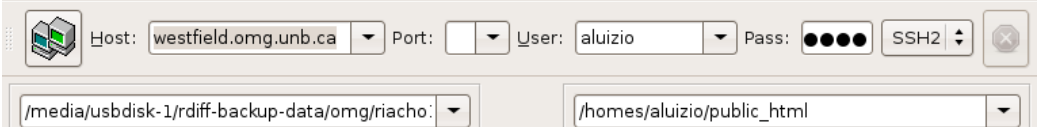# USEFUL UNIX COMMANDS

cancel	cancel print requested with lp
cat file	Display the file
cat file1 file2 > files	Combine file1 and file2 into files
cat file1 >> file2	Append file1 at the end of file2
chgrp [options] newgroup files	change the group of one or more files. New group is either a group ID number or a group name located in /etc/group. -f quiet (do not print error messages) -h change the group on symbolic links (If not used, chgrp will act in the file referenced by the symbolic link) -R recursively (descenting through the directory, including subdirectories and symbolic links.
chmod [options] mode files	Change the access mode of one or more files. Only the owner or privileged user may change its mode. Create mode by concatenating *who, opcode and permission.* *who* (u- user)(g-group)(o-other)(a-all) *opcode* (+ add permission)(-remove permission)(= assign permission, and remove from the not assigned) *permission* (r or 4 – read)(w or 2 – write)(x or 1 – execute) Examples: chmod u+x file (add permission to the user to execute the file) chmod 751 file (chmod u=rwx, g=rx, o=x file) They are the same command. -f quiet -R recursive
chown [options] newowner files	Change the ownership of files to newowner (either a user ID or a login name from /etc/passwd). -f quiet -h change the symbolic link, not the deferenced file. -R recursive -c print information about the files changed.
clear	clear the terminal display
cmp file1 file2	Compare two files (0-identical)(1-different)(2-inaccessible)
comm [options]	Compare file1 and file2. Outputs three columns: lines unique to file1, lines

file1 file2	unique to file2 and lines common to both file. -1 suppress printing column 1 -13 suppress printing columns 1 and 3
cp [options] file1 file2 cp [options] files directory	Make a copy of file1 with the name file2 Copy the files into directory with same name files. -f force (remove existing files in the destination) -i interactively (promp for confirmation) -p preserve the original fileś permissions and ownership in the new file. -r, -R recursively (copy directories recursively) -L used with -R. if symbolic link points to a directory, recursively traverse the directory. -L used with -R. -s make symbolic link instead of copying.
df [[options]	Report the number of free disk blocks and inodes on all mounted file systems. -h human readable -k kilobytes -m megabytes
diff [options] file1 file2	Reports the differences between file1 and file2. Prints file1 text flagged (<) and file2(>). -b ignore blank spaces. -e produce a script of commands to re-create file2 from file1, using ed editor. -D merge file1 and file2 into a single file containing conditional C preprocessors (#ifdef). Defining symbol and then compiling yelds file2. Not defining symbol, yields file1.
du [options]	Print disk usage. Options like df command.
echo [options] [string]	Echo arguments to standards outputs. Often used for producing promps from shell scripts. \a alert \n new line \r carriage return \t tab

egrep [options] [regexp] [files]	Search files that match a regular expression [regexp]. Support metacharacters +, ?, (), etc. But must be enclosed with quotes. -n print the line matching. -v print lines that don't match [regexp]. Example: egrep '(Victor | Victoria)' file Seach Victor or Victoria in file.
fgrep [options] [pattern] [files]	Fast grep. Seach files for lines that match a literal. Options are the same as for egrep.
find [options] pathname condition	Find and locate all the files inside the pathname specified that matches some condition (-name. -type, -size, -user). Examples: find /home -name chapter1 find /home /usr -name 'memo*' -user ann find / -mtime -2 (find files modified within the last two days) find / -size 10k (find files with 10 kB)
gcc	GNU C compiler. -c creates linkable object file (.o) for each source file but do not call the linker. -o file specify output file as file. Default is a.out -Wall enable almost all possible warnings. -lm when using the math.h function.
gftp	Tranfer files to and from a remote network site hostname. Below is presented an example of gftp screen and login configuration necessary to access OMG computers /homes/username directory. Host: westfield.omg.unb.ca ▼ Port: ▼ User: aluizio ▼ Pass: ●●●● SSH2 ⬍ /media/usbdisk-1/rdiff-backup-data/omg/riacho ▼ /homes/aluizio/public_html ▼
gunzip [gzip options] [files]	Restore the file.gz.

gzip [options] [files]	Reduce the size of one or more files and move to file.gz. -f force -q quite (suppress warnings) -r recursively walk the current directory tree and compress all files found. -v display the name and percantage of reduction.
head [options] [files]	Print the first few lines of files (default is 10 lines). -n 50 print the first 50 lines.
hostname [option]	Print name of current host system. -i display the iIP address of the host.
id [options] [username]	display information about yourself or another user: used ID, group ID, etc.
kill [options] IDs	Terminate one or more processes IDs. You must own the process or be a privileged user. -l list the types of signals. -s 9 send signal 9 (complete kill).
locate [pattern]	Search files matching the pattern.
lp [options] [files]	Send files to a priner.
ls [options] [names]	List the files in the current directory. With names is specified, list the files inside the directory names or that match a file names. -a list all files, including the hidden . files. -d list only directory information, not its contents. Used with -l. -h human readable, using abbreviations for kilobyte, megabyte, etc. -k size in kilobytes -l long format list (includes permissions, owner, size, modification time, etc). -r list files in reverse order (by name or by time). -R recursively list subdirectories. -s list size in blocks (1block = 512 KB) -t list files according to modification time (newest first) -u list files according to the file access time.
make [options] [targets]	Update one or more targets according to dependency instructions in a description file (makefile) in the current directoty.
man subject	Display information about a subject (name of a command).
mkdir [options]	Create one or more directories. You must have write permission in the parent

