Høgskolen i Østfold

Introduction to Lab Sessions

Objectives

- To help students to better understand the theorical parts of the lectures
- To see the theories from implementation points of views
- To improve students' programming skills

Expectations

- Students try to understand lab materials and do exercises
- Teachers (& TA) try to help students understand the materials and answer questions
- We expect more questions from students

- No cheating!

Labs Grading

- 50% of course grade comes from theories while the other 50% comes from programming and other exercises

- 13 lab sessions
  - Total points for each lab: 100 (or 100 + bonus points)

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Labs Grading

- All lab sessions will be graded (points/scores)
- We will decide which labs will be counted towards the your final labs grade
- Lab grade
  - Lab average scores/points: the average of the scores/points you earn from all selected labs
  - Scale: A-F
- Students final grade: Labs grade (50%) + Written Exam (50%)

Materials

- No textbooks
- Labs materials will be delivered through GitHub
- For each lab session:
  - Instruction will be posted on Wednesday
  - Submission deadline: Thursday of the following week
  - TA office hours: Tuesday

Students Submissions

- We use GitHub to manage your submissions
- Only on-time submission will be graded
- Hard deadline
  - Right after the deadline, TA will pull all students repositories

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Teaching Assistance (TA)

- Michal Kowalski (michal.kowalski@hiof.no)
- Joakim Jensen (joakim.jensen@hiof.no)
- TA office hours: 12pm – 2pm every Tuesday except Sept. 14th
- Available on Discord

Expected conduct for lab assignment

Students can discuss an assignment with other students and ask TAs or teachers for assistance. However, each student has to complete his/her assignment individually. Copying of another' assignment or copying code from the Internet is strongly prohibited. We assume that all programming and exercises throughout this course is your own. If we are not sure that the work you submitted demonstrates your clear understanding, we may request that you give an oral presentation.

Policy

- If plagiarism is detected, students will get 0 points for the lab session with plagiarism

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Labs Organizations

Date	Details	Due
Mon Aug 23, 2021	Forelesning: Kursinformasjon og introduksjon til operativsystemer	12:15pm to 2pm
Fri Aug 27, 2021	Lab 1: Warm-up with Linux OS	10:15am to 2pm
Mon Aug 30, 2021	Forelesning: C-programmering	12:15pm to 2pm
Fri Sep 3, 2021	Lab 2: C programming 1	10:15am to 2pm
Mon Sep 6, 2021	Forelesning: Prosesser	12:15pm to 2pm
Fri Sep 10, 2021	Lab 3: C programming 2	10:15am to 2pm
Mon Sep 13, 2021	Forelesning: Tråder	12:15pm to 2pm
Fri Sep 17, 2021	Lab 4: GNU compiler and gdb	10:15am to 2pm
Mon Sep 20, 2021	Forelesning: Interprosesskommunikasjon 1	12:15pm to 2pm
Fri Sep 24, 2021	Lab 5: Process in Linux	10:15am to 2pm
Mon Sep 27, 2021	Forelesning: Interprosesskommunikasjon 2	12:15pm to 2pm
Fri Oct 1, 2021	Lab 6: Thread Programming 1	10:15am to 2pm

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Fri Sep 3, 2021	Lab 2: C programming 1	10:15am to 2pm
Mon Sep 6, 2021	Forelesning: Prosesser	12:15pm to 2pm
Fri Sep 10, 2021	Lab 3: C programming 2	10:15am to 2pm
Mon Sep 13, 2021	Forelesning: Tråder	12:15pm to 2pm
Fri Sep 17, 2021	Lab 4: GNU compiler and gdb	10:15am to 2pm
Mon Sep 20, 2021	Forelesning: Interprosesskommunikasjon 1	12:15pm to 2pm
Fri Sep 24, 2021	Lab 5: Process in Linux	10:15am to 2pm
Mon Sep 27, 2021	Forelesning: Interprosesskommunikasjon 2	12:15pm to 2pm
Fri Oct 1, 2021	Lab 6: Thread Programming 1	10:15am to 2pm

