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International Collegiate Programming Contest

Latin American Regional Contests

Warmup Session: July 3, 2021 – Contest Session: July 10, 2021

Testing Environment and Submission System

1 Information on the Testing Environment

1.1 Memory limits

```
C, C++17, Python: 1GB
Java, Kotlin: 1GB + 100MB stack
```

1.2 Other limits

```
Source file size: 100KB
Output size: 1MB
```

1.3 Compilation commands

```
C: gcc -g -O2 -std=gnu11 -static -lm
C++17: g++ -g -O2 -std=gnu++17 -static
Java: javac
Kotlin: kotlinc -J-Xms1024m -J-Xmx1024m -J-Xss100m -include-runtime
```

1.4 C/C++17

- Your program must return a zero, executing, as the last command, `return 0` or `exit(0)`.

- It is known that for problems with very large inputs, `iostream` objects can be slow as, by default, they use a buffer synchronized with the stdio library. If you want to use `cin` and `cout`, disabling such synchronization is advised. This can be achieved by calling `std::ios::sync_with_stdio(false);` at the beginning of your main function. Note that, in this case, using `scanf` and `printf` in the same program should be avoided, since, with separate buffers, misbehavior can occur.

1.5 Java

- DO NOT declare a `package` in your Java program; if you declare a package the program will not execute in Boca.

- Notice that the convention for the solution file name must be obeyed, which means that your public class name must be a capital letter (A, B, C, ...).

- Command for running a Java solution: `java -Xms1024m -Xmx1024m -Xss100m {problem_code}`

1.6 Python

- Note that only Python 3 is supported.

- Beware: there is no guarantee that solutions in Python will run within the time limit specified for the problem.

1.7 Kotlin

- DO NOT declare a `package` in your Kotlin program; if you declare a package the program will not execute in Boca.

- Notice that the convention for the solution file name must be obeyed, which means that your source file must be named (A.kt, B.kt, C.kt, ...).

- Command for running a Kotlin solution: `java -Xms1024m -Xmx1024m -Xss100m {problem_code}Kt`

- Beware: there is no guarantee that solutions in Kotlin will run within the time limit specified for the problem.

2 Instructions for the Usage of the Boca Submission System

2.1 Submission of Solutions

To submit a solution, you must use the Boca's web interface:

- Open your browser.

- Login as a team (username and password assigned to your team).

- Access the tab `Runs`. Choose the appropriate problem, the language used and upload the source file.

The verdicts you may receive from the judges are:

- 1 - YES

- 2 - NO - Compilation error

- 3 - NO - Runtime error

- 4 - NO - Time limit exceeded

- 5 - NO - Wrong answer

- 6 - NO - Contact staff

- 7 - NO - Class name mismatch

- 8 - NO - Wrong language

- 9 - NO - Problem mismatch

Meanings of 1, 2, 3, 4 and 5 are obvious.

- About 6: for unforeseeable circumstances. In this case, use the "Clarifications" menu and provide the "run" number for further clarification.

- About 7: only for Java/Kotlin submissions, reported when the team submits a solution with a file name different from the public class declared, causing the run execution to fail. You will also receive this answer if you declare a package in your source file.

- About 8: used when the submission fails in a way that allows judge to notice that the wrong language was selected.

- About 9: a wrong identification was chosen for the problem when submitting the solution. This answer is only sent if the judges can detect the error, for example when the source file is named `B.cpp` and the problem chosen is `C`), or the java filename is not a capital letter representing a problem.

Notice that it is not always possible to distinguish among verdicts 3, 7, 8 and 9. For example, when a team submits a source file `B.java` in which a public class `A` is defined as a solution to problem `A`, the verdict may be "Name mismatch" or "Problem mismatch".

2.2 Clarifications

To request a clarification concerning a problem statement, you must use Boca's web interface:

- Open your browser.

- Login as a team (username and password assigned to your team).

- Access the tab `Clarifications`. Choose the appropriate problem and type your question.

2.3 Score Board

To visualize the score board showing the teams ranking, you must use Boca's web interface:

- Open your browser.

- Login as a team (username and password assigned to your team).

- Access the tab `Score`. You will have access to the local score board.