

Computer Systems, B1-2 2019-20

Introduction

Michael Kirkedal Thomsen

DIKU, September 2, 2019

Overall outline

- Week 36-41 Machine architecture and introduction to C programming
 - C programming in parallel
- Week 42 Fall break
- Week 43-45 Operating systems
 - Week 46 No activities (reexam week)
- Week 47-48 Operating systems cont.
- Week 49-51 Computer networks and encryption
 - Week 52 Christmas vacation
 - Week 2 Computer networks cont.
 - Week 4 4-hour written exam (Wed, Jan 22)

Lectures

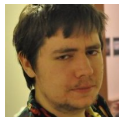
- Mondays 13-15
- Wednesdays 10-12



Michael Kirkedal
Thomsen, Course-
leader, assembler
programming, Compu-
ter Network



Finn Schirmer Ander-
sen, Computer Archi-
tecture



Troels Henriksen, C
programming, Operat-
ing Systems



Troels Langkjær, IT-
security

Teaching Material

- BOH Computer Systems: A programmer's approach, Randal E. Bryant and David R. O'Hallaron, Pearson, 3rd and Global Edition, ISBN 13: 978-1292101767
- KR Computer Networking: A Top-Down Approach, James F. Kurose and Keith W. Ross, Pearson, 7th and Global Edition, ISBN 13: 978-1292153599 (This book will not be used before December)
- JG Modern C, Jens Gustedt, http://icube-icps.unistra.fr/img_auth.php/d/db/ModernC.pdf
- ?? Some notes and book chapters that will be made available through the detailed course schedule

BOH is (and KR will be) available at Academic Books at Panum (<http://www.academicbooks.dk/> (Links to an external site.)) and Polyteknisk Boghandel at Biocenteret (<http://www.polyteknisk.dk/> (Links to an external site.)).

Exercises and TAs

- Mondays 15-17
- Wednesdays 13-15

TAs (Location today):

- Hold 1: Æmilie Bom Cholewa-Madsen (HCØ Aud 07)
- Hold 2: Jens Kanstrup Larsen (Biocenter, 2-2-07/09)
- Hold 3: Daniel Alstrup (NEXS Karnapsalen, Nørre Alle 53)
- Hold 4: Magnus Joensen (Biocenter 4-0-05)
- Hold 5: Eva Kroon Enevoldsen (NBB 1.H.142)
- Hold 6: Jonas Flach-Jensen (DIKU 3-1-25)
- Hold 7: Anders Holst (AB Teori 2)
- Hold 8: Kristian Bøjer Andreasen (NEXS Auditorium Nord, Nørre Alle 51)

Look at course details (online) for more locations.

Assignment Cafées and Ambassador

- Wednesdays 15-17
- Fridays
 - Block 1: 14-16
 - Block 2: 13-15

Look at course details (online) for more locations.

Ambassador(s)

- Mathias Graae Larsen <cala@di.ku.dk>

Can help with

- Group members
- A way to the administration
- A fellow student that can answer questions (or help find the answers)
- Meet them at Friday cafées (They do know CompSys material)

Groups

Size

2-3 student advised. 1 can be accepted but not recommended. More than 3 not allowed.

- Sign up for classes with your group-mates on Absalon
- If you need one or more members
 - Come to Aud 4 Tuesday Sep 5 @ 11:00 (just after MASD)
 - Course ambassadors will facilitate

Assignments

- There are 8 assignment in total during the course with deadline roughly every week or second week (all Sundays). The assignments will be evaluated with points.
- Assignments will be awarded zero to 4 points.
- You are required to achieve at least 50 % of the total number of points (equal to 12).
- A0 and A1 is counted as one assignment.
- Also we will require that you achieve points in each the of topics of the course to ensure that you have touched all parts of the curriculum.
- Assignments are made to be solved in groups of 2-3 students, but you can also do them by alone.

Assignment rules

Each group must make their own solution.

This means

- You can talk with other people about the assignments: Teachers, TAs, other students, etc.
- You cannot share written code with other groups.
- You are not allowed to use code that you did not write yourself without proper citation.
- You cannot share written text with other groups.
- You are not allowed to use text of material without proper citation
 - This also includes material provided on the course.

Assignments vs. exercises

- Note! Both are equally important
- Assignments:
 - Seek to test learning goals that relates to implementation and development of computer systems.
 - Does not fully prepare you for the written exam, but for some
- Exercises:
 - Helps you understand the theoretical parts of the material.
 - Prepares you for part of the exam.
- Difference should be clear this year.

Tools

- C compiler – gcc
- C debugger – gdb
- Image for VirtualBox will be available
 - Special setup of VirtualBox is needed and will be done at exercises
- You can also install most tools on you laptop
 - Linux: most available though apt
 - OS X: most available though Homebrew
 - Windows: Windows Subsystem for Linux
- Set up your tool chain
 - recommended using git to share code and reports in your group
 - Sign-up at GitHub today and apply for the *Student Developer Pack*
 - <https://education.github.com/>
- Tool-site is available on Absalon/Github

Teaching format - flipped-class room

We will start by introducing flipped-class room to some degree.

- Exercises before lectures
 - Some will collect and recap on material from last time
 - Some will introduce tools that are not discussed further in the lectures
 - Some will introduce material we will use in following lectures
- Lectures
 - Videos can be made available to introduce you to the material
 - You will be expected to prepare in advance
 - Quizzes can be made to recap the videos and help us know your understanding
- UP
 - I will ask for volunteers

Exam

- The exam is a 4-hour written exam; Jan 22 2020.
- Exact format is not fixed; It will *not* be ITX.
- The course syllabus is the exercises, assignments and reading material.
- Previous exams will be available.

Questions?