APPROVE:

Chairman of the Jury

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N.V. Nikolaeva

The International Tuymaada Olympiad 2023 for School Students in Informatics Technical Regulations

1. General Provisions

1.1. The Technical Regulations for the International Tuymaada Olympiad for school students in Informatics in 2023 (referred to later as the Technical Regulations) follow the International Tuymaada Olympiad for school students Regulations.

1.2. If a participant violates the Technical Regulations, the Jury may decide to disqualify the participant.

1.3. The Jury reserves the right to make changes to Technical Regulations, and all interested parties must be informed of the changes by mailing and announcement on the official website of the Olympiad.

2. Proctoring system

2.1. Participants agree that during the Olympiad round, a specialized software (referred to later as the Proctoring System) and a person appointed for this purpose (referred to later as a Proctor) will monitor all their actions. The proctoring system will record the entire procedure, including video capture of the monitor screen.

2.2. Participants must prepare the workplace according to the minimum requirements specified in the table below:

Parameter	Minimum requirements
Workplace	A personal computer or laptop with broadband Internet access at a speed of at least 10 Mbit/s
Multimedia equipment	Two *webcams* [1] with a resolution of at least 640×480 and a frequency of at least 15 frames/s, a microphone and headphones (speakers)
Web Browser	Chrome 100 or Firefox 100, or Edge 100

	without extensions
Compiler (interpreter) and the corresponding development environment of the participant's choice	• GNU C++ 5.1.0 or later • Microsoft Visual C++ 2019 or later • Free Pascal 3.0.0 or later • PascalABC.NET 3.4.2 or later • Python 3.9 or later • Microsoft C# 8 and .NET Core 3.1 or later • Oracle Java SE Development Kit 11 or later
Zeal Offline Documentation system (https://zealdocs.org/)	Participants select and install the sets of documentation at will

Participants can use text editors and other auxiliary utilities, provided they do not use Internet access and exclude interaction with other users.

2.3. A team leader is obliged to check the compliance of the workplace with the requirements.

2.4. A participant is allowed to the round only if he has a passport or other document with a photo proving his identity. The scan of the identity document must be pre-loaded into the Proctoring System.

2.5. Before the start of a round, a participant, at the request of a Proctor, demonstrates through the side camera the workplace and the absence of additional electronic devices, data carriers, et

 cetera.

2.6. Proctor has the right to field a comment and inform the Jury about any violation of the Technical Regulations or Participant's Rules of Conduct (see Appendix A), which may lead to the disqualification of a participant.

3. Olympiad

3.1. The Olympiad is held in two

5 (five) hour-rounds (days).

3.2. A trial round will be held before the Olympiad (immediately after the installation

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1. session) to check the operability of workplaces and software configuration.
2.
3. One of the cameras, a built-in laptop camera or a webcam installed using its regular mount on the upper frame of a PC monitor, must capture the participant's face. Another camera should record the participant's desk with a keyboard, mouse and sheets on which the participant performs tasks. The Jury may allow the use of a smartphone video camera as a second camera.
   Third-party objects must not obscure video cameras in use.

3.3. Each day, participants will have 4 or 5 tasks. Each complete solution gives 100 points. The methodological commission prepared the task's terms in Russian and English. The

Methodological Commission is fully responsible for the correctness of the conditions in Russian and English. The use of Russian and English is strongly advised for the participants that use the terms in other languages, if necessary.

3.4. After the rounds, representatives of the Organizing Committee publish preliminary protocols on the official website of the Olympiad.

3.5. After the end of the Olympiad, participants get access to the test materials of the tasks in electronic form.

3.6. Solutions verified and evaluated using an automatic testing system (referred to later as the Testing System). The link, login and password to log in to the Verification System will be sent to each participant individually to the mailing address specified during registration.

3.7. The solution to each problem is a single file with the source code of a program written using valid programming languages and environments. A participant can use different languages to solve tasks.

3.8. By default, standard data streams are used for input/output (reading keyboard data and output to the monitor screen). However, the author of the task may require data input/output using files. The beginning of a task description indicates a data input/output method. All input data are assumed to be correct and satisfy all the constraints specified in the task conditions, so there is no need for additional correctness checks. The participant's program must strictly observe input and output data formats.

3.9. The testing time of the solution and the available memory on each test is limited. Test failed if solutions exceeded the set limits on the test. The Methodological Commission specifies restrictions on the program's running time on one test and the size of available memory in the formulations of tasks.

3.10. All decisions are checked and evaluated during the round. The solution check proceeds in the following order:

- compilation of the source code of the program (for compiled languages);
- sequential execution of the program with input data corresponding to the tests from the test suite for this task;
- checking the results of the program execution for correctness using the checking program prepared by the authors of the problem.
- If the Checking System can not compile the solution, then the compilation error (CE)a verdict is issued. In this case, a participant receives 0 points.

3.11. A task condition may contain subtasks. Each subtask corresponds to a group of tests (one group of tests cannot have another group of tests). The author determines the method of scoring points for a group of tests. There are two ways to earn points for a subtask in the Testing system:

- each completed test
gives points;
  - only successful completion of all tests in the group gets points.
  - The author has the right to set dependencies of test groups. Testing on a test group that depends on other groups occurs if the solution has successfully passed these test groups.

