International Olympiad in Informatics 2017
July 28 – August 4, 2017
Tehran, Iran
Day 1 Tasks

notice
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Notice

Each task has an attachment package that is available both in CMS and on your desktop.

For "Output-only" tasks:

- The attachment package contains input test cases and example test cases. Each test case is a separate subtask.
- You may submit multiple output files as a zip file. For this purpose, your output files should be named `??.out`, where `??` is the test case number (e.g., `03.out`). You can zip multiple files using the following command: `zip output.zip *.out`
- You may make up to 100 submissions for output-only tasks. In each submission, you may submit the output files for any subset of the test cases.

For other tasks:

- The attachment package contains sample graders, sample implementations, example test cases, and compile scripts.
- You have to submit exactly one file, and you may make up to 50 submissions.
- Your submissions must not read from the standard input, print to the standard output or interact with any other file. However, they may output to the standard error stream.
- The name of the file that you should submit is given in the task statement header. It should implement the procedures described in the task statement using the signatures provided in the sample implementations.
- You are free to implement other procedures.
- 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.

Conventions

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

In each of the supported programming languages, the graders use appropriate data types or implementations, as listed below:

Language	bool	integer	int64	int[]	length of array a
C++	bool	int	long long	std::vector<int>	a.size()
Pascal	boolean	longint	int64	array of longint	Length(a)
Java	boolean	int	long	int[]	a.length

Limits

Task	Time limit	Memory limit
nowruz	Output-only	Output-only
wiring	1 sec	256 MB
train	2 sec	256 MB