

## Day 2 Notice

For all tasks:

- There is an attachment package that you can download from the contest system.
- The attachment package contains sample graders, sample implementations, example test cases, and compile scripts.
- You may make up to 50 submissions for each task, and you have to submit exactly one file in each submission.
- When testing your programs with the sample grader, your input should match the format and constraints from the task statement, otherwise, unspecified behaviors may occur.
- In sample grader inputs, every two consecutive tokens on a line are separated by a single space, unless another format is explicitly specified.
- You may receive a "Protocol Violation" feedback on your submission to CMS if your program does not follow the correct protocol described in the problem statement. Some possible reasons for a submission receiving this feedback include:
  - Reading from standard input
  - Printing to standard output
  - Calling `exit(0)`
- However, it should be noted that submissions that exhibit the above behavior may not always result in "Protocol Violation" feedback and the list above is also not exhaustive.
- When you test your code on your local machine, we recommend you to use scripts in 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 `ioisubmit <task_shortname> <source_file>` in directory with `<source_file>`.
  - Ask your proctor to take a picture of the output of `ioisubmit` and send it to the organizers. Your submission will not be considered unless this step was done.

## Convention

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

The graders use appropriate data types or implementations, as shown below

Language	<code>void</code>	<code>string</code>	<code>int</code>	<code>int64</code>	<code>int[]</code>	<code>bool[]</code>	length of array <code>a</code>
C++	<code>void</code>	<code>std::string</code>	<code>int</code>	<code>long</code> <code>long</code>	<code>std::vector&lt;int&gt;</code>	<code>std::vector&lt;bool&gt;</code>	<code>a.size()</code>

## Limits

Task	Name	Time limit	Memory Limit
dna	Mutating DNA	1.000 second	2.00 GiB
dungeons	Dungeons Game	4.000 seconds	2.00 GiB
registers	Bit Shift Registers	1.000 second	2.00 GiB