This part of the assignment is designed to familiarize you with the commands involving Unix processes.

Submission: You will submit hw06.txt with "~grader/submit 06". Your instructor will also test your swap configurations while grading.

For Cheetah: 1) how long has it been since it has been rebooted, 2) how many users are logged in, 3) how busy is the machine (short, medium and long term load).

For Cheetah: 4) What percentage of the cpu is the operating system spending in each of user mode, system mode and idle? 5) How much memory is in use and how much is idle? 6) What 3 processes have the largest resident set size?

For the machine you administer answer the following: 7) How many processes called `agetty` are running? 8) There are several commands running that include the letters `rpc`, list all those commands. 9) What is the resident set size and total (virtual memory or VM) size of the `inetd` process.

This part of the assignment is designed to familiarize you with the commands involving virtual memory and swapping.

10) As it is set up, does your machine use a swap partition or a swap file? Report which it is. Report the full name of the swap partition or file.

11) Report the following in kilobytes with the command used to find it:

a) the amount of memory available.
b) the amount of memory in use.
c) the amount of memory used for buffers.
d) the amount of swap space available.
e) the amount of swap space in use.

On the lab machine you are assigned to administer:

Set up a 4 MB (or 16 MB depending on blocksize) swap file, call it `/swapfile`. Turn on swapping for that file.

12) Report the exact commands you used to do this.

13) Report the amount of swap space available and the amount in use before and after turning swapping on (it could be zero use before and after).

Turn off swapping and remove your file.

Note for subsequent questions: If you did the `fdisk` as directed in the previous homework, the swap partion you created should be `/dev/sdb1`; this is your "second" swap partition. The swap partition I created is `/dev/sda1` and is already in use.

First, set up the swap structure in your second swap partition. Second, modify your `fstab` so that swapping in that partition is turned on automatically at boot. (Use the `swapon -a` command to make sure you've got everything setup correctly, else the next step will lock up!!!) Now that you've tested to make sure things work, reboot (This is to make sure the "automatically at boot" is working.) This new swap partition is permanent, do not remove it.

14) Report the amount of swap space available and the amount in use. (This should be different from your previous report of swap space, by approximately the size of your new swap partition!)