8/26/2019

Class note CSE 3320

Hardware components:

- CPU
- Memory:
  o RAM: Larger (instruction and data)
  o ROM
  o Cache
  o Speed
  o Sizes
- Disks
  o SSD
  o Spinning (HDD)
- Peripherals:
  o Video Screens
  o KB
  o Sound
  o Printer
  o Network Interfaces

Software:

1. **Assembly- ARM assembly, x86**
   Text file, in.asm
   Ld ax, data
   Inc ax
2. **Compile- C, Fortran**
   In.c
   If conditions DO:{}
   in.,c->compiler->in.obj
3. **Interpret- Some basic language**
4. **Compile and Interpret- Java, Python**

- Application (API)
- Middleware (ABI)
- OS Kernel
- ROM drivers, Microcodes
- Only run when loaded in memory, usually not distinguishable. Good for manipulating code and data.
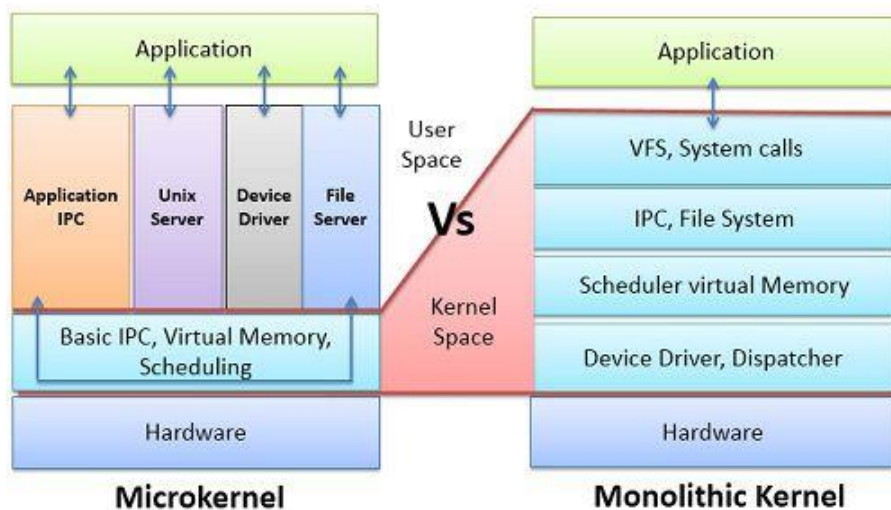
  Change in performance SW
- Performance

- Easy to construct
- Memory USe

OS Arch

- Monolithic Kernel *Fast*
    - o Entire OS (Driver, File System, and Application IPC) working in a Kernel Space, able to dynamically load/unload exe modules at runtime.
    - o Both User Services and Kernel Services; kept in the same address space.
- BIOS Model
- MicroKernel
    - o User and Kernel Services kept in different address space.

Microkernel Vs Monolithic Kernel

8/26/2019

First Assignment