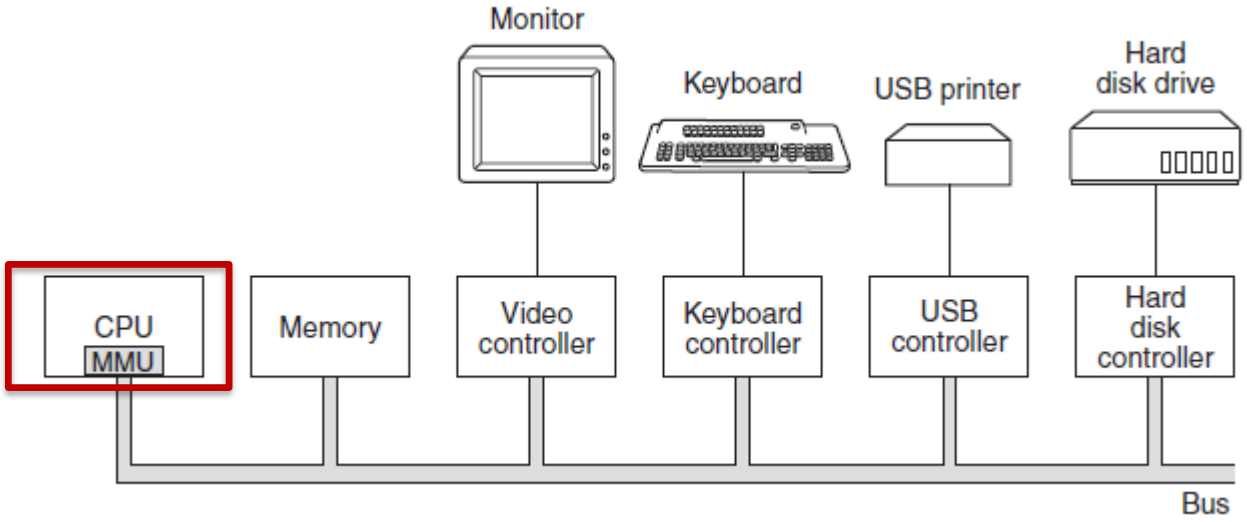
Mon Oct 4, 2021	Forelesning: Scheduling	12:15pm to 2pm
Fri Oct 8, 2021	Lab 7: Thread Programming 2	10:15am to 2pm
Mon Oct 11, 2021	Forelesning: Minnehåndtering 1	12:15pm to 2pm
Fri Oct 15, 2021	Lab 8: InterProcess Communication (IPC) 1	10:15am to 2pm
Mon Oct 18, 2021	Forelesning: Minnehåndtering 2	12:15pm to 2pm
Fri Oct 22, 2021	Lab 9: InterProcess Communication (IPC) 2	10:15am to 2pm
Mon Oct 25, 2021	Forelesning: Deadlocks 1	12:15pm to 2pm
Fri Oct 29, 2021	Lab 10: Process Scheduling	10:15am to 2pm
Mon Nov 1, 2021	Forelesning: Deadlocks 2	12:15pm to 2pm
Fri Nov 5, 2021	Lab 11: Bash Shell Script	10:15am to 2pm
Mon Nov 8, 2021	Forelesning: Filsystemer	12:15pm to 2pm
Fri Nov 12, 2021	Lab 12: Memory Management.	10:15am to 2pm
Mon Nov 15, 2021	Forelesning: Input/Output	12:15pm to 2pm
Fri Nov 19, 2021	Lab 13: File Systems.	10:15am to 2pm

Labs

- Lab 1: Warm-up with Linux and Gits
- Lab 2,3: C programming
- Lab 4: GNU complier and gdb

