

Coding Olympiad – Arena Battles

Final Exam Guidelines for Participants

Exam Start Date and Time: 25 October 2025 - 00:00 (12:00 AM) (GMT)

Exam End Date and Time: 26 October 2025 - 12:00 PM (GMT)

Total Exam Duration: 36 hours (GMT)

Exam Entry or Start Time: You can start the exam at any time during the exam period.

Exam Access and Submissions: You may log in and out freely during the 36-hour window; you may resubmit code multiple times, but only the final submission before the portal closes will count.

Final Code Submission: Submit your exam at least 5 minutes before the exam period ends, and avoid making any code edits during this time to ensure your final version is saved correctly.

- Exam will be held via the Coding Olympiad student panel.
- No additional links or emails will be sent.
- The exam cannot be accessed via CodeCombat's website.
- Please do not attempt to log in through CodeCombat's web page during the exam.
- Before connecting to the exam each time, you must activate your camera and share your entire screen. The Coding Olympiad exam portal has an integrated camera program that you can synchronize with your device's camera.

This document provides the official rules, procedures, and scoring details for the Final Exam of the Coding Olympiad in the Arena Battles (CodeCombat) category. Please read it carefully before the exam period begins. Understanding these guidelines will help ensure a smooth, fair, and successful competition experience.

What is the CodeCombat Arena Battles?

The **Arena Battles** category of the Coding Olympiad is a multiplayer coding platform where students program the behavior of in-game characters, known as *heroes*, using real programming languages, **Python** or **JavaScript**.

The objective is to create intelligent, strategic code that outperforms other players' code in real-time battles.

In the Arena Battles, your hero competes automatically against others to achieve objectives such as collecting resources or defeating enemies. You will apply everything learned in training, logic, algorithms, and strategic thinking, to design the smartest hero possible.

Objective of the Final Exam

The Final Exam in the **Arena Battles** category allows students to demonstrate both programming proficiency and strategic problem-solving in a competitive coding environment.

Your task is to write, test, and submit code that controls your hero's actions and strategy to win matches against other players.

Preparation Before the Final Exam

Before the final, it is strongly recommended that you complete the **CodeCombat training levels** available in your account. These levels cover essential programming and strategy topics needed for success in the Arena.

Key Areas to Review

Programming Basics

- Moving heroes using coordinates
- Understanding syntax in Python or JavaScript
- Using loops to repeat actions efficiently
- Applying conditional logic (if, else)

Combat and Strategy

- Coding attacks and defense mechanisms
- Targeting enemies based on distance, health, or type
- Learning and utilizing different hero abilities effectively

