

useful libraries for contest

this functions will help you a lot during contest

*if you can't understand how to use a function then look at the C Standard Library PDF or the hard copy book of Sordar Tarek Habib at home (the function list part at the last of Habib's book).
Do experiment with the functions in your PC.*

Character classification functions

They check whether the character passed as parameter belongs to a certain category:

header	function	task
ctype.h	isalnum	Check if character is alphanumeric
	isalpha	Check if character is alphabetic
	isdigit	Check if character is decimal digit
	islower	Check if character is lowercase letter
	ispunct	Check if character is a punctuation character
	isspace	Check if character is a white-space
	isupper	Check if character is uppercase letter

Character conversion functions

Two functions that convert between letter cases:

header	function	task
ctype.h	tolower	Convert uppercase letter to lowercase
	toupper	Convert lowercase letter to uppercase

C numerics library

`<math.h>` declares a set of functions to compute common mathematical operations and transformations:

header	function	task
math.h	pow	Raise to power
	sqrt	Compute square root
	ceil	Round up value
	floor	Round down value
	fmod	Compute remainder of division
	fabs	Compute absolute value
	abs	Compute absolute value

C Standard General Utilities Library

header	function	task
stdlib.h	atof	Convert string to double
	atoi	Convert string to integer
	atol	Convert string to long integer

C++ libraries

you must use a c++ project to use them

read [c++ library.pdf](#) to learn this 4 functions

header	function	task
algorithm (not algorithm.h)	swap	Exchange values of two objects
	sort	Sort elements in range
	min	Return the smallest
	max	Return the largest