APPROVE:

Chairman of the Jury

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The International Tuymaada Olympiad 2024 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 2024 (later referred 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 them.

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

2. Proctoring System

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

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

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[1] One of the cameras must be positioned so as to fully capture the participant's face. Typically, this is done using the built-in camera of a laptop, or a webcam installed using a standard mount on the top frame of the monitor.

Another camera should record the participant's desk with a keyboard, mouse and sheets on which the

	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 3.10 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 violate Participant's Rules of Conduct (see Appendix A).

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, etc.

2.6. Proctor has the right to issue a warning 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 rounds (days). Each round will take 5 (five) hours.

3.2. A trial round will be held before the Olympiad (immediately after the installation session) to ensure correct configuration of the workplace.

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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 problem statements in Russian and English. The participants that use the terms in other languages are advised to refer Russian and English statements if necessary.

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

3.5. After the end of the Olympiad, participants may access the test materials of the tasks in digital form.

3.6. Solutions are verified and evaluated using an automatic testing system (later referred as the Testing System). The URL, login and password to log in to the Testing System will be sent to the team leaders by Organizing Committee.

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 different tasks.

3.8. By default, standard streams are used for input/output (read from keyboard input and output to the screen). However, the author of the task may require data input/output using files. The data input/output method indicated in the beginning of a problem statement. 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 comply 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 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 problem statements.

3.10. All solutions 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 Testing System cannot compile the solution, then the compilation error (CE)a verdict is issued. In this case, a participant receives 0 points.

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

- each completed test gives points independently;
- 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 verification, the participant can get its results. 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 any reason (incorrect answer, exceeding the time limit, etc.), and the verification of this solution on subsequent tests will not proceed.

3.13. The Testing 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 with runtime error (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 subtask. For example, only the score for a subtask 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 submit several solutions to the same problem, the final score for this task will be equal to the maximum points scored among all submitted solutions.

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. It is guaranteed that all problems of the Olympiad may be fully solved with using C++ language.

3.18. In solving tasks, participants cannot:

- 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 Testing System.

3.19. 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.

3.20. 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.

3.21. The Jury has exclusive right to determine the correctness of test evaluation, scoreboard, and winner selection and may disqualify participants. The Jury handles issues arising as a result of unforeseen events and circumstances. The Jury's decisions are final and may not be a subject of appeal.

3.22. If a participant has complications related to his health during a round, then a participant must have an ability to call someone who can provide medical assistance.

4. Appeal

4.1. The appeal is conducted jointly 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 be filled in on an Appeal form that participants can download from the official website of the Olympiad.

4.3. Appeals are handled by a commission which includes Jury Chairman. The decisions of the appeal commission are final and cannot be revised.

APPENDIX A
Rules of Conduct for Participants During the Rounds

1. All remote participants must connect to the Proctoring System 15 minutes before the start of the round.
2. During the rounds, participants may use only:
   - the official Proctoring System;
   - the Testing System based on Codeforces (https://codeforces.com);
   - development environments installed at the workplace from the list (see clause 3.2 of the Technical Regulations, the use of online development 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:
   - Internet resources other than the Proctoring System and the Testing System;
   - large language models (GPT, LLaMA, Claude, etc.) and other software based on their usage;
   - network drives;
   - software (including email, 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 media (programmable calculators and keyboards, CD and MP3 players, flash drives, disks, floppy disks);
   - other computing devices (laptops, mobile phones and smartphones, e-books, tablets, electronic watches);
   - educational literature and personal records including prepared code and snippets.
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 Testing 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 any medication during the round, and they should take them according to their schedule.
7. During the round, there should be no other people in the location except participants. Otherwise, other people present must 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 Testing System. Only "Yes" or "No" questions are allowed. If the question is incorrect or answer is obvious from the problem statement, the Jury may answer: "No comments". If the Jury recognizes the presence of ambiguity or an error in a task description, all participants will be provided with an explanation.
9. For all other questions during the round, the participants of the Olympiad have the right to contact representatives of the Organizing Committee only (including the Proctor). Remote participants should use 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 Organizing 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 participation in the Olympiad for any reason, the participant is obliged to contact the Proctor.