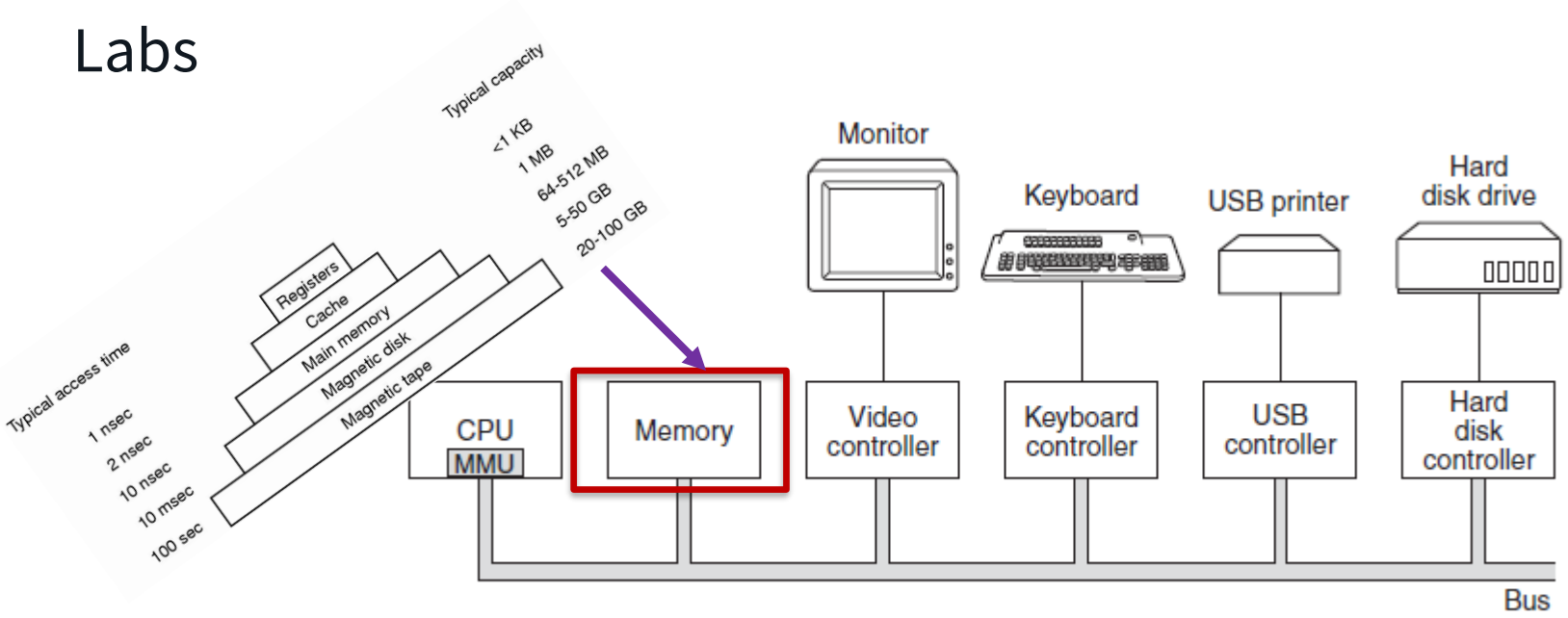
Høgskolen i Østfold

Labs



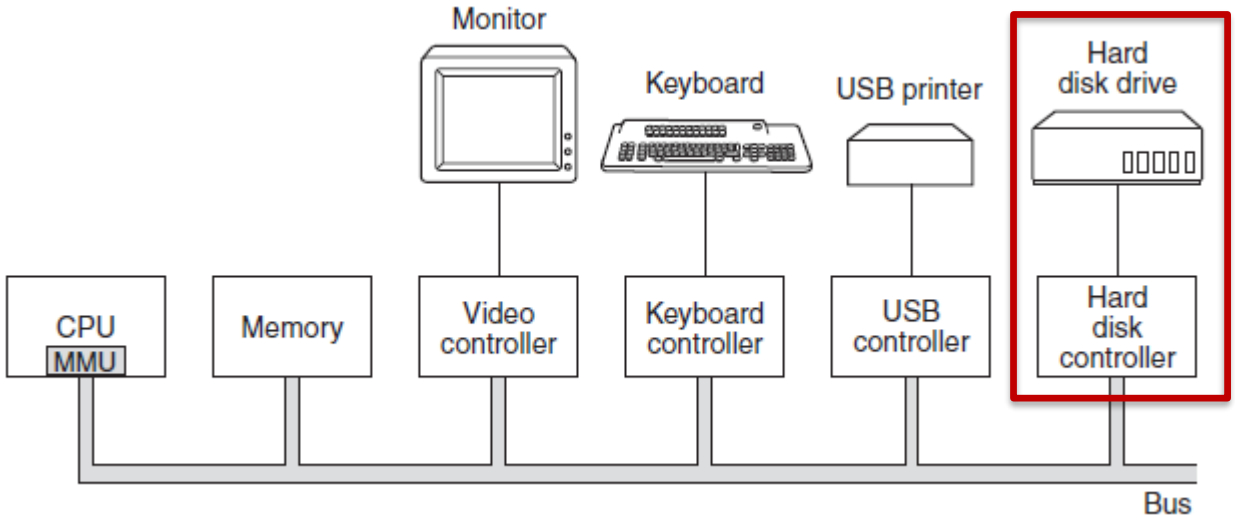
Høgskolen i Østfold

