CSE 3320 10.2.2019

Notes for Assignment 2 :

* Try Importing from Excel
  + Insertion Sort
  + Filter
  + A2I
    - Changing to Float

Unix:

* Multix came before Unix (high cost with Multix)
  + Threw away complicated in Multix
* Started with ATT Unix (small, and simple)
  + - LINUX
    - Minix
    - Android
      * Share some compatability
  + BCD
  + System 1 to 4
  + CPM

Process

* Shell (optional), to run
  + Fork()
    - Original Shell
    - Clone Shell
      * Executible (replace)
  + Process scheduling
    - First come first serve
    - Importance
    - Priorities

Files

* Files vs Directories
  + Directory:
    - Size
    - Location/Pointer
    - Name of the file
    - Ls/ls-l: dumping contents in memory (UNIX)
      * Creating
      * Multiplication
        + Easy to sort
    - User number
    - Pointer to a block of information
      * Some unix have variation
        + Directories inside a directory (directory hierarchy)

Slash (Root)

Bin

Util

User

Sub directories

Sub directories

Access with permission, linking/copying

To accrss subdirectory (permission to link): in a file block in the subdirectory pointer to the designated file (linking): link (dest file block name)🡨(file block name) **Exclusivve for UNIX**

by ../(sub directory name)/(file block name): with restrictions

Permission: file, dir (upon set up), can change to chmod (change permission to give access to certain file, directory, or exe)

* + - * Each index number points to a block (12 pointers)
        + When pointing to large block, points to the last pointer and to the other (1 level redirect)
        + May add additional level of in/re-direct if not enough
        + Common case faster
        + Read (r), Write (w), execute (x)

Real advantage in the hierarchy (linking and permission/copying).

Multiple Cores to use:

* Program review
  + Fork and exec (new process and thread)
  + To expand SMP, use Switch
    - Clusters
      * May have multiple switches
    - Grid connects clusters and came with the name between the managers
      * Naming, existancce and shaaring with other clusters
      * OSG (open science grid)
        + Science
        + Physics
        + Etc…
      * Super Grid
      * Etc…
      * Can convert between cloud/cluster/grid (Cloud Computing)
      * Take cores and divide to instances
        + Virtualized layer (not HW), can provide a lot or little resources (as minimum as web services/database to…)
        + Depending on the power, instances size vary

Amazon (biggest: XL big medium small tony)

Microsoft

IBM

* + - * + Instanced (divided CPU)

Could Computing takes over Grid

Memory

When processes are running, start with

Shceduling Algorithm:

(Non preampt or preampt: higher priority/shorter, stop what you do and then go there.)

* FCFS
* Variations/SJF
* Priority

Ready

Wait

Run