Problem-Solving and Algorithms

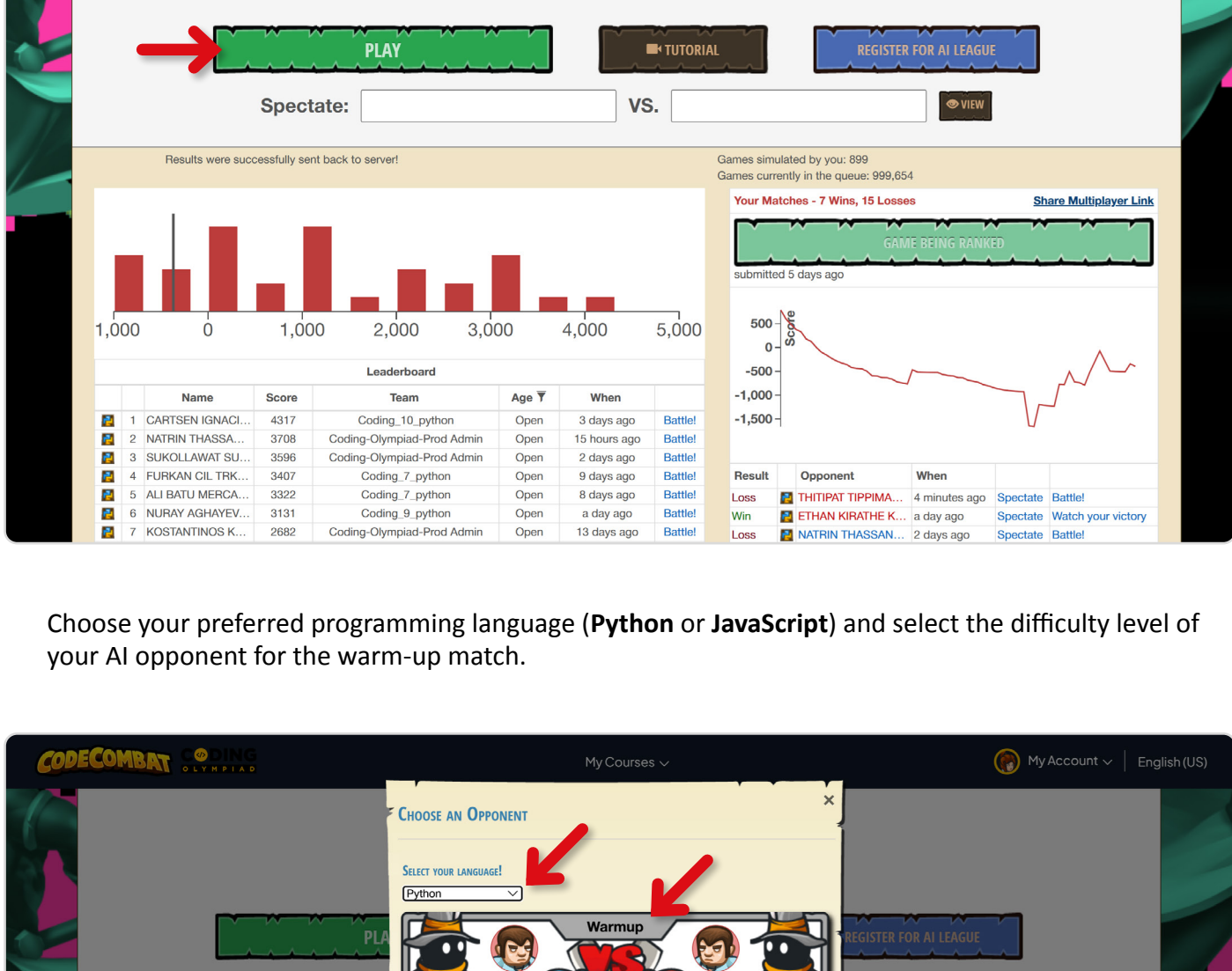
- Pathfinding and efficient movement
- Managing in-game resources (gold, mana, etc.)
- Adapting your hero's behavior to various opponents

TRAINING ARENA - FARMSCAPE BLITZ ARENA

To support this preparation, students are introduced to the **FARMSCAPE BLITZ ARENA**, an exclusive training environment available only to Coding Olympiad participants, designed to simulate the conditions of the Final Exam.

Important Notice:

The **Farmscape Blitz Arena** is only for practice. The **Final Exam Arena** will be a completely different environment with new conditions and challenges. Performance in the training arena does not affect your final exam results.