Labs



Høgskolen i Østfold

Labs



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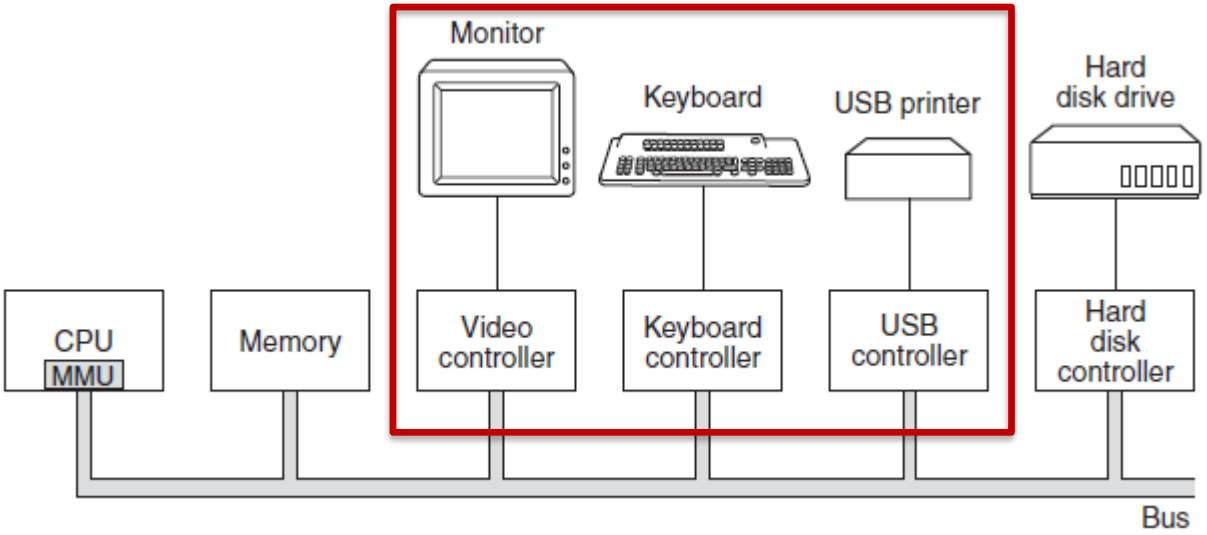
Labs