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directories	directory in order to create a directory. -m set the access mode (ex. mkdir -m file1) (to read-execute only directory).
more [options] [file]	Display file content on a terminal. One screenful at a time. To change the next screenful use SPACEBAR and to scroll the lines use ENTER. h for help, / to search, or :n to go to the next file.
mount [options] [[device] directories]	The file structure on device is mounted on directory. If no device specified, mount looks for an entry in /etc/fstab to find what device is associated with the given directory. Directory which must exist and should be empty, become the root of the newly mounted file structure. If mount is invoked with no arguments, it displays the name of each mounted device, the directory on which it is mounted, its filesystem type, and any mount options associated with the device. -a mount all filesystems listed in /etc/fstab. Use -t to limit this to all filesystems of a particular type.
mv [options] sources targets	Move files and directories around on the system and to rename them. <table><tr><th>Source</th><th>Target</th><th>Result</th></tr><tr><td>file</td><td>name</td><td>rename file as name</td></tr><tr><td>file</td><td>existing file</td><td>overwrite existing file with source file</td></tr><tr><td>directory</td><td>name</td><td>rename directory as name</td></tr><tr><td>directory</td><td>existing directory</td><td>move directory to be a subdirectory of existing directory</td></tr><tr><td>one or more files</td><td>existing directory</td><td>move files to directory</td></tr></table> -f force (force the move even if target file exists) -i interactive (prompt for a y (yes) response before overwriting an existing target. -u Do not remove a file or link if its modification date is the same as or newer than that of its replacement.
passwd [options] [user]	create or change a password associated with a user name. Only the owner or a privileged user may change a password.

ps [options]	Report on active processes. When needed to force one process to finish, *ps* shows the processes and *kill* allows to finish it. -u [user] dispaly processes running by user. If not specified the user, displays for the actual user. -r show processes currently running.
pwd	Printing Working Directory (pwd). Print the full pathname of the current directory
rm [options] files	Delete one or more files. To remove a file, you must have write permission on the directory that contains the file, but you need not have permission on the file itself. If you do not have write permission on the file, you are prompted (y or n) to overwrite. -f Force removing write-protected files without prompting. -i Promp for y or n to remove the file.
rmdir [options] files	Delete the named directories (the directory itself, not the contents). Directories are deleted from the parent directory and must be empty. -r remove directories and the files inside.
script [options] [file]	Create a record of your login session, storing in file everything that displays on the screen. -a append the script record to file.
sed [options] [files]	Stream editor. Edit one or more files without user interaction. -e apply the instructions to the files. -f apply the set of instructions from the editing script.
sort file	Sort the lines of file in alphabetical order.
ssh [options] hostname [command]	Securaly log a user into a remote system and run commands on that system. HOSTANME: user@hostname (ex. aluizio@peel.omg.unb.ca). -X enable X11 forwarding.

stty [options] [modes]	Set terminal I/O options to the current device. As a privileged user, you can set or read settings from another device using the syntax: stty [options] [modes] < device -F device read or change settings of device terminal instead of the current terminal. control modes (n (set terminal baud rate to n (e.g. 19200)), input modes, output modes, etc.
su [options] [user] [shell-args] sudo (useful to install).	Login as user. If no user specified, become superuser. Enter EOF to terminate. - change the user (eg. su - user)
tail [options] file	Print the last 10 lines of a file. -n 20 show the last 20 lines. Eg. grep '<title>' file | tail -n 20 (show the last 20 lines containing instances of title).
tar [options] [files]	Copy files or restore files from tape (tape archive). If any files are directories, tar acts on the entire subtree. Very used (-cvf to archive and -xvf to extract). -c create a new archive. -x extract files from archive. -v print function letter (x for extraction and a for archive) -f arch store files in or extract files from archive arch. -t list the contents like ls -l. Examples: tar -cvf /dev/rmt/0 /bin /usr/bin (Create an archive of /bin and /usr/bin, show the command workung and write the tape in /dev/rmt/0). tar -tvf /dev/rmt/0 (list the archives content in a format like ls -l). tar -xvf /dev/rmt/0 /bin (Extract the /bin directory)
tty [options]	Print the device name of your terminal.

stty [options] [modes]	Set terminal I/O options to the current device. As a privileged user, you can set or read settings from another device using the syntax: stty [options] [modes] < device -F device read or change settings of device terminal instead of the current terminal. control modes (n (set terminal baud rate to n (e.g. 19200)), input modes, output modes, etc.
umount [options] [arguments]	Unmount a filesystem. Announces to the system tha a removable file structure previously mounted on the specified directory is to be removed. A busy filesystem (with open files or with a directory that is some processes's currently directory) cannot be unmounted. -a ummount all filesystems specified in /etc/mtab. -f force the ummount.
users [file]	Display the currently logged-in users as a spaced separated list.

which [options] [files]	List which files are executed if the named commands are run as a command. *which* reads the user's .cshrc file (using the source built-in command), checking aliases and searching the path variable.
	
	-a print all matches, not just the first
	
	example: $ **which file ls**
	        /usr/bin/file
	         :ls aliased to ls -sFC

who [options] [file]	With no options, list the names of users currently logged in to the system. am i print user name of the invoking user (similar to id) -u report terminal usage. Present idle time (HOURS:MINUTES, . (dot-less than one minute), or old (more than 24h). -H print headings.