Frequently Used UNIX Commands

Command	Function
ls	Lists directory contents.

ls -a
List directory contents including hidden files.

ls -l
List directory contents using a long listing format that indicates the attributes of a file or directory, its owner and the group that the owner belongs to, the size of the file in bytes, and date and time it was last modified.

ls -lt | more
List directory contents using a long listing format, sorting the by modification time and printing the output page by page (more).

pwd	Prints name of current/working directory.

e.g., /usr/local/bin   /home/nmora

cat	Catenates files and prints their content on the standard output (display).

cat myfile | more
Lists the content of the file myfile page by page.

cat myfile1 myfile2
List the contents of the files myfile1 and myfile2 one after the other.

cat myfile1 myfile2 > print_record
Creates a file named print_record with the content of the the files myfile1 and myfile2, i.e., concatenates these two files into one named print_record.

more	More is a filter for paging through text one screenful at a time.

more print_record
Allow us to visualize the content of the file print_record page by page.

cp	Copies files and directories.

cp /usr/local/bin/rung03 .
Copies the file rung03 located at /usr/local/bin to the current directory.

cp rung03 /tmp
Copies the file rung03 located in the current directory to /tmp keeping its original name.

rm   Removes files or directories.

rm myfile
Removes the file myfile. This file will be permanently lost.

rm -r mydirectory
Removes the directory mydirectory with all its files, permanently.

mv   Moves (renames) files or folders.

mv myfile1 myfile3
Renames the file myfile1 as myfile3.

mv myfile myfolder
Move the file myfile to the directory myfolder.

mkdir   Makes directories.

mkdir mydirectory
Creates the directory mydirectory. This command is very useful in organizing the contents of a directory.

cd   Changes directory.

If the currect directory is /home/nela and mydirectory is a directory of the directory nela:

cd mydirectory
This will change the currect directory to /home/nela/mydirectory.

rmdir   Removes empty directories.

If the current directory is /home/nela and mydirectory is a directory in nela that is empty:
rmdir mydirectory
This will remove the folder mydirectory

lpr   Prints files.

                  lpr myfile
                  If no printer is specified it will use the printer set by default to print the file myfile.

who   Shows who is logged on the computer.

w   Shows who is logged on the computer and what they are doing.

clear   Clears the terminal screen.

df   Reports filesystem disk space usage.

                  df -h
                  Prints sizes in human readable format (e.g., 1K 234M 2G).

grep   Prints lines matching a pattern.

                  grep <pattern> <files>
                  e.g., grep house myfile

                  Output: The kids were running in the house when I arrived.

                  Searches the named input file, myfile, for lines containing a match to the given pattern, house. By default, grep prints the matching lines.

top   Provides an ongoing look at processor activity in real time.
                  It displays a listing of the most CPU-intensive tasks on the system, and can provide an interactive interface for manipulating processes.

kill   Terminates a process. It is used to stop nonresponsive or unwanted processes.

                  kill <pid>
                  Cancels the process with the process ID <pid>.

ps   Shows a list of the running processes.

chmod   Changes file access permissions.
                  Can be used to protect privacy by barring others from accessing your files, or share your files.

One way of using this command is by using numbers that identify file attributes:
Read: 4; Write: 2; Execute: 1
7 = Read(4) + Write(2) + Execute(1)
6 = Read(4) + Write(2)
5 = Read(4) + Execute(1)

chmod abc <files>

a - permissions for the file's owner
b - permissions for other users belonging to the same group of the owner
c - permissions for anyone else

e.g., chmod 777 myfile
Everyone has permissions to read, write and execute the file
myfile.

e.g., chmod 710 myfile
The owner has all permission access on myfile, and only users in the same group of the owner can execute myfile, but they cannot read or modify (overwrite) the file.

df   Used to display the amount of disk space being used on the hard drive(s).

df -h
Option -h allows the print out to be in an easily readable format.

passwd   Updates the password of a user.

gzip/gunzip   Compresses/uncompresses a file.

gzip myfile
Creates a compressed file: myfile.gz

gunzip myfile
Uncompresses the previous file.

ssh   Program for logging into a remote machine and for executing commands on a remote machine. It is intended to provide secure encrypted communications between two untrusted hosts over an insecure network. The user must prove his/her identity to the remote machine.

ssh –p 2200 nmora@marie.tru.ca

The user 'nmora' opens a remote secure conection to the host marie.tru.ca.
A password will be prompted.

scp   Secure copy (remote file copy program).
                 Copies files between hosts on a network. It uses ssh for data transfer, and uses the
                 same authentication and provides the same security as ssh.

                 scp host1:file1 host2:file2
                 Copies file1 from host1 to host2 changing its name to file2.

                 Examples: current host – marie.tru.ca

                 scp –P 2200 myfile nmora@koala.tru.ca:
                 Copies myfile to the account (home directory: /home/nmora or ~) of nmora in host
                 koala.tru.ca, keeping the original name of the file

                 scp –P 2200 nmora@koala.tru.ca:myfile .
                 The file myfile is copied from the account (home directory) of nmora to the current
                 host, keeping the original name of the file.

                 Normally the port information (-P 2200) does not need to be specified but at TRU the
                 computers we use for calculations must be access through the port 2200.

sftp   Secure File Transfer Protocol.
                 It is an interactive file transfer program, similar to ftp, which performs all operations
                 over an encrypted ssh transport. It allows you to visualize directories in a remote host,
                 transfer files (get, put, mget, mput), create/remove directories, etc.

                 sftp –oPort=2200 marie.tru.ca

qstat   Shows the current status of the available Sun Grid Engine queues and the jobs
                 associated with the queues.

                 qstat –f

                 Specifies a "full" format display of information. The -f option causes summary
                 information on all queues to be displayed along with the queued job list.

qdel   Delete Sun Grid Engine jobs from queues.
                 The job ID (JID) which can be obtained after executing the *qstat* command will have
                 to be specified.

                 qdel *<JID>*

For more information on UNIX commands just type: man *<command>*
e.g., man qstat