

The **stdlib.h** header defines four variable types, several macros, and various functions for performing general functions.

Library Variables

Following are the variable types defined in the header stdlib.h:

S.N.	Variable & Description
1	size_t This is the unsigned integral type and is the result of the sizeof keyword.
2	wchar_t This is an integer type of the size of a wide character constant.
3	div_t This is the structure returned by the div function.
4	ldiv_t This is the structure returned by the ldiv function.

Library Macros

Following are the macros defined in the header stdlib.h:

S.N.	Macro & Description
1	NULL This macro is the value of a null pointer constant.
2	EXIT_FAILURE This is the value for the exit function to return in case of failure.
3	EXIT_SUCCESS This is the value for the exit function to return in case of success.
4	RAND_MAX

This macro is the maximum value returned by the rand function.

5

MB_CUR_MAX

This macro is the maximum number of bytes in a multi-byte character set which cannot be larger than MB_LEN_MAX.

Library Functions

Following are the functions defined in the header stdio.h:

S.N.	Function & Description
1	<u>double atofconstchar * str</u> Converts the string pointed to, by the argument <i>str</i> to a floating-point number <i>typedouble</i> .
2	<u>int atoiconstchar * str</u> Converts the string pointed to, by the argument <i>str</i> to an integer <i>typeint</i> .
3	<u>long int atolconstchar * str</u> Converts the string pointed to, by the argument <i>str</i> to a long integer <i>typelongint</i> .
4	<u>double strtodconstchar * str, char * * endptr</u> Converts the string pointed to, by the argument <i>str</i> to a floating-point number <i>typedouble</i> .
5	<u>long int strtolconstchar * str, char * * endptr, intbase</u> Converts the string pointed to, by the argument <i>str</i> to a long integer <i>typelongint</i> .
6	<u>unsigned long int strtoulconstchar * str, char * * endptr, intbase</u> Converts the string pointed to, by the argument <i>str</i> to an unsigned long integer <i>typeunsignedlongint</i> .
7	<u>void *callocsize, nitems, size, size</u> Allocates the requested memory and returns a pointer to it.
8	<u>void free(void *ptr</u> Deallocates the memory previously allocated by a call to <i>calloc</i> , <i>malloc</i> , or <i>realloc</i> .

9	<u>void *mallocsize,size</u>	Allocates the requested memory and returns a pointer to it.
10	<u>void *reallocvoid * ptr, size,size</u>	Attempts to resize the memory block pointed to by ptr that was previously allocated with a call to <i>malloc</i> or <i>calloc</i> .
11	<u>void abortvoid</u>	Causes an abnormal program termination.
12	<u>int atexitvoid(* funcvoid)</u>	Causes the specified function func to be called when the program terminates normally.
13	<u>void exitintstatus</u>	Causes the program to terminate normally.
14	<u>char *getenvconstchar * name</u>	Searches for the environment string pointed to by name and returns the associated value to the string.
15	<u>int systemconstchar * string</u>	The command specified by string is passed to the host environment to be executed by the command processor.
16	<u>void *bsearchconstvoid * key, constvoid * base, size,nitems, size,size, int(* comparconstvoid * , constvoid *)</u>	Performs a binary search.
17	<u>void qsortvoid * base, size,nitems, size,size, int(* comparconstvoid * , constvoid *)</u>	Sorts an array.
18	<u>int absintx</u>	Returns the absolute value of x.
19	<u>div_t divintnumer, intdenom</u>	Divides numer <i>numerator</i> by denom <i>denominator</i> .

- 20 [long int labs](#)[longintx](#)
Returns the absolute value of *x*.
- 21 [ldiv_t ldiv](#)[longintnumer, longintdenom](#)
Divides numer *numerator* by denom *denominator*.
- 22 [int rand](#)[void](#)
Returns a pseudo-random number in the range of 0 to *RAND_MAX*.
- 23 [void srand](#)[unsignedintseed](#)
This function seeds the random number generator used by the function **rand**.
- 24 [int mblen](#)[constchar * str, size_t n](#)
Returns the length of a multibyte character pointed to by the argument *str*.
- 25 [size_t mbstowcss](#)[schar_t * pwcs, constchar * str, size_t n](#)
Converts the string of multibyte characters pointed to by the argument *str* to the array pointed to by *pwcs*.
- 26 [int mbtowc](#)[whcar_t * pwc, constchar * str, size_t n](#)
Examines the multibyte character pointed to by the argument *str*.
- 27 [size_t wcstombs](#)[schar * str, constwchar_t * pwcs, size_t n](#)
Converts the codes stored in the array *pwcs* to multibyte characters and stores them in the string *str*.
- 28 [int wctomb](#)[char * str, wchar_t wchar](#)
Examines the code which corresponds to a multibyte character given by the argument *wchar*.