Operating systems

ELTE IK.

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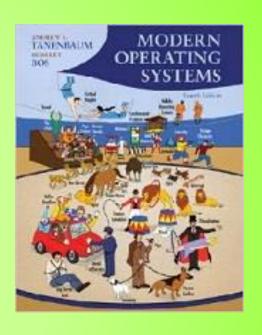
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Base Information

- The „Operating systems" homepage is: http://oprendszerek.inf.elte.hu
  - http://opsystems.inf.elte.hu
- Schedule of subject: 2+1(+1)
- Practice: 45 min/ week or 90 min/2 weeks
- The main result of the subject: one (final) mark
  - Both of lectures and practices
- Requirements of grade:
  - 2 homework
  - 2 exams(one theoretical,one practical).
    - 1. exam time: appr. 9.week (lectures)
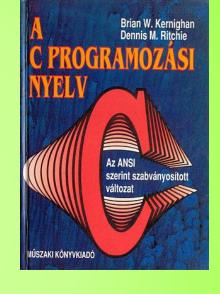   - 2. exam time: last but one week (practical)

Literature I.

- Andrew S. Tanenbaum, Herbert Boss: Modern Operating systems.
4. edition, 2014.

Literature II.

- Brian W.Kernighan, Dennis M. Ritchie: The C programming language

- Brian W.Kernighan, Rob Pike: Unix operating systems

Some of the illustrations are based on the figures of the above given literature.

The goal of subject

- Make more clear the role of operating system.
- Review questions, base problems, solutions during a planned, examined operating system.
- Choosing the right, appropriate operating system on demand.
- Knowladge of the operating system core base API functions.

Prerequisites

- Fundaments of computers
  - Unix shell script programming
- Fundaments of Programming
  - C, C++ language, base algorithms.
  - C#
- Programming languages I. (C++)
  - …

Preview of chapters

- Introduction, reviews (Foundation of computers, architecture of computers,API)
- Operating system definitions, it's evolution, user interfaces
- Files, file systems,directories, disk management
- Processes, scheduling of processes
- Input–output, resources, deadlock handling
- Memory management
- Real–Time Operating system features

Preview of practices

- Setup of your workspace.
  - We use the oprendszerek.inf.elte.hu server!
  - Your login id is: Your Neptun code
  - Password... passwd command.
  - Using a text editor: vi, mcedit, joe
  - Local text editing
    - Moving local file to server via ssh based FTP.
  - Using the winscp editor.
  - Modifying PATH environment variable.

Compiling on Server

- The server has (SLES 11 RTE SP1) GNU C, C++ compiler.
  - /usr/bin/gcc-4.3   Default C, C++ compiler, at .c C, at .cpp C++ mode.
  - cc, gcc – easier usage
  - Man gcc
  - Compiling: cc apple.c
    - Result: a.out
  - Compiling: cc -o apple -Wall apple.c
    - Result: apple, and shows all warnings
  - /usr/bin/g++-4.3 Default C++ compiler
    - it may be used as gpp

Thanks for your attention!

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