

# Nordic Championships 2010 Contest System

Mikael Goldmann      Gunnar Kreitz

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## 1 Introduction

The Contest System (<https://ncpc2010.scrool.se/>) is a web based judge, similar to the Valladolid online judge (<http://uva.onlinejudge.org/>), or the Sphere online judge (<http://www.spoj.pl/>). Solutions to problems are submitted using a web form. Submissions are enqueued for testing and the results are available over the web.

## 2 Testing the system

You may want to try out the system in advance. In order to do so you need to register and get an account, which you can get by going to <https://ncpc2010.scrool.se/register>. This registration is *only* for testing the system, to participate in the actual contest you must register at <http://ncpc.idi.ntnu.no/ncpc2010/reg/>.

Before the contest, the contest system will be up and running allowing you to submit solutions to a few sample problems to test out the judge system. You can also submit clarification requests during the test session, but don't expect fast replies (if any).

There will also be two warmup-sessions on Saturday September 25 at 11:00 and Tuesday September 28 at 18:00. Both warmup-sessions will have the same problem set and the problem set consists of old problems. Test accounts also work for the warmup-session and registration is open throughout the sessions.

The test system will be shut down Friday October 1 at 10:00, and test session accounts will be removed in preparation for the actual contest.

### 2.1 Before you log on

Go to the main page (<https://ncpc2010.scrool.se>). Very little information is available before you log on. The *public links* at the top go to **Standings** (score boards), **Problems** (the problem set, once the contest has started), **Documentation**, **News**, **About**, and **Log in**. Click **Log in** and enter username and password.

### 2.2 Once you have logged on

You will now have a contestant view of the system and below the *public links* you will see the *contestant links*. They are

- **Submissions** where you can see how your submissions are judged
- **Submit** which leads to the submission form
- **Clarifications** which leads to a page where you can issue clarification requests to the judges and read answers to clarification requests.

During the contest you will use a *team account*, and you will get username and password from the site director at your site. The account from the test session will no longer work on the contest day.

### 3 Judging a submission

A submitted solution is handled in stages, until a failure is detected or the submission is accepted.

#### 3.1 Initial handling

The submission is checked to make sure the necessary information is available, such as problem-ID, language, and in the case of Java, main class. If this fails the result is **Submission error**. This also happens if your submission is too large. There is a limit on the size of the source code.

#### 3.2 Compilation

The submitted program is compiled. If this fails the result will be **Compile error**.

#### 3.3 Running the submission

The submission is run, and is supposed to read from standard input. Anything written to standard output is considered part of the output of the program, and anything written to standard error is ignored.

The program may fail due to **Time Limit Exceeded**. Each problem has a limit on the execution time for a submission. If the program has not halted by that time, it is terminated. The time limits used at the contest are not made public.

If the program violates the restrictions imposed by the security solution, the result is **Illegal Function**. While this can sometimes happen by mistake, the judges will investigate your code to make sure you have not deliberately tried to bypass security.

If the program produces excessive output (a lot more than a correct solution would), then the result is **Output Limit Exceeded**.

If the program uses more memory than allowed, the result is **Memory Limit Exceeded**. Unless otherwise stated, the maximum memory usage of a submitted program is 256 MB during NCPC. The maximum stack size in Java is 8 MB.

If the program crashes, before the time limit and without violating any of the above constraints, the result is **Run Time Error**.

### 3.4 Validation

Finally, the output is checked for correctness, which will result in either **Wrong Answer** or **Accepted**. However, in the unlikely event that the validation process itself crashes, the result is **Judge Error**. If that should happen, please contact the judges through the clarification system.

### 3.5 Penalties

A 20 minute penalty is applied to submissions that fail, with the exception of Submission Error and Compile Error, which do not get penalty points. This does not mean that deliberately causing these (or other errors) in ways that threaten the integrity of the contest is allowed.

## 4 Multiple input files

The problem statements describe the input format of a single input file. It is possible that your program will be run several times against different input files. You do not have to take several input files into account when writing your program, simply follow the input/output specification in the problem.

If there are several input files, your program has to perform correctly on each input file, and the time limit applies to each input file. Your program will be executed once for each input file until it fails (in one of the ways described previously) or until it has handled all files successfully. If the program fails on an input file, it will not be run on any more files, and the failure on that input file is reported. You will not know which input file it failed on.

## 5 Conclusion

Good luck and happy hacking!