

Data Structures and Algorithms

Course at D-MATH (CSE) of ETH Zurich

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FS 2018

Welcome!

Course homepage

<http://lec.inf.ethz.ch/DA/2018>

The team:

Chefassistent
Assistenten

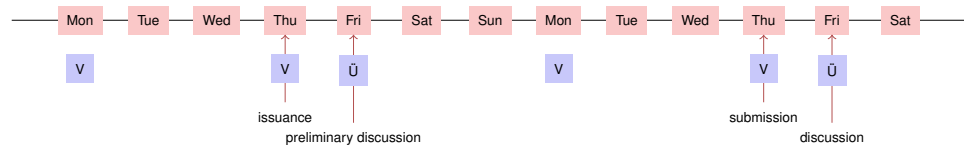
Alexander Pilz
Marija Kranjcevic
Anian Ruoss
Philippe Schlattner
Friedrich Ginnold
Felix Friedrich

Dozent

1

2

Exercises



- Exercises available at lectures.
- Preliminary discussion in the following recitation session
- Solution of the exercise until the day before the next recitation session.
- Discussion of the exercise in the next recitation session.

Exercises

- The solution of the weekly exercises is thus voluntary but *strongly* recommended.

3

4

Lacking Resources are no Excuse!

For the exercises we use an online development environment that requires only a browser, internet connection and your ETH login.

If you do not have access to a computer: there are a a lot of computers publicly accessible at ETH.

literature

Algorithmen und Datenstrukturen, *T. Ottmann, P. Widmayer*, Spektrum-Verlag, 5. Auflage, 2011

Algorithmen - Eine Einführung, *T. Cormen, C. Leiserson, R. Rivest, C. Stein*, Oldenbourg, 2010

Introduction to Algorithms, *T. Cormen, C. Leiserson, R. Rivest, C. Stein*, 3rd ed., MIT Press, 2009

The C++ Programming Language, *B. Stroustrup*, 4th ed., Addison-Wesley, 2013.

The Art of Multiprocessor Programming, *M. Herlihy, N. Shavit*, Elsevier, 2012.

5

6

Relevant for the exam

Material for the exam comprises

- Course content (lectures, handout)
- Exercises content (exercise sheets, recitation hours)

Written exam (120 min). Examination aids: four A4 pages (or two sheets of 2 A4 pages double sided) either hand written or with font size minimally 11 pt.

7

Offer

- Doing the weekly exercise series → bonus of maximally 0.25 of a grade points for the exam.
- The bonus is proportional to the achieved points of **specially marked bonus-task**. The full number of points corresponds to a bonus of 0.25 of a grade point.
- The **admission** to the specially marked bonus tasks can depend on the successful completion of other exercise tasks. The achieved grade bonus expires as soon as the course has been given again.

8

Academic integrity

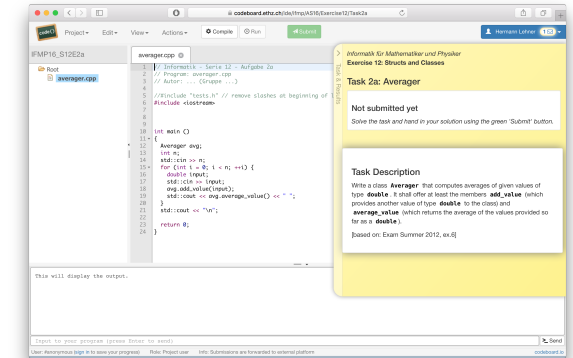
Rule: You submit solutions that you have written yourself and that you have understood.

We check this (partially automatically) and reserve our rights to adopt disciplinary measures.

Codeboard

Codeboard is an online IDE: programming in the browser!

- Bring your laptop / tablet / ... along, if available.
- You can try out examples in class without having to install any tools.



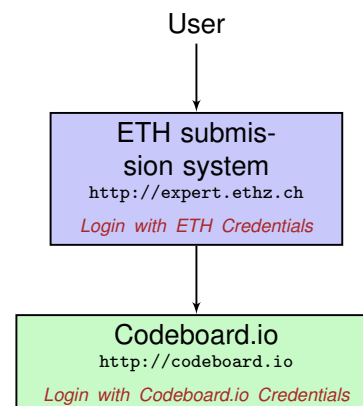
9

10

Expert

Our exercise system consists of two independent systems that communicate with each other:

- **The ETH submission system:** Allows us to evaluate your tasks.
- **The online IDE:** The programming environment



11

Exercise Registration

Codeboard.io Registration

Go to <http://codeboard.io> and create an account, stay logged in.

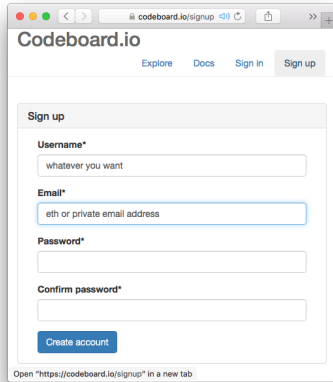
Registration for exercises

Go to <http://expert.ethz.ch/da2018> and inscribe for one of the exercise groups there.

12

Codeboard.io Registration

If you do not yet have an **Codeboard.io** account ...

