

Homework No.1

Due Date: Apr 7, 2009 at the end of the class

A late turn-in will not be accepted

1. The issue of resource utilization shows up in different forms in different types of operating systems. List what resources must be managed carefully in the following settings: (10%)
  - a. Server systems
  - b. Desktops connected to servers
  - c. Handheld computers
  
2. Run `ls` command, then `script` command, then run `ls` again. Afterward, `ctrl-d` and then run `ls` command again. What do you observe? (5%)
  
3. Run `ps` with `-u` option and show what is your current terminal type, the pid of `ps` command and parent pid of it. (10%)
  
4. Enter the following commands and report your observation. (10%)
  - a. `who` and `tty`
  - b. `tput clear`
  - c. `id`
  - d. `ps`
  - e. `echo $$`
  
5. List five services provided by an operating system. Explain how each provides convenience to the users. Explain also in which cases it would be impossible for user-level programs to provide these services. (10%)
  
6. What is the purpose of system calls? (5%)
  
7. List 5 system programs and system calls that have the same name. Provide info where (man section) they come from.
  
12. Download <http://www.latech.edu/~box/p1/sample.tar> and compile myshell sample code using `make` utility. Run myshell and find out the following myshell process's information (text and Stack&data size may change at times, but just show at a snapshot). (20%)
  - Process ID (PID)
  - Its parent process ID
  - Text size (code size)
  - Stack and Data size
  - User ID