

<cctype> / (ctype.h)	
isalnum	Check if character is alphanumeric
isalpha	Check if character is alphabetic
isblank	Check if character is blank
iscntrl	Check if character is a control character
isdigit	Check if character is decimal digit
isgraph	Check if character has graphical representation
islower	Check if character is lowercase letter
isprint	Check if character is printable
ispunct	Check if character is a punctuation character
isspace	Check if character is a white-space
isupper	Check if character is uppercase letter
isxdigit	Check if character is hexadecimal digit
tolower	Convert uppercase letter to lowercase
toupper	Convert lowercase letter to uppercase

<ctime> (time.h)	
Time manipulation	
clock	Clock program
difftime	Return difference between two times
mktime	Convert tm structure to time_t
time	Get current time
Conversion	
asctime	Convert tm structure to string
ctime	Convert time_t value to string
gmtime	Convert time_t to tm as UTC time
localtime	Convert time_t to tm as local time
strftime	Format time as string
Macro constants	
CLOCKS_PER_SEC	Clock ticks per second
NULL	Null pointer
types	
clock_t	Clock type
size_t	Unsigned integral type
time_t	Time type
struct tm	Time structure

<cmath> (math.h)

Trigonometric functions		Classification macro / functions	
cos	Compute cosine	fpclassify	Classify floating-point value
sin	Compute sine	isfinite	Is finite value
tan	Compute tangent	isinf	Is infinity
acos	Compute arc cosine	isnan	Is Not-A-Number
asin	Compute arc sine	isnormal	Is normal
atan	Compute arc tangent	signbit	Sign bit
atan2	Compute arc tangent with two parameters	Comparison macro / functions	
Hyperbolic functions		isgreater	Is greater
cosh	Compute hyperbolic cosine	isgreaterequal	Is greater or equal
sinh	Compute hyperbolic sine	isless	Is less
tanh	Compute hyperbolic tangent	islessequal	Is less or equal
acosh	Compute arc hyperbolic cosine	islessgreater	Is less or greater
asinh	Compute arc hyperbolic sine	isunordered	Is unordered
atanh	Compute arc hyperbolic tangent	Macro constants	
Exponential and logarithmic functions		math_errhandling	Error handling
exp	Compute exponential function	INFINITY	Infinity
frexp	Get significand and exponent	NAN	Not-A-Number
ldexp	Generate value from significand and exponent	HUGE_VAL	Huge value
log	Compute natural logarithm	HUGE_VALF	Huge float value
log10	Compute common logarithm	HUGE_VALL	Huge long double value
modf	Break into fractional and integral parts	Types	
exp2	Compute binary exponential function	double_t	Floating-point type
expm1	Compute exponential minus one	float_t	Floating-point type
ilogb	Integer binary logarithm	Other functions	
log1p	Compute logarithm plus one	fabs	Compute absolute value
log2	Compute binary logarithm	abs	Compute absolute value
logb	Compute floating-point base logarithm	fma	Multiply-add
scalbn	Scale significand using floating-point base exponent		
scalbln	Scale significand using floating-point base exponent (long)		

Error and gamma functions	
<code>erf</code>	Compute error function
<code>erfc</code>	Compute complementary error function
<code>tgamma</code>	Compute gamma function
<code>lgamma</code>	Compute log-gamma function
Rounding and remainder functions	
<code>ceil</code>	Round up value
<code>floor</code>	Round down value
<code>fmod</code>	Compute remainder of division
<code>trunc</code>	Truncate value
<code>round</code>	Round to nearest
<code>lround</code>	Round to nearest and cast to long integer
<code>llround</code>	Round to nearest and cast to long long integer
<code>rint</code>	Round to integral value
<code>lrint</code>	Round and cast to long integer
<code>llrint</code>	Round and cast to long long integer
<code>nearbyint</code>	Round to nearby integral value
<code>remainder</code>	Compute remainder (IEC 60559)
<code>remquo</code>	Compute remainder and quotient
Floating-point manipulation functions	
<code>copysign</code>	Copy sign
<code>nan</code>	Generate quiet NaN
<code>nextafter</code>	Next representable value
<code>nexttoward</code>	Next representable value toward precise value

Power functions	
<code>pow</code>	Raise to power
<code>sqrt</code>	Compute square root
<code>cbrt</code>	Compute cubic root
<code>hypot</code>	Compute hypotenuse
Minimum, maximum, difference functions	
<code>fdim</code>	Positive difference
<code>fmax</code>	Maximum value
<code>fmin</code>	Minimum value