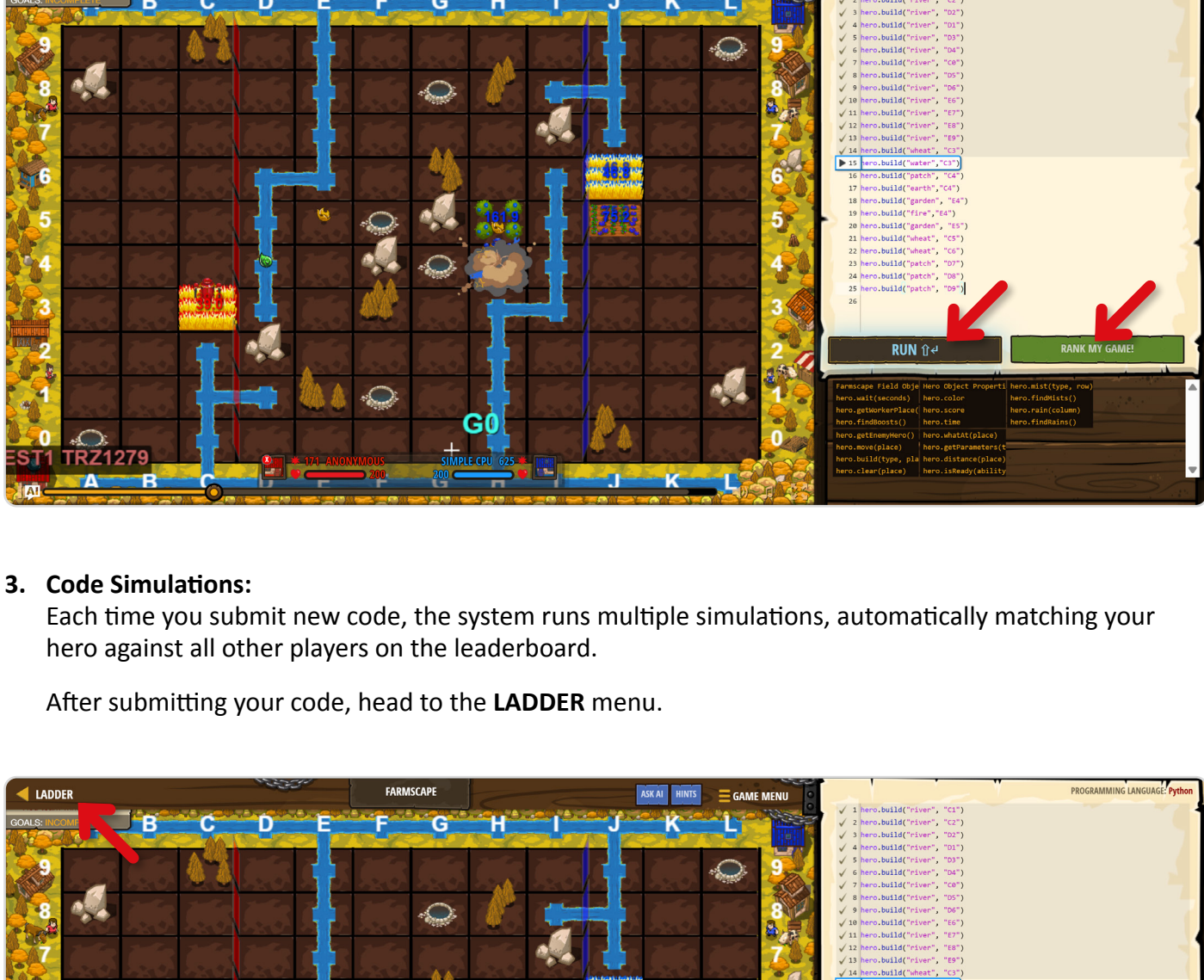


Final Exam Arena and Submission Process

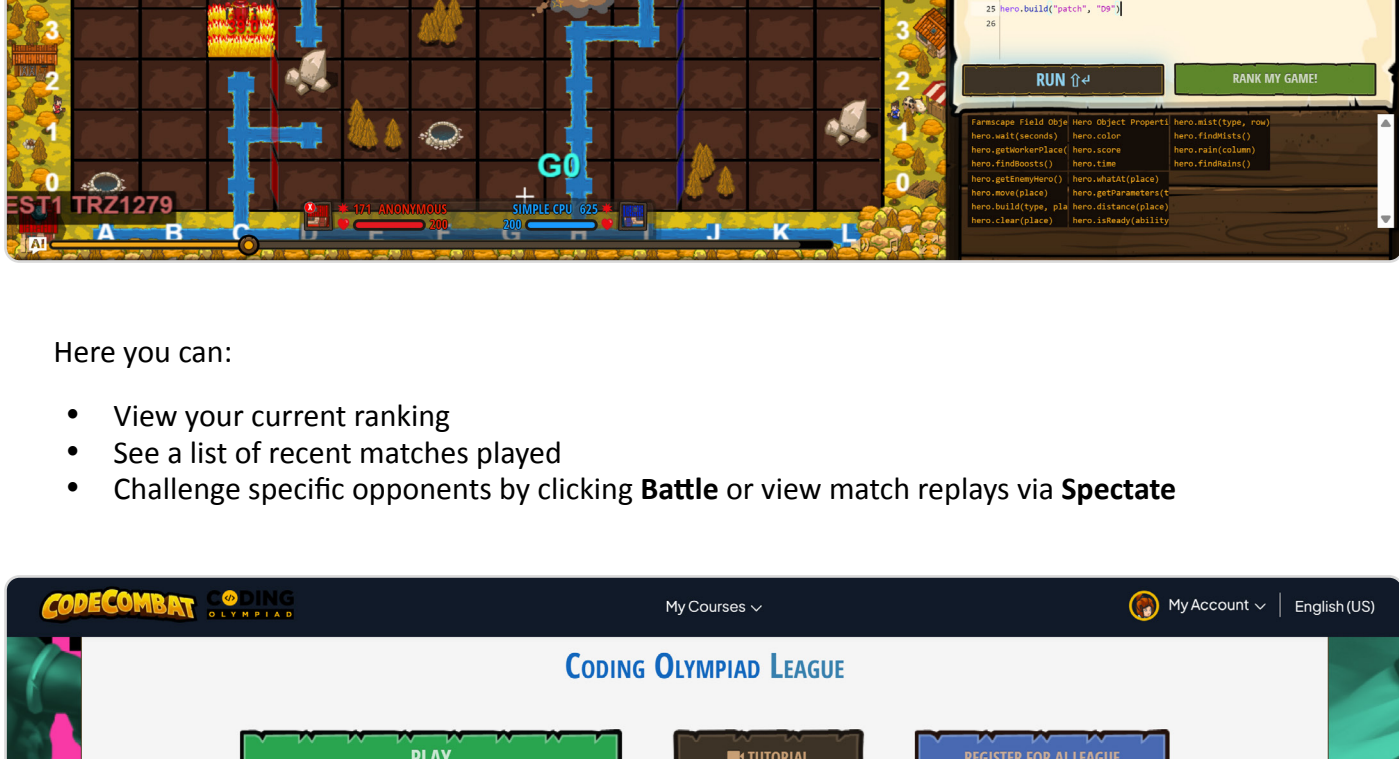
In the **Final Exam Arena**, each student's code will compete against other participants' code in live simulations. This arena is completely different from the Farmscape Blitz training arena used for practice.

