coggle
made for free at coggle.it

Mind Mapping of Advance OS

- **Advanced Operating System**
  - **Week 14 Input / Output**
    - 1.I/O Interface in computer organization
    - 2.Principles of I/O Software
    - 4.Synchronous vs. asynchronous Operation
    - 5.Device Controllers
    - 6.Device Controllers tasks
    - 7.P6 layers of the i/0 system
    - 8.memory-mapped i/o vs Direct i/o
  - **Week 13 agenda**
    - 1.Linked List Allocation
      - Pros
      - Cons
    - 2.Contiguous Allocation in Operating system
      - Pros
      - Cons
    - 3.Indexed File Allocation in Operating System
      - Pros
      - Cons
  - **Week 12 File Systems**
    - 1.How File System Works
    - 2.Design issues and Challenges of File system
    - 3.File and Directory
    - 4.Basic Operations
    - 5.Sync and Seek System Call
    - 6.Directory
    - 7.Steps in fully Qualified Path
    - 8.File protection
    - 9. File allocation Methods
  - **Week 11 Agenda**
    - 1.Paging vs Segmentation
    - 2.How Segmentation Works
    - 3. Algorithms
      - First Fit Algorithm
      - Next Fit Algorithm
      - Best Fit Algorithm
      - Worst Fit Algorithm
    - 4.Advantages and Disadvantages of Memory Allocation Methods File
  - **Week 10 Agenda**
    - 1.Fixed partitions
    - 2.Variable size Partitioning
    - 3.How to limit register and base register works
    - 4.Modern Technique: Paging
    - 5.Address translation
    - 6.Multi-Level Page Tables
  - **(9) Memory Management**
    - 1.What is the OS?
    - 2.How Memory is Organized
    - 3.How OS improve the CPU utilization
    - 4.What is Memory Management1?
    - 5.Virtual Memory Management
    - 6.Embedded System and Desktop System
    - 7.How VM Works
    - 8.Linker and Loader
    - 9.Swapping
    - 10.Memory Hierarchy
  - **Week8 Process**
    - 1.Concurrency, Threading and Parallelism
    - 2.User Interface
    - 3.Process Context Switch
    - 4.Threads
    - 5.Process Context Switch
    - 6.Threads Context Switching
      - User Level thread (ULT)
      - Kernel Level thread (ULT)
  - **Week 7**
    - 1.Zombies
    - 2.wait: Synchronizing with children
    - 3.Wattpad
    - 4.exec: Running new programs
    - 5.Process and Threads
    - 6.Concurrency
  - **(6)Week 7**
    - 1.Suspending Processes (7-State Model)
    - 2.Unix SVR4 processes
    - 3.Modes of Execution
    - 4.System Call
    - 5.System Program
    - 6.Process Control Block (PCB)
      - PCB- Memory Table
      - PCB- IO tables
      - PCB- File table
  - **Week (5) Context Switching**
    - 1. Context Switching
    - 2.When to Switch a Process
    - 3.Process creation
    - 4.Process State
      - Two-state process model
      - five-state process model
  - **Week (4) Process and Threats**
    - 1.Process definition
    - 2.Multiprogramming and Multitasking Operating System
    - 3.Private Address Spaces
    - 4.Control Flow
    - 5. Altering the Control Flow (synchronous)
    - 6. Altering the Control Flow (asynchronous)
    - 7.Exceptional Control flow
    - 8.Interrupt
    - 9.Traps
    - 10.Fault
    - 11.aborts
  - **Week (3) Address Space**
    - •1-What is process Address Space?
    - 2-Example-Covert any C program into process
    - (3) COFF File Format
    - (4) ELF Objects File Format
    - (5)Strong and Weak Symbols
    - (6)Linker's Symbol Rules
  - **Week (2) OS Structure**
    - 1-OS structure Definition
    - 2- Goal of OS structure
    - 3- DOS-Like structure (Simple Structure)
    - 4- Monolithic structure
    - 5-Layer structure
    - 6-Microkernel's
  - **Week 1 Computer System Structure**
    - 1.What is an OS?
    - 2.The layers Structure
    - 3.Resource Multiplexing
    - 4.The Major issues of OS
    - 5.Type of Operating Systems
  - **Week 15 Security**
    - 1.Protection & Security or Privacy
    - 2.Goal of Protection
    - 3.Security Violation Categories
    - 4.Principles of Protection
    - 5.Domain Structure
    - 6.Access Matrix