<stdio> (stdio.h)		getc	Get character from stream
Operations on files		getchar	Get character from stdin
remove	Remove file	gets	Get string from stdin
rename	Rename file	putc	Write character to stream
tmpfile	Open a temporary file	putchar	Write character to stdout
tmpnam	Generate temporary filename	puts	Write string to stdout
File access		ungetc	Unget character from stream
fclose	Close file	Direct input/output	
fflush	Flush stream	fread	Read block of data from stream
fopen	Open file	fwrite	Write block of data to stream
freopen	Reopen stream with different file or mode	File positioning	
setbuf	Set stream buffer	fgetpos	Get current position in stream
setvbuf	Change stream buffering	fseek	Reposition stream position indicator
Formatted input/output		fsetpos	Set position indicator of stream
fprintf	Write formatted data to stream	ftell	Get current position in stream
fscanf	Read formatted data from stream	rewind	Set position of stream to the beginning
printf	Print formatted data to stdout	Error-handling	
scanf	Read formatted data from stdin	clearerr	Clear error indicators
snprintf	Write formatted output to sized buffer	feof	Check end-of-file indicator
sprintf	Write formatted data to string	ferror	Check error indicator
sscanf	Read formatted data from string	perror	Print error message
vfprintf	Write formatted data from variable argument list to stream	Macros	
vfscanf	Read formatted data from stream into variable argument list	BUFSIZ	Buffer size
vprintf	Print formatted data from variable argument list to stdout	EOF	End-of-File
vscanf	Read formatted data into variable argument list	FILENAME_MAX	Maximum length of file names
vsprintf	Write formatted data from variable argument list to sized buffer	FOPEN_MAX	Potential limit of simultaneous open streams
vsprintf	Write formatted data from variable argument list to string	L_tmpnam	Minimum length for temporary file name
vsscanf	Read formatted data from string into variable argument list	NULL	Null pointer
Character input/output		TMP_MAX	Number of temporary files
fgetc	Get character from stream	Types	
fgets	Get string from stream	FILE	Object containing information to control a stream
fputc	Write character to stream	fpos_t	Object containing information to specify a position within a file
fputs	Write string to stream	size_t	Unsigned integral type

<stdlib> (stdlib.h)		Searching and sorting	
String conversion		bsearch	Binary search in array
atof	Convert string to double	qsort	Sort elements of array
atoi	Convert string to integer	Integer arithmetics	
atol	Convert string to long integer	abs	Absolute value
atoll	Convert string to long long integer	div	Integral division
strtod	Convert string to double	labs	Absolute value
strtof	Convert string to float	ldiv	Integral division
strtol	Convert string to long integer	llabs	Absolute value
strtold	Convert string to long double	lldiv	Integral division
strtoll	Convert string to long long integer	Multibyte characters	
strtoul	Convert string to unsigned long integer	mblen	Get length of multibyte character
strtoull	Convert string to unsigned long long integer	mbtowc	Convert multibyte sequence to wide character
Pseudo-random sequence generation		wctomb	Convert wide character to multibyte sequence
rand	Generate random number	Multibyte strings	
srand	Initialize random number generator	mbstowcs	Convert multibyte string to wide-character string
Dynamic memory management		wcstombs	Convert wide-character string to multibyte string
calloc	Allocate and zero-initialize array	Macro constants	
free	Deallocate memory block	EXIT_FAILURE	Failure termination code
malloc	Allocate memory block	EXIT_SUCCESS	Success termination code
realloc	Reallocate memory block	MB_CUR_MAX	Maximum size of multibyte characters
Environment		NULL	Null pointer
abort	Abort current process	RAND_MAX	Maximum value returned by rand
atexit	Set function to be executed on exit	Types	
at_quick_exit	Set function to be executed on quick exit	div_t	Structure returned by div
exit	Terminate calling process	ldiv_t	Structure returned by ldiv
getenv	Get environment string	lldiv_t	Structure returned by lldiv
quick_exit	Terminate calling process quick	size_t	Unsigned integral type
system	Execute system command		
_Exit	Terminate calling process		

