Member Functions of the string Class

constructors	Create strings
operators	Concatenate, assign, compare, and use strings for I/O
append	Append characters and strings to a string
assign	Assign characters to a string
at	Return the character of a string at a specific position
begin	Return an iterator referring to the beginning of a string
c_str	Return a const pointer to a regular C-string
capacity	Return the number of characters that a string can hold
clear	Erase all characters of a string
compare	Compare two strings
copy	Copy a string to an array
data	Return the pointer to the first character of a string
empty	Test whether a string is empty
end	Return an iterator referring to the end of a string
erase	Erase characters of a string
find	Find the first occurrence of a substring of a string
find_first_not_of	Return the index of the first absence of characters of a string
find_first_of	Return the index of the first occurrence of characters of a string
find_last_not_of	Return the index of the last absence of characters of a string
find_last_of	Return the index of the last occurrence of characters of a string
insert	Insert characters into a string
length	Return the size of a string
max_size	Return the largest possible size of a string
push_back	Insert a character at the end of a string
rbegin	Return a reverse_iterator referring to the beginning of a reversed string
rend	Return a reverse_iterator referring to the end of a reversed string
replace	Replace characters of a string
reserve	Request a change in capacity of a string
resize	Change the size of a string
rfind	Find the last occurrence of a substring in a string
size	Return the size of a string
substr	Return the substring of a string
swap	Swap the contents of two strings

Function Prototypes

constructors	Create strings
	string () – create an empty string
	string (const string& s) – create a copy of the string s
	string (const string& s, size_t pos, size_t n =npos) - create a copy of the portion of the string s that begins at position pos and takes up to n characters
	string (const char* cs, size_t n) – create a string from the copy of the first n characters of the character array cs
	string (const char* cs) – create a string from the copy of the characters of the C-string cs
	string (size_t n, char c) – create a string from the copy of n repetitions of the character c
	template <class II> string (II begin, II end) – create a string from a copy of the elements starting from the element referred by the input iterator begin to the element right before the one referred by the input iterator end
operator=	Assign characters and strings to a string
	string& operator= (const string& s) – assign a copy of the string s to a string
	string& operator= (const char* cs) – assign a copy of the C-string cs to a string
	string& operator= (char c) – assign a copy of the character c (as a string) to a string
operator[]	Get a character of a string
	char& operator[] (size_t pos) – return a reference to the character at position pos of a string
	const char& operator[] (size_t pos) const – const version of the operator
operator+=	Append characters and string to a string
	string& operator+= (const string& s) – append a copy of the string s to a string
	string& operator+= (const char* cs) – append a copy of the C-string cs to a string
	string& operator+= (char c) – append a copy of the character c to a string
append	Append characters and strings to a string
	string& append (const string& s) – append a copy of the string s to a string
	string& append (const string& s, size_t pos, size_t n) – append a copy of a portion of the string s that begins at position pos and takes up to n characters to a string
	string& append (const char* cs, size_t n) – append a copy of the character array cs, formed by its first n characters, to a string
	string& append (const char* cs) – append a copy of the C-string cs to a string
	string& append (size_t n, char c) – append n copies of the character c to a string
	template <class II> string& append (II first, II last) – append a copy of the elements, starting from the element referred by the input iterator first to the element right before the element referred by the input iterator last, to a string
assign	Assign characters to a string
	string& assign (const string& s) – assign copy of the string s to a string, replacing its current content
	string& assign (const string& s, size_t pos, size_t n) – assign a copy of the portion of the string s that begins at position pos and takes up to n characters to a string, replacing its current content

	string& assign (const char* cs, size_t n) – assign a copy of the character array cs, formed by its first n characters, to a string, replacing its current content
	string& assign (const char* cs) – assign a copy of the C-string cs to a string, replacing its current content
	string& assign (size_t n, char c) – assign n copies of the character c to a string, replacing its current content
	template <class II> string& assign (II first, II last) – assign a copy of the elements, starting from the element referred by the input iterator first to the element right before the element referred by the input iterator last, to a string, replacing its current content
at	Return the character of a string at a specific position
	char& at (size_t pos) – return a reference to the character at position pos of a string and also performs a range check
	const char& at (size_t pos) – const version of the function
begin	Return an iterator referring to the beginning of a string
	iterator begin () – return an iterator to the first character of a string
	const_iterator begin () const – const version of the iterator
c_str	Return a const pointer to a regular C-string
	const char* c_str () const – generate a C-string from a string
capacity	Return the number of characters that a string can hold
	size_t capacity () const – return the size of the allocated storage space for a string
clear	Erase all characters of a string
	void clear () – set a string content to an empty string
compare	Compare two strings
	int compare (const string& s) const – compare the content of the string s with a string
	int compare (const char* cs) const – compare the content of the C-string cs with a string
	int compare (size_t pos, size_t n, const string& s) const – compare the content of the string s with a string, starting from the position pos and scanning n characters
	int compare (size_t pos, size_t n, const char* cs) const – compare the content of the C-string cs with a string, starting from the position pos and scanning n characters
	int compare (size_t pos1, size_t n1, const string& s, size_t pos2, size_t n2) const – compare the portion of the string s, from the position pos2 and including n2 characters, with a string, starting from the position pos1 and scanning n1 characters
	int compare (size_t pos, size_t n1, const char* cs, size_t n2) const – compare the first n2 characters of the C-string cs with a string, starting from the position pos and scanning n1 characters.
copy	Copy a string to an array
	size_t copy (char* cs, size_t n, size_t pos =0) const – copy a portion of a string, starting at position pos and spans n characters, to the character array cs, and return the number of characters copied
data	Return the pointer to the first character of a string
	const char* data() const – return a pointer to an array of characters with the

