Online Judges

Ulises Méndez Martínez

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ulisesmdzmtz@gmail.com

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Online Judges

Introduction

Competitive programming

Competitive programming is a mind sport usually held over the Internet or a local network, involving participants trying to program according to provided specifications.

Online judge

An online judge is an online system to test programs in programming contests.They are also used to practice for such contests.
The system can compile and execute code, and test them with preconstructed data. Submitted code may be run with restrictions, including time limit, memory limit, security restriction and so on. The output of the code will be captured by the system, and compared with the standard output. The system will then return the result.

Common Veredicts

Source: https://uva.onlinejudge.org/

Submissions

Your program will be compiled and run in judge system, and the automatic judge will test it with some inputs and outputs, or perhaps with a specific judge tool. After some seconds or minutes, you'll receive by e-mail (or you'll see in the web) one of these answers:

Compile Error (CE):

The compiler could not compile your program. Of course, warning messages are not error messages. The compiler output messages are reported you by e-mail.

Accepted (AC):

OK! Your program is correct! It produced the right answer in reasonable time and within the limit memory usage. Congratulations!

Common Veredicts (cont)

Wrong Answer (WA):

Correct solution not reached for the inputs. The inputs and outputs that we use to test the programs are not public so you'll have to spot the bug by yourself.

Runtime Error (RE):

Your program failed during the execution (segmentation fault, floating point exception...). The exact cause is not reported to the user to avoid hacking. Be sure that your program returns a 0 code to the shell. If you're using Java, please follow all the submission specifications.

Time Limit Exceeded (TLE):

Your program tried to run during too much time; this error doesn't allow you to know if your program would reach the correct solution to the problem or not.

Caribbean Online Judge

Pros

1. Some Spanish descriptions
2. Progressive contest
3. Ranks & Leaderboards
4. Code Backup
5. Dynamic score problems
6. Frozen scoreboard

Cons

1. Most recycling problems
2. Private contests
3. Very strict with I/O
4. Access
5. Frozen scoreboard

Other resources

- Caribbean ICPC Information

Universidad of Valladolid Online Judge

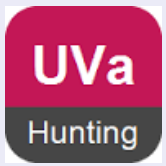
Pros

1. Vast quantity of problems
2. Many online references
3. ICPC Related contests
4. Good Analytic's Tools
5. CP Book is based completely on it

Cons

1. Poor Online Connections
2. No code backup
3. No feedback
4. Heavy traffic of users (delays in response)

Tools



Codechef

Pros

1. Active Contests Schedule
2. Community Blogs, Resources
3. Problems level clasification
4. Online Compiler
5. Sponsors & Prizes
6. Code Backup

Cons

1. Troubleshooting with large audiences
2. Math problems tend to be specific
3. Not unified rank

Contest

HackerRank

Pros

1. Visited by many recruiters
2. Frequently contests
3. Code Backup & OC
4. Editorial if AC
5. More than Algorithmic Challenges

Cons

1. No much resources to learn
2. Few sense of community

Tools

TopCoder

Pros

1. Profitable
2. Class vs Complete Program
3. Rank & Prizes & Achievements
4. More than Algorithmic Challenges
5. Time to compete & Hack :)
6. Excellence as referemce

Cons?

1. Contest Platform: BETA?
2. Only 3 problems by contest
3. Ranking based on contests

Codeforces

Pros

1. Proactive community
2. Real time Hacking exp.
3. GYM & Feedback
4. Problem Set & Others solutions
5. Code Backup
6. API

Cons

1. Unavailable during large contests
2. Rare Div.1 contests
3. Ranking based on contests
4. Its running over windows

Tools

polygon beta

Math , Games & Fight

Project Euler.net

ideone.com

CodinGame

Q & A