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to a specified key selector function, a comparer, and an element selector function.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToList<Char>](http://msdn.microsoft.com/en-us/library/bb342261.aspx) | Creates a [List<T>](http://msdn.microsoft.com/en-us/library/6sh2ey19.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx). (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToLookup<Char, TKey>(Func<Char, TKey>)](http://msdn.microsoft.com/en-us/library/bb549073.aspx) | Overloaded. Creates a [Lookup<TKey, TElement>](http://msdn.microsoft.com/en-us/library/bb460184.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to a specified key selector function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToLookup<Char, TKey>(Func<Char, TKey>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb549346.aspx) | Overloaded. Creates a [Lookup<TKey, TElement>](http://msdn.microsoft.com/en-us/library/bb460184.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to a specified key selector function and key comparer. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToLookup<Char, TKey, TElement>(Func<Char, TKey>, Func<Char, TElement>)](http://msdn.microsoft.com/en-us/library/bb549211.aspx) | Overloaded. Creates a [Lookup<TKey, TElement>](http://msdn.microsoft.com/en-us/library/bb460184.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to specified key selector and element selector functions. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [ToLookup<Char, TKey, TElement>(Func<Char, TKey>, Func<Char, TElement>, IEqualityComparer<TKey>)](http://msdn.microsoft.com/en-us/library/bb548544.aspx) | Overloaded. Creates a [Lookup<TKey, TElement>](http://msdn.microsoft.com/en-us/library/bb460184.aspx) from an [IEnumerable<T>](http://msdn.microsoft.com/en-us/library/9eekhta0.aspx) according to a specified key selector function, a comparer and an element selector function.(Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Union<Char>(IEnumerable<Char>)](http://msdn.microsoft.com/en-us/library/bb341731.aspx) | Overloaded. Produces the set union of two sequences by using the default equality comparer. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Union<Char>(IEnumerable<Char>, IEqualityComparer<Char>)](http://msdn.microsoft.com/en-us/library/bb358407.aspx) | Overloaded. Produces the set union of two sequences by using a specified[IEqualityComparer<T>](http://msdn.microsoft.com/en-us/library/ms132151.aspx). (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Where<Char>(Func<Char, Boolean>)](http://msdn.microsoft.com/en-us/library/bb534803.aspx) | Overloaded. Filters a sequence of values based on a predicate. (Defined by[Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension MethodSupported by the XNA Framework | [Where<Char>(Func<Char, Int32, Boolean>)](http://msdn.microsoft.com/en-us/library/bb549418.aspx) | Overloaded. Filters a sequence of values based on a predicate. Each element's index is used in the logic of the predicate function. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |
| Public Extension Method | [Zip<Char, TSecond, TResult>](http://msdn.microsoft.com/en-us/library/dd267698.aspx) | Applies a specified function to the corresponding elements of two sequences, producing a sequence of the results. (Defined by [Enumerable](http://msdn.microsoft.com/en-us/library/system.linq.enumerable.aspx).) |

[Top](http://msdn.microsoft.com/en-us/library/system.string.aspx#mainBody)

[Fields](javascript:void(0))

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Description** |
| Public fieldStatic memberSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [Empty](http://msdn.microsoft.com/en-us/library/system.string.empty.aspx) | Represents the empty string. This field is read-only. |

[Top](http://msdn.microsoft.com/en-us/library/system.string.aspx#mainBody)

