In C#, you can use strings as array of characters, However, more common practice is to use the **string** keyword to declare a string variable. The string keyword is an alias for the **System.String** class.

Creating a String Object

You can create string object using one of the following methods −

* By assigning a string literal to a String variable
* By using a String class constructor
* By using the string concatenation operator (+)
* By retrieving a property or calling a method that returns a string
* By calling a formatting method to convert a value or an object to its string representation

The following example demonstrates this −

using System;

namespace StringApplication {

class Program {

static void Main(string[] args) {

//from string literal and string concatenation

string fname, lname;

fname = "Rowan";

lname = "Atkinson";

char []letters= { 'H', 'e', 'l', 'l','o' };

string [] sarray={ "Hello", "From", "Tutorials", "Point" };

string fullname = fname + lname;

Console.WriteLine("Full Name: {0}", fullname);

//by using string constructor { 'H', 'e', 'l', 'l','o' };

string greetings = new string(letters);

Console.WriteLine("Greetings: {0}", greetings);

//methods returning string { "Hello", "From", "Tutorials", "Point" };

string message = String.Join(" ", sarray);

Console.WriteLine("Message: {0}", message);

//formatting method to convert a value

DateTime waiting = new DateTime(2012, 10, 10, 17, 58, 1);

string chat = String.Format("Message sent at {0:t} on {0:D}", waiting);

Console.WriteLine("Message: {0}", chat);

}

}

}

When the above code is compiled and executed, it produces the following result −

Full Name: RowanAtkinson

Greetings: Hello

Message: Hello From Tutorials Point

Message: Message sent at 5:58 PM on Wednesday, October 10, 2012

Properties of the String Class

The String class has the following two properties −

|  |  |
| --- | --- |
| **Sr.No.** | **Property & Description** |
| 1 | **Chars**  Gets the *Char* object at a specified position in the current *String* object. |
| 2 | **Length**  Gets the number of characters in the current String object. |

Methods of the String Class

The String class has numerous methods that help you in working with the string objects. The following table provides some of the most commonly used methods −

Given below is the list of methods of the String class.

You can visit MSDN library for the complete list of methods and String class constructors.

Examples

The following example demonstrates some of the methods mentioned above −

Comparing Strings

using System;

namespace StringApplication {

class StringProg {

static void Main(string[] args) {

string str1 = "This is test";

string str2 = "This is text";

if (String.Compare(str1, str2) == 0) {

Console.WriteLine(str1 + " and " + str2 + " are equal.");

} else {

Console.WriteLine(str1 + " and " + str2 + " are not equal.");

}

Console.ReadKey() ;

}

}

}

When the above code is compiled and executed, it produces the following result −

This is test and This is text are not equal.

String Contains String

using System;

namespace StringApplication {

class StringProg {

static void Main(string[] args) {

string str = "This is test";

if (str.Contains("test")) {

Console.WriteLine("The sequence 'test' was found.");

}

Console.ReadKey() ;

}

}

}

When the above code is compiled and executed, it produces the following result −

The sequence 'test' was found.

Getting a Substring

using System;

namespace StringApplication {

class StringProg {

static void Main(string[] args) {

string str = "Last night I dreamt of San Pedro";

Console.WriteLine(str);

string substr = str.Substring(23);

Console.WriteLine(substr);

}

}

}

When the above code is compiled and executed, it produces the following result −

San Pedro

Joining Strings

using System;

namespace StringApplication {

class StringProg {

static void Main(string[] args) {

string[] starray = new string[]{"Down the way nights are dark",

"And the sun shines daily on the mountain top",

"I took a trip on a sailing ship",

"And when I reached Jamaica",

"I made a stop"};

string str = String.Join("\n", starray);

Console.WriteLine(str);

}

}

}