Computer Systems, B1-2 2019-20

Introduction

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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, Computer Network

Finn Schirmer Andersen, Computer Architecture

Troels Henriksen, C programming, Operating 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 fixes; It will *not* be ITX.
- The course syllabus is the exercises, assignments and reading material.
- Previous exams will available.

Questions?