[Explicit Interface Implementations](javascript:void(0))

|  |  |  |
| --- | --- | --- |
|  | **Name** | **Description** |
| Explicit interface implemetationPrivate methodSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IComparable.CompareTo](http://msdn.microsoft.com/en-us/library/hh924458.aspx) | Compares the current instance with another object of the same type and returns an integer that indicates whether the current instance precedes, follows, or occurs in the same position in the sort order as the other object. |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToBoolean](http://msdn.microsoft.com/en-us/library/bb346937.aspx) | Infrastructure. For a description of this member, see [ToBoolean](http://msdn.microsoft.com/en-us/library/system.iconvertible.toboolean.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToByte](http://msdn.microsoft.com/en-us/library/bb355898.aspx) | Infrastructure. For a description of this member, see [ToByte](http://msdn.microsoft.com/en-us/library/system.iconvertible.tobyte.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToChar](http://msdn.microsoft.com/en-us/library/bb335877.aspx) | Infrastructure. For a description of this member, see [ToChar](http://msdn.microsoft.com/en-us/library/system.iconvertible.tochar.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToDateTime](http://msdn.microsoft.com/en-us/library/bb302858.aspx) | Infrastructure. For a description of this member, see [ToDateTime](http://msdn.microsoft.com/en-us/library/system.iconvertible.todatetime.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToDecimal](http://msdn.microsoft.com/en-us/library/bb359959.aspx) | Infrastructure. For a description of this member, see [ToDecimal](http://msdn.microsoft.com/en-us/library/system.iconvertible.todecimal.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToDouble](http://msdn.microsoft.com/en-us/library/bb154906.aspx) | Infrastructure. For a description of this member, see [ToDouble](http://msdn.microsoft.com/en-us/library/system.iconvertible.todouble.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToInt16](http://msdn.microsoft.com/en-us/library/bb293091.aspx) | Infrastructure. For a description of this member, see [ToInt16](http://msdn.microsoft.com/en-us/library/system.iconvertible.toint16.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToInt32](http://msdn.microsoft.com/en-us/library/bb300452.aspx) | Infrastructure. For a description of this member, see [ToInt32](http://msdn.microsoft.com/en-us/library/system.iconvertible.toint32.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToInt64](http://msdn.microsoft.com/en-us/library/bb359566.aspx) | Infrastructure. For a description of this member, see [ToInt64](http://msdn.microsoft.com/en-us/library/system.iconvertible.toint64.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToSByte](http://msdn.microsoft.com/en-us/library/bb342232.aspx) | Infrastructure. For a description of this member, see [ToSByte](http://msdn.microsoft.com/en-us/library/system.iconvertible.tosbyte.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToSingle](http://msdn.microsoft.com/en-us/library/bb360375.aspx) | Infrastructure. For a description of this member, see [ToSingle](http://msdn.microsoft.com/en-us/library/system.iconvertible.tosingle.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToType](http://msdn.microsoft.com/en-us/library/bb358540.aspx) | Infrastructure. For a description of this member, see [ToType](http://msdn.microsoft.com/en-us/library/system.iconvertible.totype.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToUInt16](http://msdn.microsoft.com/en-us/library/bb337265.aspx) | Infrastructure. For a description of this member, see [ToUInt16](http://msdn.microsoft.com/en-us/library/system.iconvertible.touint16.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToUInt32](http://msdn.microsoft.com/en-us/library/bb357762.aspx) | Infrastructure. For a description of this member, see [ToUInt32](http://msdn.microsoft.com/en-us/library/system.iconvertible.touint32.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IConvertible.ToUInt64](http://msdn.microsoft.com/en-us/library/bb155099.aspx) | Infrastructure. For a description of this member, see [ToUInt64](http://msdn.microsoft.com/en-us/library/system.iconvertible.touint64.aspx). |
| Explicit interface implemetationPrivate methodSupported by the XNA Framework | [IEnumerable<Char>.GetEnumerator](http://msdn.microsoft.com/en-us/library/cc672334.aspx) | Returns an enumerator that iterates through the current String object. |
| Explicit interface implemetationPrivate methodSupported by the XNA FrameworkSupported by Portable Class LibrarySupported in .NET for Windows Store apps | [IEnumerable.GetEnumerator](http://msdn.microsoft.com/en-us/library/bb344612.aspx) | Returns an enumerator that iterates through the current String object. |