<cstring>(string.h)	
Copying	
memcpy	Copy block of memory
memmove	Move block of memory
strcpy	Copy string
strncpy	Copy characters from string
Concatenation	
strcat	Concatenate strings
strncat	Append characters from string
Comparison	
memcmp	Compare two blocks of memory
strcmp	Compare two strings
strcoll	Compare two strings using locale
strncmp	Compare characters of two strings
strxfrm	Transform string using locale
Searching	
memchr	Locate character in block of memory
strchr	Locate first occurrence of character in string
strcspn	Get span until character in string
strpbrk	Locate characters in string
strrchr	Locate last occurrence of character in string
strspn	Get span of character set in string
strstr	Locate substring
strtok	Split string into tokens
Other	
memset	Fill block of memory
strerror	Get pointer to error message string
strlen	Get string length
Macros	
NULL	Null pointer
Types	
size_t	Unsigned integral type

<algorithm>		replace_copy_if	Copy range replacing value
Non-modifying sequence operations		fill	Fill range with value
all_of	Test condition on all elements in range	fill_n	Fill sequence with value
any_of	Test if any element in range fulfills condition	generate	Generate values for range with function
none_of	Test if no elements fulfill condition	generate_n	Generate values for sequence with function
for_each	Apply function to range	remove	Remove value from range
find	Find value in range	remove_if	Remove elements from range
find_if	Find element in range	remove_copy	Copy range removing value
find_if_not	Find element in range (negative condition)	remove_copy_if	Copy range removing values
find_end	Find last subsequence in range	unique	Remove consecutive duplicates in range
find_first_of	Find element from set in range	unique_copy	Copy range removing duplicates
adjacent_find	Find equal adjacent elements in range	reverse	Reverse range
count	Count appearances of value in range	reverse_copy	Copy range reversed
count_if	Return number of elements in range satisfying condition	rotate	Rotate left the elements in range
mismatch	Return first position where two ranges differ	rotate_copy	Copy range rotated left
equal	Test whether the elements in two ranges are equal	random_shuffle	Randomly rearrange elements in range
is_permutation	Test whether range is permutation of another	shuffle	Randomly rearrange elements in range using generator
search	Search range for subsequence	Partitions	
search_n	Search range for elements	is_partitioned	Test whether range is partitioned
Modifying sequence operations		partition	Partition range in two
copy	Copy range of elements	stable_partition	Partition range in two - stable ordering
copy_n	Copy elements	partition_copy	Partition range into two
copy_if	Copy certain elements of range	partition_point	Get partition point
copy_backward	Copy range of elements backward	Sorting	
move	Move range of elements	sort	Sort elements in range
move_backward	Move range of elements backward	stable_sort	Sort elements preserving order of equivalents
swap	Exchange values of two objects	partial_sort	Partially sort elements in range
swap_ranges	Exchange values of two ranges	partial_sort_copy	Copy and partially sort range
iter_swap	Exchange values of objects pointed by two iterators	is_sorted	Check whether range is sorted
transform	Transform range	is_sorted_until	Find first unsorted element in range
replace	Replace value in range	nth_element	Sort element in range
replace_if	Replace values in range		
replace_copy	Copy range replacing value		

Binary search		Min/max	
lower_bound	Return iterator to lower bound	min	Return the smallest
upper_bound	Return iterator to upper bound	max	Return the largest
equal_range	Get subrange of equal elements	minmax	Return smallest and largest elements
binary_search	Test if value exists in sorted sequence	min_element	Return smallest element in range
Merge		max_element	Return largest element in range
merge	Merge sorted ranges	minmax_element	Return smallest and largest elements in range
inplace_merge	Merge consecutive sorted ranges	Other	
includes	Test whether sorted range includes another sorted range	lexicographical_compare	Lexicographical less-than comparison
set_union	Union of two sorted ranges	next_permutation	Transform range to next permutation
set_intersection	Intersection of two sorted ranges	prev_permutation	Transform range to previous permutation
set_difference	Difference of two sorted ranges		
set_symmetric_difference	Symmetric difference of two sorted ranges		
Heap			
push_heap	Push element into heap range		
pop_heap	Pop element from heap range		
make_heap	Make heap from range		
sort_heap	Sort elements of heap		
is_heap	Test if range is heap		
is_heap_until	Find first element not in heap order		

<tuple>		forward_as_tuple	Forward as tuple
Classes		tie	Tie arguments to tuple elements
tuple	Tuple	tuple_cat	Concatenate tuples
Helper classes		Element access	
tuple_size	Tuple size traits	get	Get element
tuple_element	Tuple element type	Objects	
Object creation		ignore	Ignore assignment
make_tuple	Construct tuple		