	content of a string
empty	Test whether a string is empty
	bool empty () const – return whether a string is empty
end	Return an iterator referring to the end of a string
	iterator end () – return an iterator to the next element after the last character of a string
	const_iterator end () const – const version of the iterator
erase	Erase characters of a string
	string& erase (size_t pos =0, size_t n =npos) – erase a sequence of n characters of a string starting at position pos
	iterator erase (iterator i) – erase the character of a string at position referred by the iterator i
	iterator erase (iterator first, iterator last) – erase all characters of a string between the positions referred by the iterators first and last
find	Find the first occurrence of a substring of a string
	size_t find (const string& s, size_t pos =0) const – search for the starting position of the first occurrence of a portion of the string s in a string, including only the characters on or after the position pos
	size_t find (const char* cs, size_t pos, size_t n) const – search for the starting position of the first occurrence of a portion of the C-string cs in a string, including only the characters on or after the position pos and span n characters
	size_t find (const char* cs, size_t pos =0) const – search for the starting position of the first occurrence of a portion of the C-string cs in a string, including only the characters on or after the position pos
	size_t find (char c, size_t pos =0) const – search for the position of the first occurrence of the character c in a string, including only the characters on or after the position pos
find_first_not_of	Return the index of the first absence of characters of a string
	size_t find_first_not_of (const string& s, size_t pos =0) const – search for the position of the first character in a string, starting from the position pos, which is not part of the string s
	size_t find_first_not_of (const char* cs, size_t pos, size_t n) const – search for the position of the first character in a string, starting from the position pos and span n characters, which is not part of the C-string cs
	size_t find_first_not_of (const char* cs, size_t pos =0) const – search for the position of the first character in a string, starting from the position pos, which is not part of the C-string cs
	size_t find_first_not_of (char c, size_t pos =0) const – search for the position of the first character in a string, starting from the position pos, which is different than the character c
find_first_of	Return the index of the first occurrence of characters of a string
	size_t find_first_of (const string& s, size_t pos =0) const – search for the position of the first occurrence of any of the characters of the string s in a string, including only the characters on or after the position pos
	size_t find_first_of (const char* cs, size_t pos, size_t n) const – search for the position of the first occurrence of any of the characters of the C-string cs in a string, including only the characters on or after the position pos and span n

	characters
	size_t find_first_of (const char* cs, size_t pos =0) const – search for the position of the first occurrence of any of the characters of the C-string cs in a string, including only the characters on or after the position pos
	size_t find_first_of (char c, size_t pos =0) const – search for the first occurrence of the character c in a string, including only the characters on or after the position pos
find_last_not_of	Return the index of the last absence of characters of a string
	size_t find_last_not_of (const string& s, size_t pos =npos) const – search for the position of the last character in a string, which is not part of the string s, including only the characters on or before the position pos
	size_t find_last_not_of (const char* cs, size_t pos, size_t n) const – search for the position of the last character in a string, which is not part of the C-string cs, including only the characters on or before the position pos and span n characters
	size_t find_last_not_of (const char* cs, size_t pos =npos) const – search for the position of the last character in a string, which is not part of the C-string cs, including only the characters on or before the position pos
	size_t find_last_not_of (char c, size_t pos =npos) const –search for the position of the last character in a string, which is different than the character c, including only the characters on or before the position pos
find_last_of	Return the index of the last occurrence of characters of a string
	size_t find_last_of (const string& s, size_t pos =npos) const – search for the position of the last occurrence of any of the characters of the string s in a string, including only the characters on or before the position pos
	size_t find_last_of (const char* cs, size_t pos, size_t n) const – search for the position of the last occurrence of any of the characters of the C-string cs in a string, including only the characters on or before the position pos and span n characters
	size_t find_last_of (const char* cs, size_t pos =npos) const – search for the position of the last occurrence of any of the characters of the C-string cs in a string, including only the characters on or before the position pos
	size_t find_last_of (char c, size_t pos =npos) const – search for the position of the last occurrence of the character c in a string, including only the characters on or before the position pos
insert	Insert characters into a string
	string& insert (size_t pos, const string& s) – insert a copy of the string s at position pos of a string
	string& insert (size_t pos1, const string& s, size_t pos2, size_t n) – insert a copy of the portion of the string s, starting at position pos2 and takes up to n characters, at position pos1 of a string
	string& insert (size_t pos, const char* cs, size_t n) – insert a copy of the portion of the character array cs, formed by its first n characters, at position pos of a string
	string& insert (size_t pos, const char* cs) – insert a copy of the C-string cs at position pos of a string
	string& insert (size_t pos, size_t n, char c) – insert n copies of the character c at position pos of a string