3.12. After the solution is verified, the participant can get acquainted with the results of its testing. For each completed test (or group of tests), the participant receives a certain number of points, and if the solution has successfully passed all the tests, then the task gets 100 points per task. A participant receives 0 points if any test (or the corresponding group of tests) fails for one reason or another (incorrect answer, exceeding the time limit, et cetera), and the verification of this solution on subsequent tests will not proceed.

3.13. The Checking System gives one of the following verdicts for each test:

- test passed (OK);
- wrong answer (WA – Wrong answer);
- exceeding the memory limit (ML – Memory limit exceeded);
- exceeding the time limit (TL – Time limit exceeded);
- the program ended abruptly (RE – Runtime error).

3.14. The author of the task has the right to limit the information available to the participant about the result of testing on a group of tests. For example, in this case, only the score for a group of tests may be available to the participant, and the scores for each test will not be visible.

3.15. Since a participant during the round can send several solutions to the same problem for verification, the final points for this task will equal the maximum score due to the estimates for the solutions obtained following the checks.

3.16. Participants of the Olympiad are allowed to use any standard libraries and header files installed as part of the corresponding compiler (interpreter) in solving problems.

3.17. In solving tasks, participants can not:

- using system calls, except for I/O operations specified in the task condition;
- create directories, temporary files, or perform any I/O other than those indicated in the task condition;
- use any network interaction operations;
- perform any other actions that disrupt the Checking System.

3.18. The solution is a program software form that must provide the same answers to the same tests, regardless of the launch time and the software environment. The Olympiad jury has the right to make unlimited launches of the participant's program and choose the worst result for each test.

3.19. In case of computer or software malfunctions during the round, the time spent on restoring the computer's operability may be compensated by the decision of the Jury if the failure was not the fault of the participant.

3.20. The Jury exclusively determines the correctness of passing tests, ratings, and winners and may disqualify participants. The Jury examines issues arising as a result of unforeseen events and circumstances. The Jury's decisions are final and not subject to appeal.

3.21. If a participant has complications related to his health during a round, then a participant will call someone who knows how to provide medical care.

4. Appeal

4.1. The appeal is conducted simultaneously for both rounds.

4.2. Participants can file an appeal to the Jury. Appeal applications are filed according to the deadlines specified in the Olympiad Program and must fill in on an Appeal form that participants can download from the official website of the Olympiad.

4.3. Jury Chairman chairs the Appeal Commission. It decides on appeals filed by participants. The decisions of the appeal commission are final and are not subject to revision.

APPENDIX A
Rules of Conduct for Participants During the Rounds

1. All participants must connect to the Proctoring System 15 minutes before the start of the round.
2. During the rounds, participants use only:
   - the official Proctoring System;
   - the Checking System on the platform https://codeforces.com;
   - development environments installed at the workplace from the list (see clause 3.2 of the Technical Regulations, the use of online environments is prohibited!);
   - the Zeal offline documentation system with pre-downloaded sets of documentation on programming languages;
   - electronic means for tracking the state of health (for example, glucose meters).
3. It is strictly forbidden to use during the round:
   - other sites other than those specified in clause 2;
   - network drives;
   - software (including e-mail, chats, messengers, and remote control tools) that allows data transfer between computers other than those specified in paragraph 2;
   - communication means (pagers, mobile phones, smart watches);
   - other electronic devices and data carriers (programmable calculators and keyboards, CD and MP3 players, flash drives, disks, floppy disks);
   - personal computers (laptops, mobile phones and smartphones, e-books, tablets, electronic watches);
   - educational literature and personal records.
4. Participants are strictly prohibited from passing their login and password to other participants before and during the rounds, trying to access information on other participants' computers or logging into the Verification System on behalf of another participant.
5. Participants only use blank sheets, a squared notebook/sheets, and writing materials: a pen, pencil, washing gum, compasses, and ruler.
6. Participants must notify Organizing Committee about taking the medication during the round, and a participant should take it independently according to the appropriate schedule.
7. During the round, there must be no other people in the location except participants. Otherwise, other people present should not interact with a participant during the Olympiad in any way except for the persons providing medical care.
8. According to the terms of the tasks during the round, participants can ask the Jury questions in Russian or English through the service of the Checking System. Only "Yes" or "No" questions are allowed. If the question is incorrect or based on the task' condition, the Jury must answer: "No comments". If the Jury recognizes the presence of ambiguity or an error in a task description, all participants receive an explanation.

9. For all other questions during the round, the participants of the Olympiad have the right to contact only representatives of the organizing committee (including the Proctor) using the chat function of the Proctoring System.
10. Participants of the Olympiad must strictly follow the Jury's instructions and the representatives of the Olympiad Organization Committee. During the round, a participant can leave his workplace only after notifying and getting permission from a Proctor.
11. In case of an emergency that does not allow to continue participating in the round, or early termination of the Olympiad for any reason, the participant is obliged to contact the Proctor.