C++ Header Files

- cmath - declares functions for mathematical operations
- cstdlib - usually general purpose functions
- iostream - functions for standard I/O
- cstring - functions to manipulate C-style string
- cctype - functions to classify (and transform) individual characters
- csignal - to handle signals
- clocale - internationalization support task such as date/time formatting
- cwctype - for classifying and transforming individual wide characters
- cstdio - C Standard Input and Output Library
- cwchar - to work with C wide string
- cuchar - convert between multibyte characters and UTF-16 or UTF-32
- csetjmp - bypass the normal function call and return discipline
- cfenv - access floating point environment
- ctime - functions to work with date and time

C Math

Title	Description	
C++ pow()	Computes Power a Number	
C++ llrint()	Rounds argument using current rounding mode	
C++ remainder()	Returns remainder of x/y	
C++ nan()	returns a quiet NaN value	
C++ cosh()	Returns Hyperbolic Cosine of an Angle	
C++ copysign()	returns num with value of first and sign of second	
C++ fma()	Returns Fused Multiply–Accumulate	
C++ abs()	returns absolute value of an argument	
C++ fabs()	returns absolute value of argument	
C++ fdim()	Returns Positive Different Between Arguments	
C++ fmin()	returns smallest among two given arguments	
C++ fmax()	returns largest among two arguments passed	
C++ hypot()	Returns Square Root of sum of square of Arguments	
C++ nexttoward()	returns next value after x in direction of y	
C++ nextafter()	returns next value after x in direction of y	
C++ cbrt()	Computes Cube Root of a Number	
C++ sqrt()	Computes Square Root of A Number	
C++ remquo()	Computer remainder and stores quotient of x/y	
C++ logb()	returns logarithm of |x|	
C++ log1p()	returns natural logarithm of x+1.	
C++ scalbln()	Scales x by FLT_RADIX to the power n	
C++ log2()	returns base2 logarithm of a number	
C++ scalbn()	Scales x by FLT_RADIX to the power n	
C++ ilogb()	returns integral part of logarithm of |x|	
C++ nearbyint()	Rounds argument to using current rounding mode	
C++ expm1()	Returns e raised to Power Minus 1	
C++ ldexp()	returns product of x and 2 raised to the power e	
C++ frexp()	breaks float to its binary significand	

C++ exp2()	Returns 2 raised to a Number	
C++ exp()	returns exponential (e) raised to a number	
C++ modf()	Breaks Number Into Integral and Fractional Part	
C++ log10()	Returns Base 10 Logarithm of a Number	
C++ lrint()	Rounds argument using current rounding mode	
C++ rint()	Rounds argument using current rounding mode	
C++ llround()	Rounds argument to nearest long long int value	
C++ lround()	Returns the long int value nearest to the argument	
C++ round()	Returns integral value nearest to argument	
C++ trunc()	Truncates the demical part of a number	
C++ log()	Returns Natural Logarithm of a Number	
C++ atanh()	returns arc hyperbolic tangent of a number	
C++ asinh()	returns arc hyperbolic sine of a number	
C++ acosh()	returns hyperbolic cosine of a number	
C++ fmod()	Computes floating point remainder of division	
C++ tanh()	returns hyperbolic tangent of an angle	
C++ floor()	Returns floor value of decimal number	
C++ ceil()	Return ceiling value of number	
C++ sinh()	returns hyperbolic sine of an angle	
C++ acos()	Returns Inverse cosine a Number	
C++ atan2()	Returns Inverse Tangent of a Coordinate	
C++ tan()	Returns Tangent of the Argument	
C++ atan()	Returns Inverse tangent a Number	
C++ asin()	Returns Inverse Sine a Number	
C++ sin()	Returns Sine of the Argument	
C++ cos()	Returns Cosine of the Argument	

