

Lab: Efficient Algorithms

Prof. Dr. Heiko Röglin
Dr. Daniel Schmidt

Winter term 2019/20

Topic of the lab

Competitive programming

Solving challenging programming exercises with limited resources by combining efficient algorithms and efficient implementations.

Structure of the lab

Plan for the term

- There will be five exercise sheets, about 36 exercises in total
- Upload your solutions to our server
- Meet every three weeks to present solutions
- Hand in report at the end of the term
- Grading based on # of correct solutions, active participation in the meetings and the report
- You may upload solutions after the presentation (will count slightly less towards your grade)
- After sheet 2: (Fixed) teams are allowed, we track individual contributions

Submitting solutions

Automatic testing

- Upload source code, server will compile and execute
- Server runs code on (secret) inputs and compares output (be careful with spaces/newlines :))
- Read input from standard input
- Server applies strict time and memory limits
- Response: Correct, Wrong Answer, Timeout, Runtime error, Compile error

Supported languages

- C++11: g++-4.9.2-10
- Java 1.7: jdk-1.7.0_111
- Python 2/3: 2.7.9 / 3.4.2

Lab server at

`http://compprog.cs.uni-bonn.de/domjudge/`

Access from network of the CS department/via the GSG VPN:

`https://gsg.bit.uni-bonn.de/doku.php?id=en:vpn`

→ Demonstration

Timeline

Meetings and Presentations

meeting	presentation	release
15.10.2019	organization	Sheet 1
29.10.2019	solutions Sheet 1	Sheet 2
12.11.2019	solutions Sheet 2	Sheet 3
03.12.2019	solutions Sheet 3	Sheet 4
07.01.2020	solutions Sheet 4	Sheet 5
28.01.2020	solutions Sheet 5	

Deadline for final reports: 13.03.2020.