

Advanced Operating System CSC 546

Dr. J. Montgomery
Spring 2002, Thursdays

Overview

- Syllabus
- Grading

Chap 0

Syllabus

- Cover Internals of OS
- Process Control
- Memory Management
- Scheduling
- I/O
- Projects (NACHOS)
- Grading

Chap 0

Computing Environment

- DePaul University
 - ◆ Hawk
 - HP Server
 - Unix based
 - ◆ Debian Linux ??
 - Intel Based
 - Unix
- Personal Computers ??

Chap 0

NACHOS

- OS Simulator
- Source Code
 - ◆ <http://condor.depaul.edu/~jmontgo2/cs546/index.html>
 - ◆ Version for HP
 - ◆ Soon to come Debian/Linux version

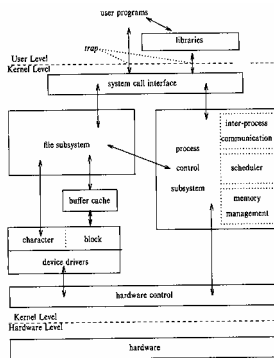
Chap 0

Grading

- 3 programming projects
- 1 technical paper presentation
- Quizzes
 - A 100 – 91
 - B 81 – 90
 - C 71 – 80
 - D 64 – 70
 - F below 64

Chap 0

Kernel Overview



Chap 0

System Kernel

- Kernel is partitioned into subsystems
 - ◆ I/O (file system, tape, etc.)
 - ◆ Memory management
 - ◆ Scheduler
 - ◆ Inter-process Control (synchronization)
 - ◆ Device drivers

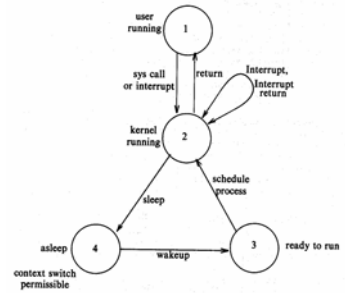
Chap 0

Process

- **Program in execution**
 - ◆ Text, data and stack
 - ◆ Separate stacks for user and kernel
- **Holds or uses resources**
- **State**

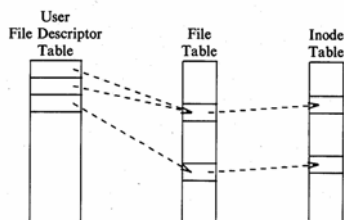
Chap 0

Process Transition States



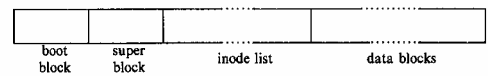
Chap 0

File Descriptors



Chap 0

File System Layout



Chap 0