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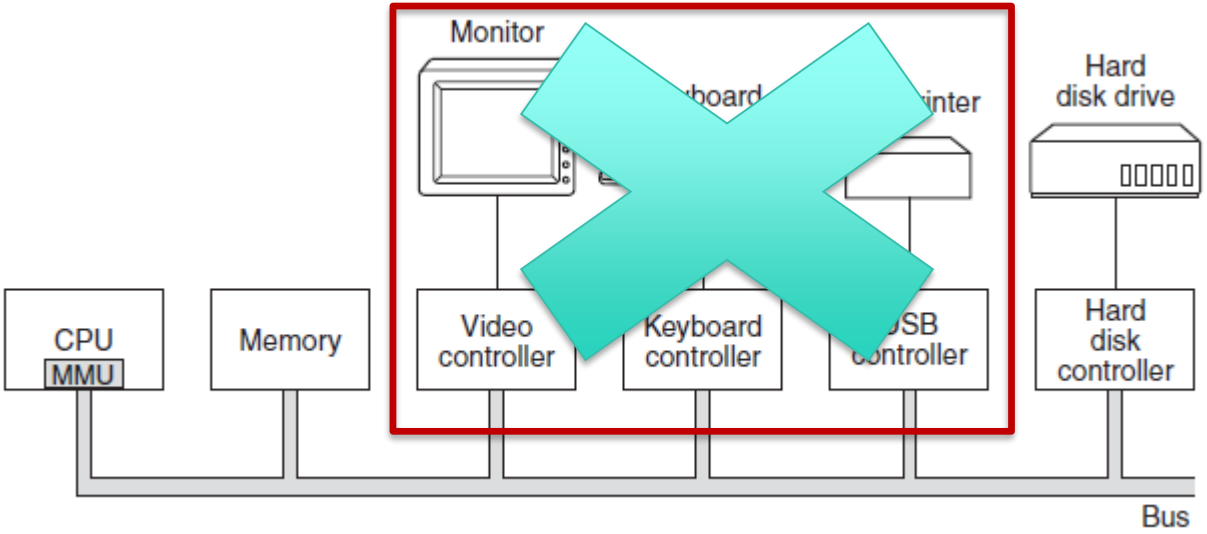
Labs



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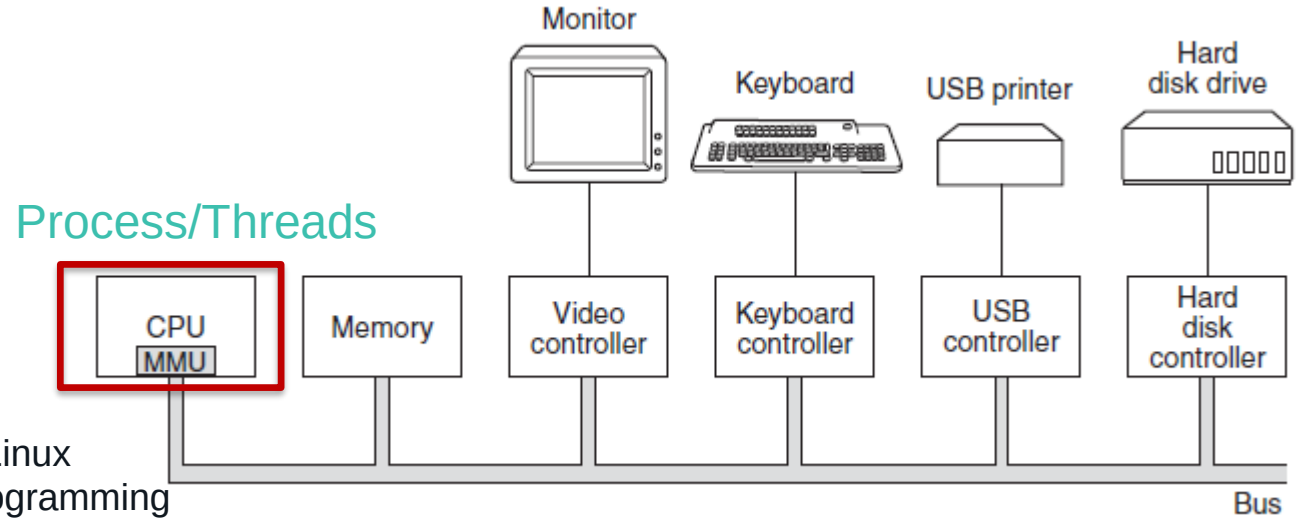
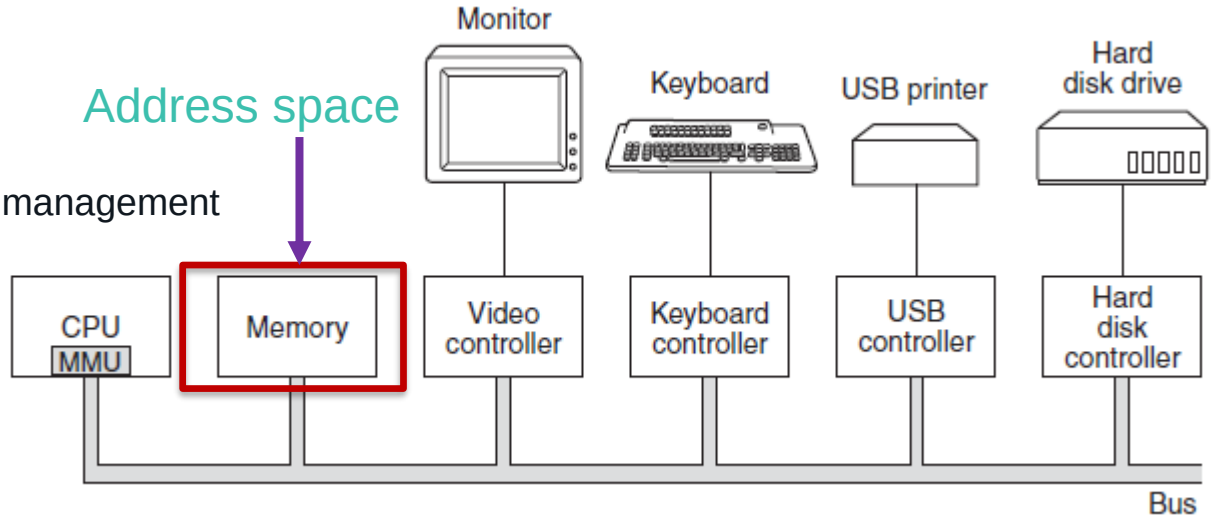
Labs



