IT 1100: Introduction to Operating Systems

Chapter 10 Processes

Textbook Time

Read and Complete the Exercises in the Book

- WES-10 Processes

init - Receives PID of 1. program that runs when Linux starts. init will launch several processes and call init scrips.

Process Related Commands

ps - list processes for the current user on the current terminal
pstree - lists the processes in a tree structure identifying parent processes
top - dynamically lists the top processes running
jobs - lists the jobs run from this terminal
bg - put a program in the background
fg - put a program in the foreground
kill - kills a process based on the PID
killall - kills a process based on the name
shutdown
poweroff
reboot
halt

key commands

ctrl-c kills a process
ctrl-z puts a process in the background without killing it

ps options

a - list all processes
x - lift the BSD style
u - list processes for all users example: ps aux
o - customize the process list
ps xao pid,ppid,comm #will list all processes sorted in columns listed for pid, ppid (the parent), and the command

kill

kill -9 pid # will kill a process ID
killall xclock # will kill the xclock process

shutdown options

System Shutdown and Restart commands

```
shutdown -r time message
  Example:  sudo shutdown -r +5 "Server will restart in 5 minutes. Please save your work."

halt - leaves the machine powered on
  Example:  sudo shutdown -h now
  Example:  sudo halt

Poweroff
  Example:  sudo poweroff
  Example:  shutdown -p now

Reboot
  Example:  sudo reboot
  Example:  sudo shutdown -r now
  Example:  sudo shutdown -r09:35  # reboots the machine at 09:35am
```