1. Practice Stage:

All students begin by battling basic AI opponents to understand game mechanics and test their logic



Choose your preferred programming language (**Python** or **JavaScript**) and select the difficulty level of your AI opponent for the warm-up match.



2. Competitive Stage:

After defeating the basic AI opponent, students can begin submitting their code to enter official ranked battles against other players.

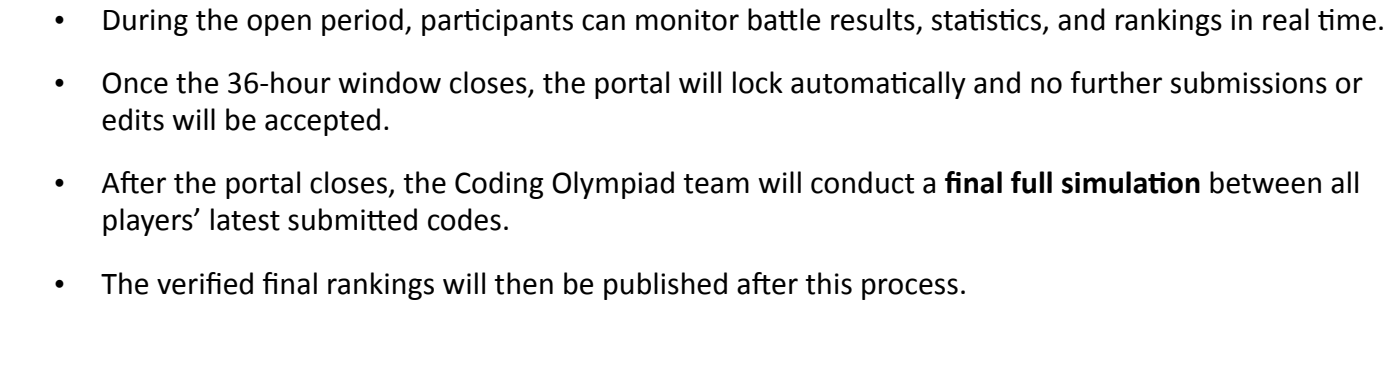
First click **Run** to test your code in action. Then click **Rank My Game** to officially submit it for ranking.



