

Introduction to the practice session

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About the contest

The contest in a nutshell

- Teams of 3 students.
- One computer per team.
- Around 10-12 problems to solve.
- Languages: C, C++, Java, Python.
- Goal: solve many problems quickly and correctly.

Ranking function

Teams are ranked, in lexicographic order, by:

1. their total number of solved problems;
2. a **tie-breaking time**: the sum over the solved problems of:
 - the time it took to solve the problem;
 - 20 minutes for every incorrect submission.

A typical problem

- Short description in English of a **problem to solve**.
- Description of the input and output **format**.
- **Example** of an input and its output.
- The program should read the input and write the output on the **standard streams** (`stdin` and `stdout`).

Evaluation

- Submission is done through a **Web interface**.
 - Also: **command-line** submission client.
- **Automatic** evaluation on secret test cases.
- Verdicts may be **manually overturned** by judges.
- Limited **execution time**: 1–10 seconds
- Limited **memory** (1 GB), source size (256 kB), etc.

Verdicts

- | | |
|-------------------|-----------------|
| 1. TOO-LATE | 6. TIMELIMIT |
| 2. COMPILER-ERROR | 7. WRONG-ANSWER |
| 3. MEMORY-LIMIT | 8. NO-OUTPUT |
| 4. OUTPUT-LIMIT | 9. CORRECT |
| 5. RUN-ERROR | |

Caveats

- Only **one source file** can be submitted.
- The specified **input format** is guaranteed.
- Respect exactly the specified **output format**.
- Use an efficient **algorithm** to pass the time limit.

A note on languages

- Languages available:
 - C/C++ through gcc 7.2.0 (support for C++ 2011, C++ 2014)
 - Java 8 through OpenJDK 1.8
 - Python 2 through PyPy 2.4.0
 - Python 3 through CPython 3.4.2
- All problems have been solved with C/C++, with Java, and with Python
- Some problems are more difficult to solve in some languages

Language features

Some language features **not allowed**:

- inline assembly code
- threads
- file I/O, networking
- file management
- device management
- interprocess communication
- forking and execution of external commands

Do not try these! Malicious uses of these features will lead to **disqualification**.

Behavior

- Talking is only allowed between members of the same team while seated at their desk.
- No talking away from your desk or across teams
- Don't do anything that jeopardizes the contest:
Trying to access the Internet, distract others, etc.

Other rules

- No **electronic devices** permitted in the contest area!
Leave them with your coach or don't bring them.
 - Teams with electronic devices will be **disqualified**!
- Access to the **bathroom** one at a time
- **Stay** in the room until the end of the contest
- Again: **absolutely no talking** in the corridor!

Before contest begins

- Don't touch the computer before contest starts
 - No time is provided to set up your computer
- Don't open the envelope with the problems before contest starts
- Contest starts when the countdown goes to zero

Questions and problems

- Questions about the **problems** or **environment** (compiler versions, etc.)
 - Ask a **clarification request** on the judging system
- Problem with your **workstation**: crash, hardware failure, etc.
 - Ask a **volunteer**
- Requests for more draft paper, other practical issues
 - Ask a **volunteer**
- Technical support, help with your source code
 - Don't even ask. ;-)

- Coaches may use room B310 or B312 (entrance floor).
- Coaches can participate on the public instance:

`https://domjudge.di.ens.fr/public/`

- Practice: coaches may visit their teams between 15:00 and 16:00

About the environment

Where is your working space?

- Computer labs are **one floor above** in building C.
- Your **position** is written on your badge, e.g., C127-B9
 - C127 is the **room**
 - B9 is the **position** in the room (column/row)

Material

You are only allowed to bring:

- **Writing instruments** (pens, ...): they are not provided
- **Stickers** to customize your keyboard

Your **notebooks** are installed by us.

Process

- Install your desk today (stickers, etc.)
- After the practice contest:
 - **Throw away** or **take away** all problem statements, drafts, printouts.
 - **Leave** the notebooks, pens, stickers, etc.
- No additional material brought in on Sunday.

- Volunteers will have logged you in the **workstation**.
Don't close your session or exit the environment.
- You are automatically logged into the **judging system**.

Resources

There is **no Internet access**, except to the following:

- Automatic judging system.
- PDF **documentation** of the judging system.
- Offline **documentation** of the programming languages.
- Copy of **swerc.eu** (including regulations and environment details).


You can also use the **team reference document**.