<cstdlib>

Title	Description	
C++ calloc()	allocates block of memory and initializes to zero	
C++ wcstombs()	converts wide character string to multibyte seq	
C++ mbstowcs()	converts multibyte char string to wide char seq	
C++ wctomb()	converts wide character to a multibyte character	
C++ mbtowc()	converts multibyte character to a wide character	
C++ mblen()	determines size of a multibyte character	
C++ lldiv()	computes integral division of two long long int.	
C++ llabs()	returns absolute value of a long long int data	
C++ ldiv()	computes integral division of long int numbers	
C++ labs()	returns absolute value of long or long int number	
C++ abs()	returns absolute value of an integer	
C++ div()	computes integral quotient and remainder of number	
C++ qsort()	sorts array using quick-sort algorithm	
C++ bsearch()	performs binary search on sorted array	
C++ _Exit()	causes termination without cleanup tasks	
C++ quick_exit()	causes termination without cleaning resources	
C++ getenv()	returns pointer to environment variable passed	
C++ at_quick_exit()	registers function and calls on quick termination	
C++ atexit()	registers function to be called on termination	
C++ realloc()	reallocates a block of previously allocated memory	
C++ malloc()	allocates a block of unitialized memory	
C++ free()	deallocates a block of memory	
C++ srand()	seeds pseudo random number for rand()	
C++ strtoull()	converts string to unsigned long long int	
C++ strtoll()	converts string to long long int in C++	
C++ atol()	Converts String to Integer	
C++ strtol()	Converts a string to number	
C++ atof()	Converts String to Double	
C++ strtod()	returns string float to double	

<iostream>

Title	Description	
C++ wclog	writes to log stream with wide character	
C++ wcerr	prints to error stream as wide character type	
C++ wcout	displays wide characters (Unicode) to screen	
C++ wcin	accepts input in wide character type	
C++ clog	used for streaming logs	
C++ cerr	writes to error stream	
C++ cout	displays output to output device i.e monitor	
C++ cin	accepts input from user	

<csignal>

Title	Description	
C++ raise()	sends signal to the program	
C++ signal()	sets error handler for specifiied signal	

<clocale>

Title	Description	
C++ localeconv()	returns current locale formatting rules	
C++ setlocale()	sets locale information for the current program	

<cstring>

Title	Description	
C++ strxfrm()	transform byte string into implementation def form	
C++ strcoll()	compares two null terminated string	
C++ strlen()	returns length of given string	
C++ strerror()	gives description of system error code	
C++ memset()	copies character to beginning of string n times	
C++ strtok()	split string based on delimiter	
C++ strstr()	finds first occurrence of a substring in string	
C++ strspn()	gives length of maximum initial segment	
C++ strrchr()	searches last occurence of a character in string	
C++ strpbrk()	search characters in one string in another string	
C++ strcspn()	searches a string for characters in another string	
C++ strchr()	searches for character in string	
C++ memchr()	searches for character in string	
C++ strncmp()	compares two strings lexographically	
C++ strcmp()	compare two strings	
C++ memcmp()	compares two pointer objects	
C++ strncat()	appends string to end of another string	
C++ strcat()	appends copy of string to end of another string	
C++ strncpy()	copies character string from source to destination	
C++ strcpy()	copies character string from source to destination	
C++ memmove()	copies memory even if there is overlapping blocks	
C++ memcpy()	copies block of memory from source to destination	

<cctype>

Title	Description	
C++ toupper()	converts a given character to uppercase	
C++ tolower()	converts a given character to lowercase	
C++ isxdigit()	checks if given character is hexadecimal character	
C++ isupper()	check if given character is uppercase or not	
C++ isspace()	check if given character is whitespace character	
C++ ispunct()	check if given character is punctuation character	
C++ isprint()	check if given character is printable or not	
C++ islower()	checks if given character is lowercase	
C++ isgraph()	checks if given character is graphic or not	
C++ isdigit()	checks if given character is a digit or not	
C++ iscntrl()	checks if given character is control character	
C++ isblank()	checks if given character is a blank character	
C++ isalpha()	checks if given character is alphabet or not	

