class

std::string

<string>

`typedef basic_string<char> string;`

String class

Strings are objects that represent sequences of characters.

The standard `string` class provides support for such objects with an interface similar to that of a standard container of bytes, but adding features specifically designed to operate with strings of single-byte characters.

The `string` class is an instantiation of the basic_string class template that uses `char` (i.e., bytes) as its *character type*, with its default char_traits and allocator types (see basic_string for more info on the template).

Note that this class handles bytes independently of the encoding used: If used to handle sequences of multi-byte or variable-length characters (such as UTF-8), all members of this class (such as length or size), as well as its iterators, will still operate in terms of bytes (not actual encoded characters).

Member types

member type	definition
value_type	char
traits_type	char_traits<char>
allocator_type	allocator<char>
reference	char&
const_reference	const char&
pointer	char*
const_pointer	const char*
iterator	a random access iterator to char (convertible to const_iterator)
const_iterator	a random access iterator to const char
reverse_iterator	reverse_iterator<iterator>
const_reverse_iterator	reverse_iterator<const_iterator>
difference_type	ptrdiff_t
size_type	size_t

Member functions

(constructor)	Construct string object (public member function)
(destructor)	String destructor (public member function)
operator=	String assignment (public member function)

Iterators:

begin	Return iterator to beginning (public member function)
end	Return iterator to end (public member function)
rbegin	Return reverse iterator to reverse beginning (public member function)
rend	Return reverse iterator to reverse end (public member function)
cbegin	Return const_iterator to beginning (public member function)
cend	Return const_iterator to end (public member function)
crbegin	Return const_reverse_iterator to reverse beginning (public member function)
crend	Return const_reverse_iterator to reverse end (public member function)

Capacity:

size	Return length of string (public member function)
length	Return length of string (public member function)
max_size	Return maximum size of string (public member function)
resize	Resize string (public member function)
capacity	Return size of allocated storage (public member function)
reserve	Request a change in capacity (public member function)
clear	Clear string (public member function)
empty	Test if string is empty (public member function)
shrink_to_fit	Shrink to fit (public member function)

Element access:

operator[]	Get character of string (public member function)
at	Get character in string (public member function)
back	Access last character (public member function)
front	Access first character (public member function)

Modifiers:

operator+=	Append to string (public member function)
append	Append to string (public member function)
push_back	Append character to string (public member function)
assign	Assign content to string (public member function)

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string

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string::find_last_of
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string::get_allocator
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string::max_size
string::operator+=
string::operator=
string::operator[]
string::pop_back
string::push_back
string::rbegin
string::rend
string::replace
string::reserve
string::resize
string::rfind
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string::size
string::substr
string::swap
member constants:
string::npos
non-member overloads:
getline (string)
operator+ (string)
operator<< (string)
operator>> (string)
relational operators (string)
swap (string)

insert	Insert into string (public member function)
erase	Erase characters from string (public member function)
replace	Replace portion of string (public member function)
swap	Swap string values (public member function)
pop_back	Delete last character (public member function)

String operations:

c_str	Get C string equivalent (public member function)
data	Get string data (public member function)
get_allocator	Get allocator (public member function)
copy	Copy sequence of characters from string (public member function)
find	Find content in string (public member function)
rfind	Find last occurrence of content in string (public member function)
find_first_of	Find character in string (public member function)
find_last_of	Find character in string from the end (public member function)
find_first_not_of	Find absence of character in string (public member function)
find_last_not_of	Find non-matching character in string from the end (public member function)
substr	Generate substring (public member function)
compare	Compare strings (public member function)

Member constants

npos	Maximum value for size_t (public static member constant)

Non-member function overloads

operator+	Concatenate strings (function)
relational operators	Relational operators for string (function)
swap	Exchanges the values of two strings (function)
operator>>	Extract string from stream (function)
operator<<	Insert string into stream (function)
getline	Get line from stream into string (function)