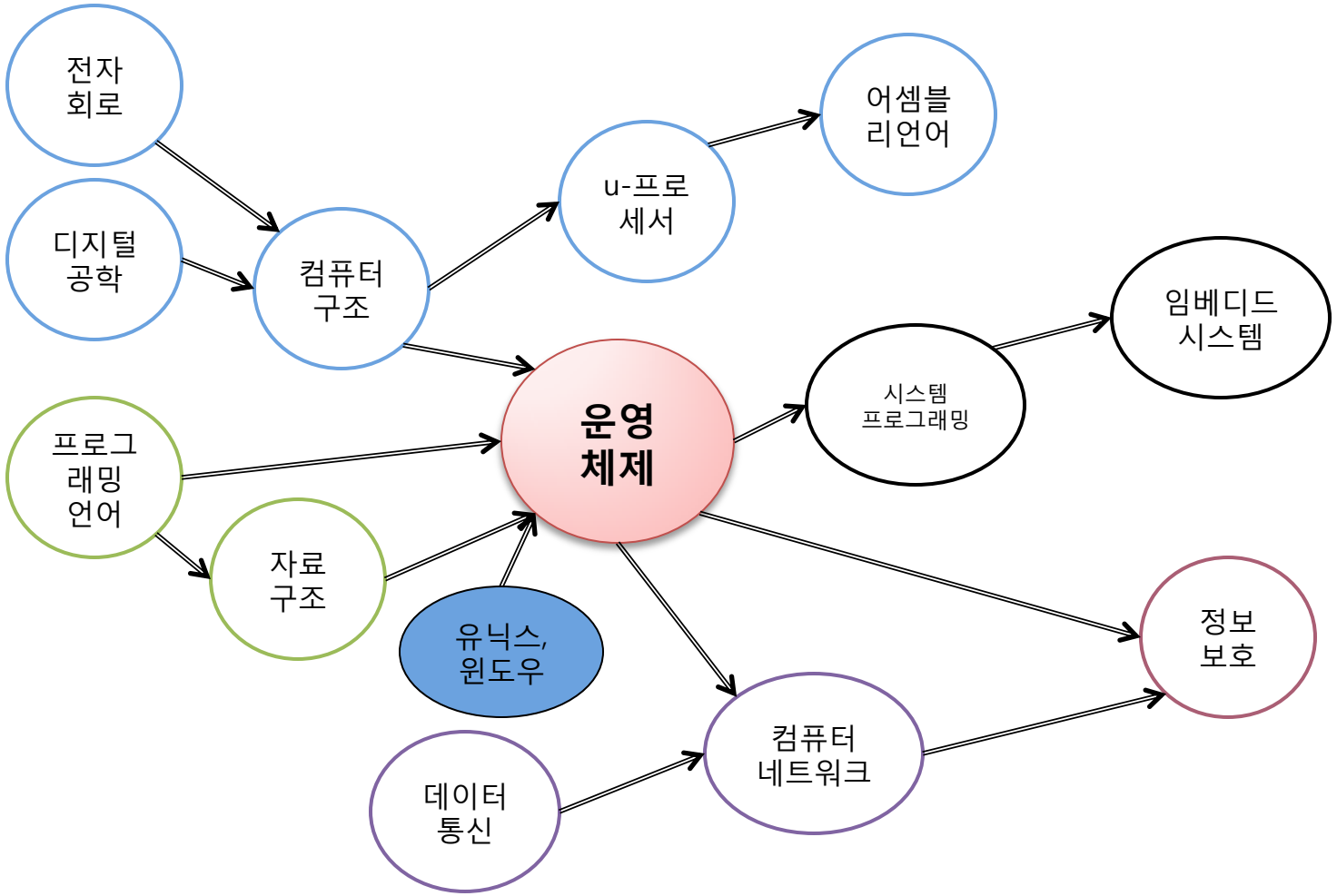
운영체제

교과과정 속의 운영체제


전자
회로
디지털
공학
컴퓨터
구조
u-프로
세서
어셈블
리언어
프로그
래밍
언어
자료
구조
운영
체제
유닉스,
윈도우
데이터
통신
시스템
프로그래밍
임베디드
시스템
컴퓨터
네트워크
정보
보호

개요 (1)