3. Code Simulations:

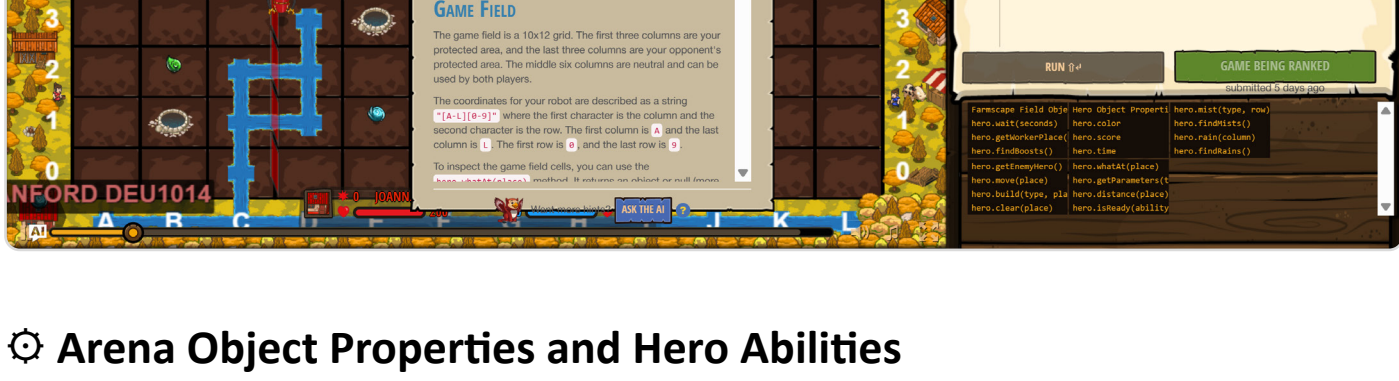
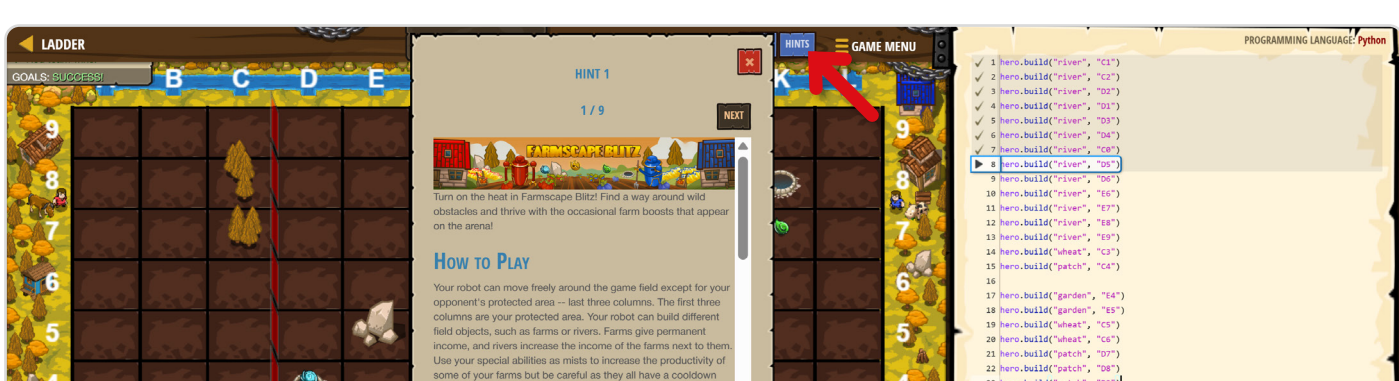
Each time you submit new code, the system runs multiple simulations, automatically matching your hero against all other players on the leaderboard.

After submitting your code, head to the **LEADERBOARD** menu.



Here you can:

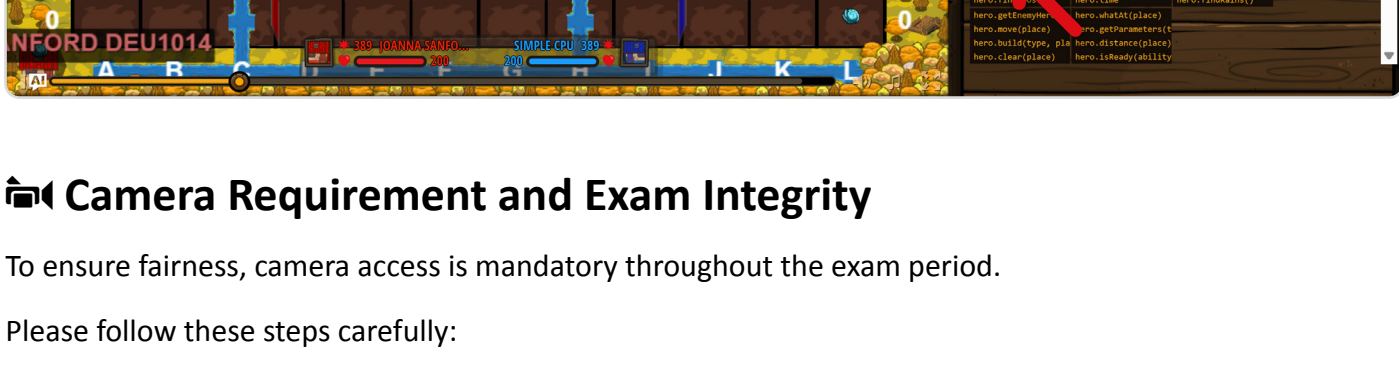
- View your current ranking
- See a list of recent matches played
- Challenge specific opponents by clicking **Battle** or view match replays via **Spectate**