About the judging system

Judging interface

[overview](#) [problems](#) [scoreboard](#)

logged in as John Doe

RANK	TEAM	SCORE	A	B	C	D	E	F	G	H	I	J	K
3	 Example team Utrecht University	9 1158	1/49	0	1/80	2/210	1/68	1/294	2/158	0	1/26	2/34	3/139

Submissions

No files selected.

time	problem	lang	result
19:55	B	CPP	TOO-LATE
11:34	F	CPP	CORRECT
10:10	D	CPP	CORRECT
10:00	D	CPP	WRONG-ANSWER
09:18	G	CPP	CORRECT
08:59	K	CPP	CORRECT
08:50	K	CPP	WRONG-ANSWER
08:46	G	CPP	WRONG-ANSWER
08:30	E	CPP	CORRECT
08:24	K	CPP	WRONG-ANSWER
08:00	C	CPP	CORRECT
07:48	E	CPP	CORRECT
07:29	A	CPP	CORRECT
07:14	J	CPP	CORRECT
07:07	J	CPP	WRONG-ANSWER
07:06	I	CPP	CORRECT

Clarifications

time	from	to	subject	text
19:52	Jury	All	General issue	The scoreboard is now frozen!
19:52	Jury	You	problem A	Read the problem statement carefully!

Clarification Requests

No clarification requests.
















Scoreboard

[overview](#) [problems](#) [scoreboard](#)

logged in as John_Doe [x](#)

Scoreboard NWERC 2015

final standings

RANK	TEAM	SCORE	A	B	C	D	E	F	G	H	I	J	K
1	 Game of Noli University of Helsinki	10 1447	2/36	1	3/193	4/116	3/77	1/119	3/283	1/237	1/13	2/7	1/146
2	 DoCTh Imperial College London	9 1089	1/40	0	2/273	2/126	2/25	0	1/118	3/275	1/17	1/22	2/73
3	 Example team	9 1158	1/49	0	1/80	2/210	1/68	1/294	2/158	0	1/26	2/34	3/139
4	 That empty teamname Nijmegen University	9 1165	1/36	0	1/173	2/128	3/134	0	1/179	3/287	1/9	1/19	2/80
5	 hackIT Karlsruhe Institute of Technology	8 672	1/26	0	1/98	1/195	2/44	0	1/145	0	1/8	1/12	1/124
6	 viRUS Reykjavik University	8 956	3/82	1	2/200	1/86	1/28	0	3/289	0	1/9	1/6	2/136
7	 Beuler University of Cambridge	8 1093	1/55	0	4/129	3/293	1/47	0	3/195	0	1/9	3/25	2/140
8	 Carrot University College London	8 1130	2/89	0	1/222	1/173	1/61	0	3/290	0	1/18	2/29	2/148
9	 UCool University of Southampton	7 530	1/21	0	1/136	2/83	1/87	0	6	0	1/13	1/43	4/67
10	 Little eleFAunt has array Friedrich-Alexander-University	7 554	1/43	0	1/106	1/200	1/31	5	3	0	2/16	1/13	1/125
11	 Exception: teamName not University of Warwick	7 689	1/72	0	1/136	3/251	1/47	0	0	0	1/27	1/13	1/103
12	 EE Dragons University of Cambridge	7 793	1/35	2	8/253	7	1/30	0	1/228	0	1/3	1/13	2/71
13	 Fastnade i en while-loop Lund University	7 803	1/62	0	7/291	2/99	2/43	0	1	0	1/15	1/7	1/126
14	 <{0v0}> Universitaet des Saarlandes	7 847	1/62	0	2/222	1/119	2/201	0	0	0	1/13	1/29	1/161
15	 ACK Friedrich-Alexander-University	7 848	3/65	0	3/266	1/167	1/99	0	0	0	1/15	1/8	2/128
16	 KTH 2 KTH - Royal Institute of Technology	7 856	1/86	2	1/225	1/266	1/50	0	2	0	1/19	1/15	3/155

Printing

- You can request **printouts** of your code
- Use the **judging system** to run printouts
- A volunteer will deliver the printout when ready

Clarification requests

- You can ask a **clarification request** to the judges using the online judging system.
- Possible **categories**:
 - Specific problem statement (e.g., Problem A).
 - Technical issue.
 - Other general issue.
- “**No comment**” when the judges decline to answer (e.g., already explained in the problem statement).
- Judges can send clarifications to **all teams**.
Check the judging system **regularly** for this.

Good luck!

- The practice is the time to test **everything**:
Please request printouts, ask for clarifications, etc.
- Try to solve **at least one problem** during the practice
- Good luck, and **have fun**!

Questions, comments, feedback. . .

SWERC'2017