(Lab 5) Process in Linux
(Lab 6,7)Thread Programming
(Lab 8, 9) InterProcess Communication
(Lab 10) Process scheduling

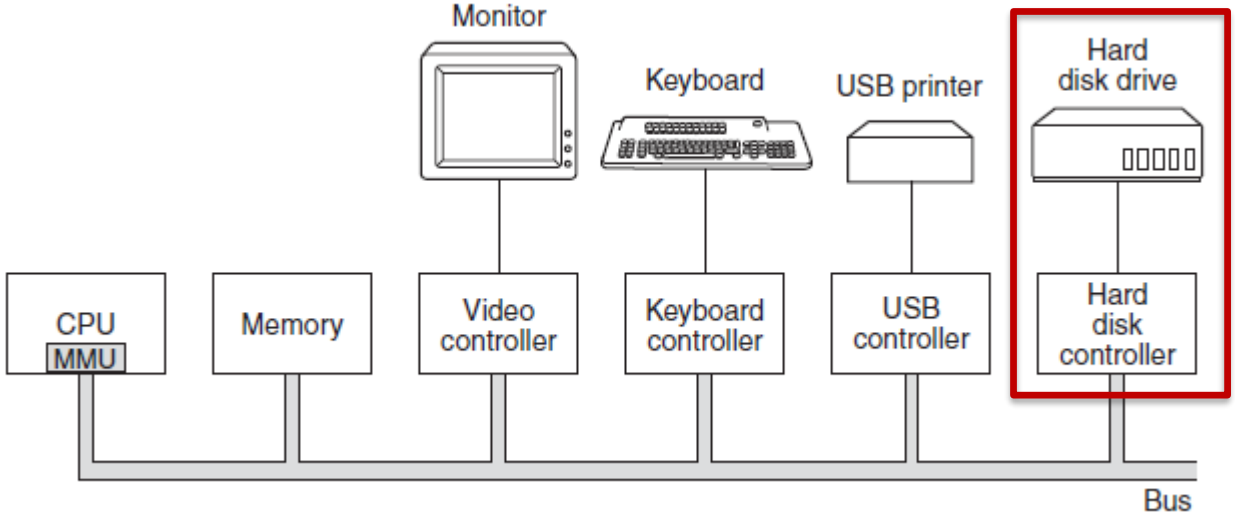
Labs

(Lab 12) Memory management



Labs

File systems



Labs

- Lab 11: Bash Scripting

Q&A