Arena Object Properties and Hero Abilities

Review the **Farmscape Field Object Properties** displayed in the arena. These properties describe the interactive elements within the field, such as crops, fences, resources, or enemies, and how your hero can interact with them. Understanding these details helps you determine which objects can be targeted, collected, or avoided during the match.

In addition, make sure to check the **Hero Object Properties** and available abilities. These define your hero's actions, attributes, and methods. Knowing how these functions work will allow you to design more accurate, efficient, and strategic code.



Camera Requirement and Arena Integrity

To ensure fairness, camera access is mandatory throughout the exam period.

Please follow these steps carefully:

1. After clicking the **Start Exam** button, always **enable your camera** when prompted.
2. If you leave the portal, close both the exam window and your camera.
3. When you return, **allow camera access again** before continuing.
4. Your **camera online time** must match your **portal activity time**. Having your camera off while coding may affect your exam validity and ranking.
5. Keep your face visible and your workspace clear at all times.

Failure to comply may result in invalidation of your participation or score.

Scoring and Ranking System

How Scoring Works

- Your code continuously battles the code of other participants throughout the tournament.
- A Bayesian ranking algorithm predicts your win probability in each match.
 - Winning against higher-ranked players yields more points.
 - Losing to lower-ranked players results in a greater score deduction.
- You can improve your code and resubmit multiple times during the open period.
- No points are scored until you submit your latest code and it starts to automatically play matches against other players.
- After the tournament, a full simulation will be run to verify the final rankings based on each participant's latest submitted code.

Viewing Scores

- You can see your placement and progress on the leaderboard during the live competition.
- These scores represent in-progress estimates and may shift during the final ranking phase once all matches are simulated and verified.

Final Rankings

- When the tournament concludes, the ladder will be locked, preventing new submissions.
- The Coding Olympiad team will run a final comprehensive simulation, ensuring each player's latest code battles against every other participant.
- The **official final rankings** will be determined based on **total verified wins and losses** after this final simulation.

Important: Avoid Last-Minute Edits

Do **not** make code changes in the final minutes before the portal closes.

If you run out of time, the system will **automatically save** and **submit your current code**, even if it is incomplete. Because there may not be enough time to re-test or fix errors, always make sure your final code is complete, tested, and stable well before the deadline.

Tips for Success

- **Plan early:** Start refining your code early in the exam period.
- **Test continuously:** Regularly run simulations to observe your strategy's effectiveness.
- **Learn from results:** Analyze your wins and losses to find weaknesses in your logic.
- **Keep it efficient:** Clean, well-structured code performs faster and more reliably.
- **Stay composed:** Focus on consistent improvement, not quick last-minute changes.

Summary of Key Details

Topic	Key Information
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Exam Type	Final Exam - Arena Battles by CodeCombat
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Arena	A new competition arena will be presented on the exam day
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Duration	36 hours total
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Access	Multiple logins allowed during the open period
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Programming Languages	Python or JavaScript
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Multiplayer Battles	Code competes live against other players
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Code Submissions	Unlimited within time frame, must be original
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Scoring	Bayesian ranking algorithm
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Ranking	Determined by total verified wins and losses
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Camera	Must remain active during all portal use
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Submission	System auto-saves last version when time ends
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Important Note	Avoid last-minute edits to prevent incomplete code
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Results	Final rankings published after full simulation
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Best of Luck, Coders!

Prepare early, think strategically, and let your code lead your hero to victory! ✂