<cwctype>

Title	Description	
C++ iswdigit()	checks if given wide character is digit or not	
C++ wctype()	returns wide character classification	
C++ wctrans()	returns current transformation for wide character	
C++ towctrans()	transforms a given wide character	
C++ iswctype()	checks if given wide char has certain property	
C++ towupper()	converts given wide character to uppercase	
C++ towlower()	converts given wide character to lowercase	
C++ iswxdigit()	checks if given wide character is hexadecimal num	
C++ iswupper()	checks if given wide character is uppercase	
C++ iswspace()	checks if given wide character is wide whitespace	
C++ iswpunct()	checks if given wide character is punctuation	
C++ iswprint()	checks if given wide character can be printed	
C++ iswlower()	checks if given wide character is lowercase	
C++ iswgraph()	checks if wide char has graphical representation	
C++ iswcntrl()	checks if given wide char is control character	
C++ iswblank()	checks if given wide character is blank character	
C++ iswalpha()	checks if given wide character is an alphabet	
C++ iswalnum()	checks if given wide character is alphanumeric	

<cstdio>

Title	Description	
C++ getc()	reads next character from input stream	
C++ fseek()	sets file position indicator for given file stream	
C++ ungetc()	push previously read character back to the stream	
C++ vsscanf()	read data from a string buffer	
C++ vscanf()	read data from stdin	
C++ vfscanf()	read data from a file stream	
C++ freopen()	opens a new file with stream associated to another	
C++ fflush()	flushes any buffered data to the respective device	
C++ setvbuf()	change or specify buffering mode and buffer size	
C++ perror()	prints error to stderr	
C++ ferror()	checks for errors in given stream	
C++ feof() function	checks if file stream EOF has been reached or not	
C++ clearerr()	resets error flags and EOF indicator for stream	
C++ rewind()	sets file position to beginning of stream	
C++ ftell()	returns current position of file pointer	
C++ fsetpos()	sets stream file pointer to given position	
C++ fgetpos()	gets current file position	
C++ fwrite()	writes specified number of characters to stream	
C++ fread()	reads specified no. of characters from stream	
C++ puts()	writes string to stdout	
C++ putchar()	writes a character to stdout	
C++ putc()	writes character to given output stream	
C++ gets()	reads line from stdin	
C++ getchar()	reads next character from stdin	
C++ fputs()	writes string to file stream	
C++ fputc()	writes character to given output stream	
C++ fgets()	reads n number of characters from file stream	
C++ fgetc()	reads the next character from given input stream	
C++ vsprintf()	write formatted string to a string buffer	
C++ vsnprintf()	write formatted string to string buffer	
C++ vprintf()	printf but takes args from vlist instead	
C++ vfprintf()	write formatted string to file stream	
C++ sscanf()	read data from string buffer	
C++ sprintf()	write a formatted string to buffer	
C++ snprintf()	write formatted string to character string buffer	

C++ scanf	read data form stdin	
C++ printf()	write formatted string to stdout	
C++ fscanf()	read data from file stream	
C++ fprintf()	write a formatted string to file stream	
C++ setbuf()	sets the internal buffer to be used for I/O	
C++ fopen()	opens specified file	
C++ fclose()	closes given file stream	
C++ tmpnam()	generates unique filename	
C++ tmpfile()	creates temporary file with auto-generated name	
C++ rename()	renames or moves specified file	
C++ remove()	deletes the specified file	

<cuchar>

Title	Description	
C++ mbrtoc32()	converts narrow multibyte char to 32 bit char	
C++ mbrtoc16()	converts narrow multibyte char to 16 bit char	
C++ c32rtomb()	converts 32 bit char to narrow multibyte char	
C++ c16rtomb()	converts 16 bit char to narrow multibyte char	

<csetjmp>

Title	Description
C++ longjmp() and setjmp()	restores previously saved environment

