



Implementation Notice

Notice

- You can download a zipped attachment package of each task from CMS. For implementation details and sample graders, see the files in the zip file.
- For each task, you have to submit exactly one file.
- For each task, 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.
- Submitted file should implement the procedures described in the task statement using the signatures provided in the sample implementations.
- You are free to implement other procedures.

Conventions

In each of the supported programming languages, the following data types are used. For details on data types, etc. see the sample implementations.

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
Bubble Sort 2	5.0 sec	512 MB
Cats or Dogs	3.0 sec	512 MB
Collapse	6.0 sec	512 MB
Xylophone	2.0 sec	256 MB