

操作系统-重点划分

50个选择，70分

3个简单题，一个10分(同步算法，内存里计算为主的)



教学目录(原理部分)

- Chapter 1: Introduction 引论
- Chapter 2: Operating-System Structures 操作系统结构
- Chapter 3: Processes 进程
 - 3.1 Process Concept
 - 3.3 Operations on Processes
- Chapter 4: Threads 线程
 - 4.1 Overview
 - 4.2 Multithreading Models
- Chapter 5: CPU Scheduling CPU调度
 - 5.1 Basic Concepts
 - 5.2 Scheduling Criteria
 - 5.3 Scheduling Algorithms

0.2



(生产者消费者)

(不考monitor)

(死锁都重要，因为都红太难看因此不画)



教学目录(原理部分)

- Chapter 6: Process Synchronization 进程同步
 - 6.2 The Critical-Section Problem
 - 6.3 Peterson Algorithm
 - 6.4 Synchronization Hardware
 - 6.5 Semaphores
 - 6.6 Classical Problems of Synchronization
- Chapter 7: Deadlocks 死锁
 - 7.1 System Model
 - 7.2 Deadlock Characterization
 - 7.3 Methods for Handling Deadlocks
 - 7.4 Deadlock Prevention
 - 7.5 Deadlock Avoidance
 - 7.6 Deadlock Detection
 - 7.7 Recovery from Deadlock

0.3



(碎片)

(请求分页、缺页机制TLB页表和调入内存)

(帧分配和copy-on-write)



教学目录(原理部分)

■ Chapter 8: Memory Management 存储器管理

- 8.2 Swapping (交换)
- 8.3 Contiguous Memory Allocation (连续内存分配)
- 8.4 Paging (分页)
- 8.5 Segmentation (分段)
- 8.6 Segmentation with Paging (段页式)

■ Chapter 9: Virtual Memory 虚拟存储器

- 9.1 Background
- 9.2 Demand Paging
- 9.3 Copy-on-Write
- 9.4 Page Replacement
- 9.5 Allocation of Frames
- 9.6 Thrashing
- 9.7 Memory-Mapped Files

0.4



第十章看ppt, 11章要知道文件系统类型

空闲空间, 看位图



教学目录(原理部分)

■ Chapter 10: File-System Interface 文件系统接口

- 10.1 File Concept
- 10.2 Access Methods
- 10.3 Directory Structure
- 10.4 File-System Mounting
- 10.5 File Sharing
- 10.6 Protection

■ Chapter 11: File System Implementation 文件系统实现

- 11.1 File-System Structure
- 11.2 File-System Implementation
- 11.3 Directory Implementation
- 11.4 Allocation Methods
- 11.5 Free-Space Management

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磁盘调度算法, 要知道

I/O看作业题, 知道基础概念, 缓冲, spooling等就行, 应该没有什么难的题



教学目录(原理部分)

■ Chapter 12: Mass-Storage Systems 海量存储系统

- 12.4 Disk Scheduling
- 12.5 Disk Management
- 12.6 Swap-Space Management
- 12.7 RAID Structure

■ Chapter 13: I/O Systems I/O系统

- 13.2 I/O Hardware
- 13.3 Application I/O Interface
- 13.4 Kernel I/O Subsystem

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只有简单的命令