Notice

For all tasks:

- Time and memory limits are available in the "Overview" page in the contest system.
- There is an attachment package that you can download from the contest system, containing sample graders, sample implementations, example test cases, and compile and run scripts.
- Each task has a subtask with index 0 which is worth 0 points. The test cases for this subtask are the same as the sample test cases in the downloadable attachment.
- You may make up to 50 submissions for each task, and you have to submit exactly one file in each submission.
- When testing a program with the sample grader, your input should match the format and constraints from the task statement, otherwise, unspecified behaviors may occur. Every two consecutive tokens on a line are separated by a single space, unless another format is explicitly specified.
- When you test your code on your local machine, we recommend you to use the scripts from the attachment packages. Please note that we use the `-std=gnu++17` compiler option.
- If you are unable to submit to CMS, you can use the `ioisubmit` tool to store your code for evaluation after the end of the contest.
  - Run the following command from the directory containing `<source_file>` - the file that you want to submit: `ioisubmit <task_shortname> <source_file>`
  - Ask a committee member to take a picture of the output of `ioisubmit`. Your submission will be rejected unless this step was done.
  - Your submission will only be considered if it is accompanied by an appeal from your Team Leader.

Convention

The task statements specify signatures using generic type names `void`, `char`, `int`, `int[]` (array), `int64` and `int64[]` (array).

In C++, the graders use appropriate data types or implementations, as listed below

void	**char**	**int**	**int[]**
void	char	int	std::vector<int>

int64	**int64[]**	**length of array a**
long long	std::vector<long long>	a.size()