<complex>		log	Natural logarithm of complex
Classes		log10	Common logarithm of complex
complex	Complex number class	pow	Power of complex
Complex values		sin	Sine of complex
real	Real part of complex	sinh	Hyperbolic sine of complex
imag	Imaginary part of complex	sqrt	Square root of complex
abs	Absolute value of complex	tan	Tangent of complex
arg	Phase angle of complex	tanh	Hyperbolic tangent of complex
norm	Norm of complex	acos	Arc cosine of complex
conj	Complex conjugate	acosh	Arc hyperbolic cosine of complex
polar	Complex from polar components	asin	Arc sine of complex
proj	Complex projection	asinh	Arc hyperbolic sine of complex
Transcendentals overloads		atan	Arc tangent of complex
cos	Cosine of complex	atanh	Arc hyperbolic tangent of complex
cosh	Hyperbolic cosine of complex	Operator overloads	
exp	Exponential of complex	complex operators	Complex number operators

<exception>		set_terminate	Set terminate handler function
Types		unexpected	Function handling unexpected exceptions
exception	Standard exception class	get_unexpected	Get unexpected handler function
bad_exception	Exception thrown by unexpected handler	set_unexpected	Set unexpected handler function
nested_exception	Nested exception class	uncaught_exception	Return exception status
exception_ptr	Exception pointer	current_exception	Get smart pointer to current exception
terminate_handler	Type of terminate handler function	rethrow_exception	Rethrow exception
unexpected_handler	Type of unexpected handler function	make_exception_ptr	Make exception_ptr
Functions		throw_with_nested	Throw with nested
terminate	Function handling termination on exception	rethrow_if_nested	Rethrow if nested
get_terminate	Get terminate handler function		

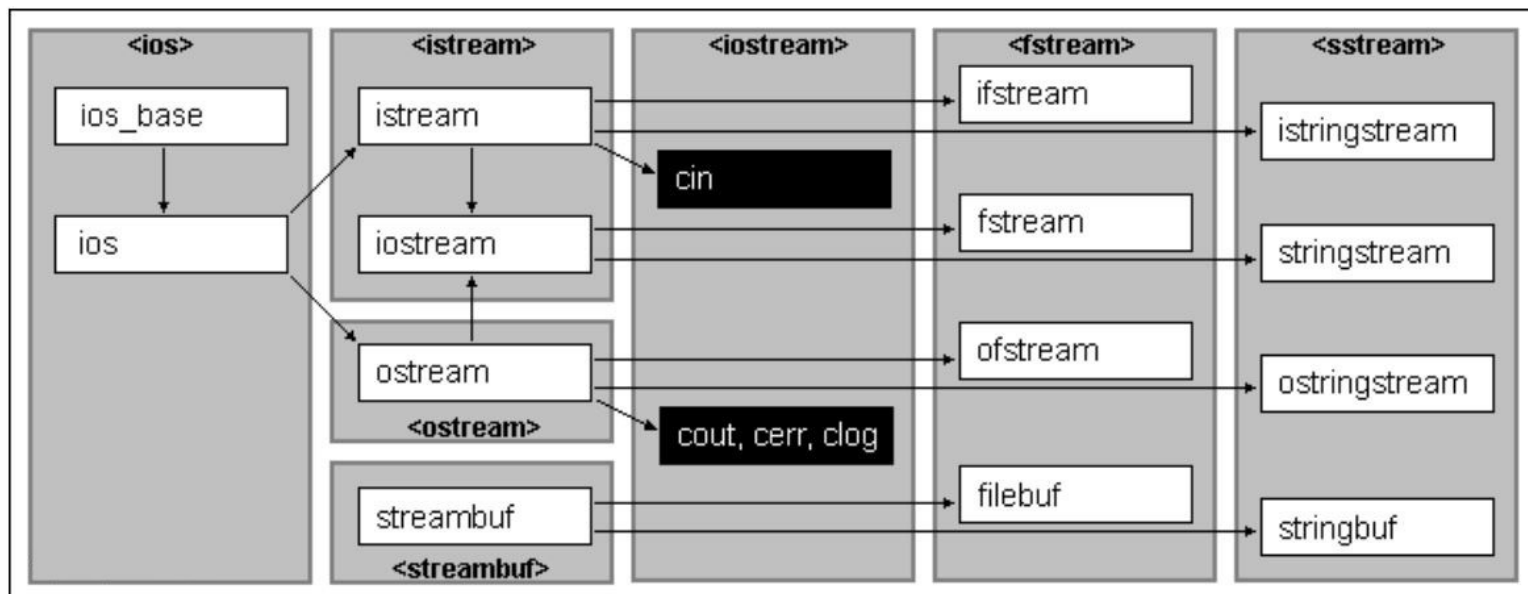
<regex>		match_results instantiations	
Functions		cmatch	match_results for string literals
regex_match	Match sequence	wcmatch	match_results for wide string literals
regex_search	Search sequence	smatch	match_results for string objects
regex_replace	Replace matched sequence	wsmatch	match_results for wide string objects
Iterator types		sub_match instantiations	
regex_iterator	Regex iterator	csub_match	sub_match for string literals
regex_token_iterator	Regex token iterator	wcsub_match	sub_match for wide string literals
Basic types		ssub_match	sub_match for strings
basic_regex	Regular expression	wssub_match	sub_match for wide strings
match_results	Match results	Namespaces	
sub_match	Sub-expression match	regex_constants	regex constants
regex_traits	Regex traits	Grammar	
regex_error	Regex exception	ECMAScript syntax	ECMAScript regular expressions pattern syntax
basic_regex instantiations		Other functions	
regex	Regex	begin	Iterator to beginning
wregex	Regex for wchar_t	end	Iterator to end