<cwchar>

Title	Description	
C++ wcscoll()	compares two null terminated wide string	
C++ wcstoull()	converts wide string num to unsigned long long	
C++ wcstoul()	converts wide str of given base to unsigned long	
C++ wcstoll()	converts wide string of specified base to int	
C++ wcsftime()	converts given date and time to wide character str	
C++ wmemset()	copies single wide char for a certain num of time	
C++ wmemmove()	moves wide chars from src to dest	
C++ wmemcpy()	copies specified num of wide char from src to dest	
C++ wmemcmp()	compares wide chars of two wide strings	
C++ wmemchr()	searches for first occurrence of wide char	
C++ wcsxfrm()	transforms wide string to implementation defined	
C++ wcsstr()	finds first occurrence of wide substring in a str	
C++ wcsspn()	returns length of maximum initial segment	
C++ wcsrchr()	searches last occurrence of wide char in string	
C++ wcspbrk()	searches for set of wide char in given wide string	
C++ wcsncpy()	copies specified number of wide characters	
C++ wcsncmp()	compares specified number of wide char of strings	
C++ wcsncat()	appends specified num of wide char to another str	
C++ wcslen()	returns length of the given wide string	
C++ wcscspn()	returns number of wide char before first occurence	
C++ wcscpy()	copies wide character string from source to dest	
C++ wcscmp()	lexicographically compares two wide string	
C++ wcschr()	searches for a wide character in a wide string	

C++ wcscat()	appends copy of wide string to the end of another	
C++ wcsrtombs()	convert wide char seq to narrow multibyte char seq	
C++ wctob()	converts wide character to single byte character	
C++ wcrtomb()	convert wide character to its narrow multibyte rep	
C++ mbsrtowcs()	convert narrow multibyte char seq to wide char seq	
C++ mbsinit()	describe initial conversion state of mbstate_t obj	
C++ mbrtowc()	converts narrow multibyte char to wide char	
C++ mbrlen()	determines size in bytes of a multibyte character	
C++ btowc()	converts character to its wide character	
C++ wcstok()	returns next token in null terminated wide string	
C++ wcstold()	converts wide string float number to long double	
C++ wcstol()	converts wide string float number to long int	
C++ wcstof()	converts wide string float number to float	
C++ wcstod()	converts wide string float number to double	
C++ wscanf()	reads wide character from stdin	
C++ wprintf()	write formatted wide string to stdout	
C++ vwscanf()	read wide character from stdin	
C++ vwprintf()	write formatted wide string to stdout	
C++ vswscanf()	read wide character string from wide string buffer	
C++ vswprintf()	write formatted wide string to wide string buffer	
C++ vfwscanf()	read wide character string from a file stream	
C++ vfwprintf()	write formatted wide string to a file stream	
C++ ungetwc()	push previously read wide character back to stream	
C++ swscanf()	reads wide character from wide string buffer	
C++ swprintf()	write formatted wide string to wide string buffer	
C++ putwchar()	writes wide character to stdout	
C++ putwc()	writes wide character to the given output stream	
C++ getwchar()	reads next wide character from stdin	

C++ getwc()	reads next wide character from input stream	
C++ fwscanf()	reads wide character from file stream	
C++ fwprintf()	write formatted wide string to a file stream	
C++ fwide()	set or query orientation of given file stream	
C++ fputws()	writes wide string except null wide char to output	
C++ fputwc()	writes wide character to the given output stream	
C++ fgetws()	reads specified num of wide characters from stream	
C++ fgetwc()	reads next wide character from given input stream	

<cfenv>

Title	Description	
C++ fetestexcept()	tests floating point exception	
C++ feupdateenv()	updates floating point environment	
C++ feholdexcept()	saves and clear floating point status flags	
C++ fesetenv()	set floating point environment	
C++ fesetround()	set rounding direction	
C++ fegetenv()	store status of floating point env in an object	
C++ fegetround()	gets round direction mode	
C++ fesetexceptflag()	sets given floating point exceptions to the env	
C++ fegetexceptflag()	gets floating point exception flags	
C++ feraiseexcept()	raises floating point exceptions specified	
C++ feclearexcept()	attempts to clear floating point exception flags	

<ctime>

Title	Description	
C++ strftime()	converts calendar time to multibyte character str	
C++ mktime()	converts local calendar time to time since epoch	
C++ localtime()	converts given time since epoch to local time	
C++ gmtime()	converts given time since epoch to UTC time	
C++ ctime()	converts time since epoch to char representation	
C++ asctime()	converts calendar time to character representation	
C++ time()	returns current calendar time	
C++ difftime()	computes difference between two times in seconds	
C++ clock()	returns processor time consumed by program	