- Chapter 1: Introduction
  - What Operating Systems Do
  - Computer-System Organization
  - Computer-System Architecture
  - Operating-System Structure
  - Operating-System Operations
  - Process Management
  - Memory Management
  - Storage Management
  - Protection and Security
  - Distributed Systems
  - Special-Purpose Systems
  - Computing Environments
  - Open-Source Operating Systems

개요 (2)

- Chapter 2: Operating-System Structures
  - Operating System Services
  - User Operating System Interface
  - System Calls
  - Types of System Calls
  - System Programs
  - Operating System Design and Implementation
  - Operating System Structure
  - Virtual Machines
  - Operating System Debugging
  - Operating System Generation
  - System Boot

프로세스 관리 (1)

- Chapter 3: Processes
  - Process Concept
  - Process Scheduling
  - Operations on Processes
  - Interprocess Communication
  - Examples of IPC Systems
  - Communication in Client-Server Systems

프로세스 관리 (2)

- Chapter 4: Threads
  - Overview
  - Multithreading Models
  - Thread Libraries
  - Threading Issues
  - Operating System Examples
  - Windows XP Threads
  - Linux Threads

프로세스 관리 (3)

- Chapter 5: CPU Scheduling
  - Basic Concepts
  - Scheduling Criteria
  - Scheduling Algorithms
  - Thread Scheduling
  - Multiple-Processor Scheduling
  - Operating Systems Examples
  - Algorithm Evaluation

프로세스간 협력 (1)

- Chapter 6: Process Synchronization
  - Background
  - The Critical-Section Problem
  - Peterson's Solution
  - Synchronization Hardware
  - Semaphores
  - Classic Problems of Synchronization
  - Monitors
  - Synchronization Examples
  - Atomic Transactions

프로세스간 협력 (2)

- Chapter 7: Deadlocks
  - The Deadlock Problem
  - System Model
  - Deadlock Characterization
  - Methods for Handling Deadlocks
  - Deadlock Prevention
  - Deadlock Avoidance
  - Deadlock Detection
  - Recovery from Deadlock

메모리 관리 (1)

- Chapter 8: Main Memory
  - Background
  - Swapping
  - Contiguous Memory Allocation
  - Paging
  - Structure of the Page Table
  - Segmentation
  - Example: The Intel Pentium

메모리 관리 (2)

- Chapter 9: Virtual Memory
  - Background
  - Demand Paging
  - Copy-on-Write
  - Page Replacement
  - Allocation of Frames
  - Thrashing
  - Memory-Mapped Files
  - Allocating Kernel Memory
  - Other Considerations
  - Operating-System Examples

저장 관리 (1)

- Chapter 10: File-System Interface
  - File Concept
  - Access Methods
  - Disk and Directory Structure
  - File-System Mounting
  - File Sharing
  - Protection

저장 관리 (2)

- Chapter 11: File System Implementation
  - File-System Structure
  - File-System Implementation
  - Directory Implementation
  - Allocation Methods
  - Free-Space Management
  - Efficiency and Performance
  - Recovery
  - NFS
  - Example: WAFL File System

저장 관리 (3)

- Chapter 12: Secondary-Storage Systems
  - Overview of Mass Storage Structure
  - Disk Structure
  - Disk Attachment
  - Disk Scheduling
  - Disk Management
  - Swap-Space Management
  - RAID Structure
  - Stable-Storage Implementation
  - Tertiary Storage Devices

저장 관리 (4)

- Chapter 13: I/O Systems
  - I/O Hardware
  - Application I/O Interface
  - Kernel I/O Subsystem
  - Transforming I/O Requests to Hardware Operations
  - STREAMS
  - Performance

보호와 보안 (1)

- Chapter 14: Protection
  - Goals of Protection
  - Principles of Protection
  - Domain of Protection
  - Access Matrix
  - Implementation of Access Matrix
  - Access Control
  - Revocation of Access Rights
  - Capability-Based Systems
  - Language-Based Protection

보호와 보안 (2)

- Chapter 15: Security
  - The Security Problem
  - Program Threats
  - System and Network Threats
  - Cryptography as a Security Tool
  - User Authentication
  - Implementing Security Defenses
  - Firewalling to Protect Systems and Networks
  - Computer-Security Classifications
  - An Example: Windows