<string>		stoul	Convert string to unsigned integer
Class templates		stoll	Convert string to long long
basic_string	Generic string class	stoull	Convert string to unsigned long long
char_traits	Character traits	stof	Convert string to float
Class instantiations		stod	Convert string to double
string	String class	stold	Convert string to long double
u16string	String of 16-bit characters	Convert to strings	
u32string	String of 32-bit characters	to_string	Convert numerical value to string
wstring	Wide string	to_wstring	Convert numerical value to wide string
Convert from strings		Range access	
stoi	Convert string to integer	begin	Iterator to beginning
stol	Convert string to long int	end	Iterator to end

<iostream>		write	Write block of data
Member types		tellp	Get position in output sequence
event	Type to indicate event type	seekp	Set position in output sequence
event_callback	Event callback function type	flush	Flush output stream buffer
failure	Base class for stream exceptions	Public member functions inherited from ios	
fmtflags	Type for stream format flags	good	Check whether state of stream is good
Init	Initialize standard stream objects	eof	Check whether eofbit is set
iostate	Type for stream state flags	fail	Check whether either failbit or badbit is set
openmode	Type for stream opening mode flags	bad	Check whether badbit is set
seekdir	Type for stream seeking direction flag	operator!	Evaluate stream (not)
istream::sentry	Prepare stream for input	operator bool	Evaluate stream
ostream::sentry	Prepare stream for output	rdstate	Get error state flags
Public member functions		setstate	Set error state flag
(constructor)	Construct object	clear	Set error state flags
(destructor)	Destroy object	copyfmt	Copy formatting information
Protected member functions		fill	Get/set fill character
operator=	Move assignment	exceptions	Get/set exceptions mask
swap	Swap internals	imbue	Imbue locale
Public member functions inherited from istream		tie	Get/set tied stream
operator>>	Extract formatted input	rdbuf	Get/set stream buffer
gcount	Get character count	narrow	Narrow character
get	Get characters	widen	Widen character
getline	Get line	Public member functions inherited from ios_base	
ignore	Extract and discard characters	flags	Get/set format flags
peek	Peek next character	setf	Set specific format flags
read	Read block of data	unsetf	Clear specific format flags
readsome	Read data available in buffer	precision	Get/Set floating-point decimal precision
putback	Put character back	width	Get/set field width
unget	Unget character	imbue	Imbue locale
tellg	Get position in input sequence	getloc	Get current locale
seekg	Set position in input sequence	xalloc	Get new index for extensible array [static]
sync	Synchronize input buffer	word	Get integer element of extensible array
Public member functions inherited from ostream		pword	Get pointer element of extensible array
operator<<	Insert formatted output	register_callback	Register event callback function
put	Put character	sync_with_stdio	Toggle synchronization with cstdio streams [static]