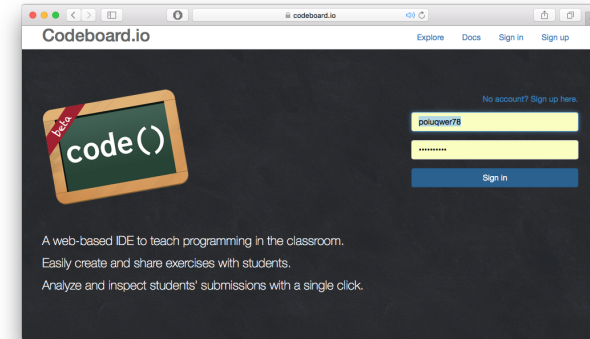


The screenshot shows the Codeboard.io registration page. It features a 'Sign up' form with the following fields: 'Username*' (placeholder: 'whatever you want'), 'Email*' (placeholder: 'eth or private email address'), 'Password*', and 'Confirm password*'. A 'Create account' button is located at the bottom of the form. The browser's address bar shows 'codeboard.io/signup'.

- We use the online IDE **Codeboard.io**
- Create an account to store your progress and be able to review submissions later on
- Credentials can be chosen arbitrarily *Do not use the ETH password.*

Codeboard.io Login

If you have an account, log in:



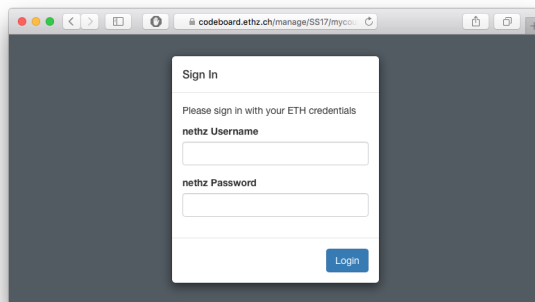
The screenshot shows the Codeboard.io login page. It features a 'code()' logo on the left and a login form on the right. The form has two input fields: one for the username (containing 'poluqwer78') and one for the password (masked with dots). A 'Sign in' button is located below the password field. A link 'No account? Sign up here.' is positioned above the password field. Below the form, there is a brief description of the IDE: 'A web-based IDE to teach programming in the classroom. Easily create and share exercises with students. Analyze and inspect students' submissions with a single click.'

13

14

Exercise group registration I

- Visit <http://expert.ethz.ch/da2018>
- Log in with your nethz account.

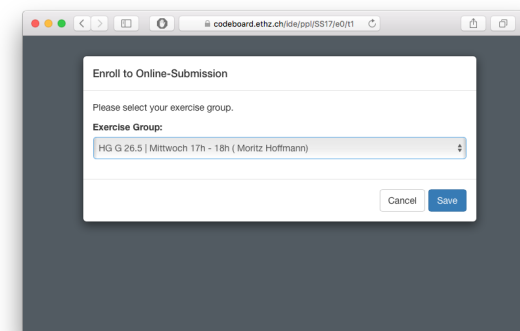


The screenshot shows a 'Sign In' dialog box. It contains the text 'Please sign in with your ETH credentials' and two input fields: 'nethz Username' and 'nethz Password'. A 'Login' button is located at the bottom right of the dialog.

15

Exercise group registration II

Register with this dialog for an exercise group.

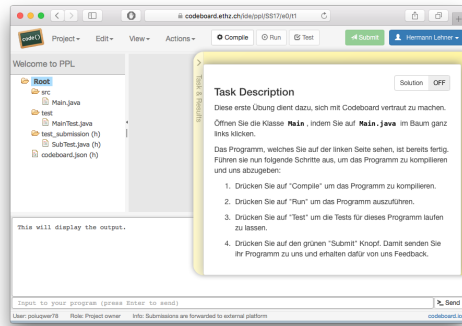


The screenshot shows an 'Enroll to Online-Submission' dialog box. It contains the text 'Please select your exercise group.' and a dropdown menu labeled 'Exercise Group:' with the selected option 'HG G 26.5 | Mittwoch 17h - 18h (Moritz Hoffmann)'. 'Cancel' and 'Save' buttons are located at the bottom right of the dialog.

16

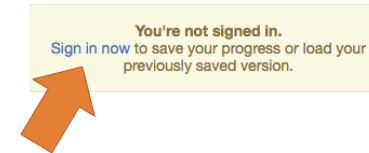
The first exercise.

You are now registered and the first exercise is loaded. Follow the instructions in the yellow box.



The first exercise – codeboard.io login

Attention If you see this message, click on [Sign in now](#) and register with your **codeboard.io** account.

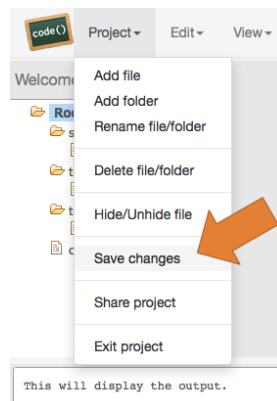


17

18

The first exercise – store progress

Attention! Store your progress regularly. So you can continue working at any different location.



In your and our Interest

Please let us know as soon as possible when you see problems, if

- the lectures are too fast, too hard, too slow,
- you have problems with the exercises ...
- you do not feel well looked after ...

Briefly: if there is anything that we can fix



19

20

Should there be any Problems ...

- with the course content
 - definitely attend all recitation sessions
 - ask questions there
 - request a meeting with the assistant
- other problems
 - Email to the head TA (Alexander Pilz) or
 - Email to lecturer (Felix Friedrich)
- We are willing to help.