

Operating System Concepts

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Homework 2–
Compile the Linux Kernel

Process for Compiling Kernel

- Install Required Tools and Packages
  - e.g., build-essential, fakeroot, …
- Download the Linux Kernel Source Code
  - from the Linux distribution you used or from
  - https://www.kernel.org/
- Extract the Downloaded Source Code
- Configured the Linux Kernel
- Compile the Linux Kernel
- Install the New Kernel

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Requirements

- Use “uname -r” to check your kernel version
- Download the source code of your current kernel
- Compile and install it
- Use uname -r to show the new kernel

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Report

1. The steps for your implementation
2. The problem you met, and how you solved it
3. **The reference of this homework**

- The report is limited within 2 pages in PDF
  - If you have bonus one extra page (3 pages in total)

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Grading

- Implementation
  - The screenshots of the compiling process 30%
  - Boot the new kernel 30%
- Report
  - 20%
- Bonus
  - Study your bootloader, e.g., GRUB 2
    - Modify the default kernel for booting 5%
    - Modify the list of kernels in the GRUB menu 5%
  - Download, compile and install Linux kernel 7.3.3 10%
- Demo Q&A
  - 20%

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Submission

- Homework 2 deadline: at 23:00 on 2026-12-1

➔**NO DELAY!**

- Upload to e-learning system
- The title of the report: OSHomework2StudentID
- **Point deduction for wrong format: 10%**

➔DEMO will be arranged!

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