	iterator insert (iterator i, char c) – insert a copy of the character c at the position referred by the iterator i into a string and return an iterator referring to the insert position
	void insert (iterator i, size_t n, char c) – insert n copies of the character c at the position referred by the iterator i into a string
	template <class II> void insert (iterator i, II first, II last) – insert copy of the elements, starting from the element referred by the input iterator first to the element right before the one referred by the input iterator last, at the position referred by the iterator i into a string
length	Return the size of a string
	size_t length () const – return the number of characters of a string
max_size	Return the largest possible size of a string
	size_t max_size () const – return the maximum number of characters that a string can hold
push_back	Insert a character at the end of a string
	void push_back (char c) – append a copy of the character c to a string, increasing its size by one
rbegin	Return a reverse_iterator referring to the beginning of a reversed string
	reverse_iterator rbegin () – return a reverse iterator to the last character of a string
	const_reverse_iterator rbegin () const – const version of the reverse iterator
rend	Return a reverse_iterator referring to the end of a reversed string
	reverse_iterator rend () – return a reverse iterator to the element right before the first character of a string
	const_reverse_iterator rend () const – const version of the reverse iterator
replace	Replace characters of a string
	string& replace (size_t pos, size_t n, const string& s) – replace a portion of a string, starting at position pos and spans n characters, with a copy of the string s
	string& replace (iterator i, iterator j, const string& s) – replace a portion of a string, between the positions referred by the iterator i and j, with a copy of the string s
	string& replace (size_t pos1, size_t n1, const string& s, size_t pos2, size_t n2) – replace a portion of a string, starting at position pos1 and spans n1 characters, with a copy of the portion of the string s, starting at position pos2 and spans n2 characters
	string& replace (size_t pos, size_t n1, const char* cs, size_t n2) – replace a portion of a string, starting at position pos and spans n1 characters, with a copy of the first n2 characters of the array cs
	string& replace (iterator i, iterator j, const char* cs, size_t n) – replace a portion of a string, between the positions referred by the iterators i and j, with a copy of the first n characters of the array cs
	string& replace (size_t pos, size_t n, const char* cs) – replace a portion of a string, starting at position pos and spans n characters, with a copy of the C-string cs
	string& replace (iterator i, iterator j, const char* cs) – replace a portion of a string, between the positions referred by the iterators i and j, with a copy of the C-string cs
	string& replace (size_t pos, size_t n1, size_t n2, char c) – replace a portion of a string, starting at position pos and spans n1 characters, with n2 copies of the

	character c
	string& replace (iterator i, iterator j, size_t n, char c) –replace a portion of a string, between the positions referred by the iterators i and j, with n copies of the character c
	template <class II> string& replace (iterator i1, iterator i2, II j1, II j2) – replace a portion of a string, between the positions referred by the iterators i1 and i2, with the elements between the positions referred by the input iterators j1 and j2
reserve	Request a change in capacity for a string
	void reserve (size_t res =0) – request that the capacity of the allocated storage space for a string be at least res
resize	Change the size of a string
	void resize (size_t n, char c) – resize the string content to n characters, and if n is greater than the current size of the string, its expanded content is filled by the copies of the character c
	void resize (size_t n) – same as before but the expanded content of the string is filled with the default value of the char type, which is the null character
rfind	Find the last occurrence of a substring in a string
	size_t rfind (const string& s, size_t pos =npos) const – search for the starting position of the last occurrence of the content of the string s in a string, including only the characters on or before the position pos
	size_t rfind (const char* cs, size_t pos, size_t n) const – search for the starting position of the last occurrence of the C-string cs in a string, including only the characters on or before the position pos and span n characters
	size_t rfind (const char* cs, size_t pos =npos) const – search for the starting position of the last occurrence of the C-string cs in a string, including only the characters on or before the position pos
	size_t rfind (char c, size_t pos =npos) const – search for the position of the last occurrence of the character c in a string, including only the characters on or before the position pos
size	Return the size of a string
	size_t size () const – return the number of characters of a string
substr	Return the substring of a string
	string substr (size_t pos =0, size_t n =npos) const – return the substring of a string, which starts at position pos and has n characters
swap	Swap the contents of two strings
	void swap (string& s) – swap the contents of a string with the string s