<fstream>		write	Write block of data
Inherited from istream, ostream and ios_base		tellp	Get position in output sequence
event	Type to indicate event type	seekp	Set position in output sequence
event_callback	Event callback function type	flush	Flush output stream buffer
failure	Base class for stream exceptions	Inherited from ios	
fmtflags	Type for stream format flags	good	Check whether state of stream is good
Init	Initialize standard stream objects	eof	Check whether eofbit is set
iostate	Type for stream state flags	fail	Check whether either failbit or badbit is set
openmode	Type for stream opening mode flags	bad	Check whether badbit is set
seekdir	Type for stream seeking direction flag	operator!	Evaluate stream (not)
sentry (istream)	Prepare stream for input	operator bool	Evaluate stream
sentry (ostream)	Prepare stream for output	rdstate	Get error state flags
Public member functions		setstate	Set error state flag
(constructor)	Construct object and optionally open file	clear	Set error state flags
open	Open file	copyfmt	Copy formatting information
is_open	Check if a file is open	fill	Get/set fill character
close	Close file	exceptions	Get/set exceptions mask
rdbuf	Get the associated filebuf object	imbue	Imbue locale
operator=	Move assignment	tie	Get/set tied stream
swap	Swap internals	rdbuf	Get/set stream buffer
Inherited from istream		narrow	Narrow character
/"operator>>	Extract formatted input	widen	Widen character
gcount	Get character count	Inherited from ios_base	
get	Get characters	flags	Get/set format flags
getline	Get line	setf	Set specific format flags
ignore	Extract and discard characters	unsetf	Clear specific format flags
peek	Peek next character	precision	Get/Set floating-point decimal precision
read	Read block of data	width	Get/set field width
readsome	Read data available in buffer	imbue	Imbue locale
putback	Put character back	getloc	Get current locale
unget	Unget character	xalloc	Get new index for extensible array [static]
tellg	Get position in input sequence	word	Get integer element of extensible array
seekg	Set position in input sequence	pword	Get pointer element of extensible array
sync	Synchronize input buffer	register_callback	Register event callback function
Inherited from ostream		sync_with_stdio	Toggle synchronization with cstdio streams [static]
operator<<	Insert formatted output	Non-member function overloads	
put	Put character	swap	Swap file streams

<sstream>		Public member functions inherited from ios	
event	Type to indicate event type	good	Check whether state of stream is good
event_callback	Event callback function type	eof	Check whether eofbit is set
failure	Base class for stream exceptions	fail	Check whether either failbit or badbit is set
fmtflags	Type for stream format flags	bad	Check whether badbit is set
Init	Initialize standard stream objects	operator!	Evaluate stream (not)
iostate	Type for stream state flags	operator bool	Evaluate stream
openmode	Type for stream opening mode flags	rdstate	Get error state flags
seekdir	Type for stream seeking direction flag	setstate	Set error state flag
sentry (istream)	Prepare stream for input	clear	Set error state flags
sentry (ostream)	Prepare stream for output	copyfmt	Copy formatting information
Public member functions		fill	Get/set fill character
(constructor)	Construct object	exceptions	Get/set exceptions mask
str	Get/set content	imbue	Imbue locale
operator=	Move assignment	tie	Get/set tied stream
swap	Swap internals	rdbuf	Get/set stream buffer
Public member functions inherited from istream		narrow	Narrow character
operator>>	Extract formatted input	widen	Widen character
gcount	Get character count	Public member functions inherited from ios_base	
get	Get characters	flags	Get/set format flags
getline	Get line	setf	Set specific format flags
ignore	Extract and discard characters	unsetf	Clear specific format flags
peek	Peek next character	precision	Get/Set floating-point decimal precision
read	Read block of data	width	Get/set field width
readsome	Read data available in buffer	imbue	Imbue locale
putback	Put character back	getloc	Get current locale
unget	Unget character	xalloc	Get new index for extensible array [static]
tellg	Get position in input sequence	word	Get integer element of extensible array
seekg	Set position in input sequence	pword	Get pointer element of extensible array
sync	Synchronize input buffer	register_callback	Register event callback function
Public member functions inherited from ostream		sync_with_stdio	Toggle synchronization with cstdio streams [static]
operator<<	Insert formatted output	Non-member function overloads	
put	Put character	swap	Swap string streams
write	Write block of data		
tellp	Get position in output sequence		
seekp	Set position in output sequence		
flush	Flush output stream buffer		



<iomanip>	
setiosflags	Set format flags
resetiosflags	Reset format flags
setbase	Set basefield flag
setfill	Set fill character
setprecision	Set decimal precision
setw	Set field width
get_money	Get monetary value
put_money	Put monetary value
get_time	Get date and time
put_time	Put date and time