

Minimal Unix Commands Reference page 1

File/directory commands:

sample usage

| | | | | |
|--------------|----------------------------------|---------------------------|------------------|----|
| cd | <i>change directory</i> | cd bin | cd ~/2350/hw | cd |
| chgrp | <i>change group ownership</i> | chgrp appm2350 index.html | | |
| chmod | <i>change permissions</i> | chmod 664 myfile.html | | |
| cp | <i>copy file(s)</i> | cp thisfile newfile | cp file* subdir/ | |
| ls | <i>list files</i> | ls -l | ls -alrt *.html | |
| mkdir | <i>make new directory</i> | mkdir 2005fall | | |
| mv | <i>move/rename file(s)</i> | mv a.out ProgramE | mv file* subdir/ | |
| pwd | <i>present working directory</i> | pwd | | |
| rm | <i>remove/delete file(s)</i> | rm -i *.aux | rm -rf subdir/ | |
| rmdir | <i>delete empty directory</i> | rmdir 1999fall | | |

Editing, Email, Documentation:

sample usage

| | | | | |
|-----------------|------------------------------|-----------------------|-------------------------|--|
| emacs | <i>text editor</i> | emacs mythesis.tex | | |
| vi | <i>text editor</i> | vi mythesis.tex | | |
| nedit | <i>text editor</i> | nedit mythesis.tex | | |
| pico | <i>text editor</i> | pico mythesis.tex | | |
| pine | <i>email</i> | pine | | |
| mailx | <i>email</i> | mailx | mailx smith@hotmail.com | |
| latex | <i>compiles DVI document</i> | latex mythesis.tex | | |
| pdflatex | <i>compiles PDF document</i> | pdflatex mythesis.tex | | |

Remote login and file copying:

sample usage

| | | | | |
|-------------|---------------------------------|--|--|--|
| scp | <i>copy between computers</i> | scp myfile amath.colorado.edu:subdir/file8 | | |
| sftp | <i>copy between computers</i> | sftp | | |
| ssh | <i>log onto remote computer</i> | ssh amath.colorado.edu -l username | | |

Text filters:

sample usage

| | | | | |
|--------------|-----------------------------------|-----------------------------------|----------------|--|
| cat | <i>display text contents</i> | cat file1.txt file2.txt file3.txt | | |
| grep | <i>find word/string</i> | grep keyword file1 file2 file3 | | |
| head | <i>display first few lines</i> | head -5 file.txt | | |
| more | <i>display 20 lines at a time</i> | more file.txt | | |
| sort | <i>re-order text lines</i> | sort -r -n file.txt | | |
| spell | <i>find misspelled words</i> | spell file.txt | | |
| tail | <i>display last few lines</i> | tail -5 file.txt | | |
| wc | <i>word count</i> | wc file.txt | cat *.tex wc | |

Other Utilities:

sample usage

| | | | | |
|-------------|--------------------------------|-----------------------------|---------------|--|
| man | <i>manual page</i> | man ls | man -k editor | |
| cal | <i>calendar</i> | cal | cal 12 2005 | |
| date | <i>current date/time</i> | date | | |
| du | <i>total size of directory</i> | du -k sort -n | | |
| echo | <i>print to screen</i> | echo "This is great stuff." | | |
| look | <i>suggest words</i> | look stri | | |

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Process control:

sample usage

| | | |
|--------------|-------------------------|---|
| file | <i>type of file</i> | file * |
| jobs | <i>in current shell</i> | jobs |
| kill | <i>stop process</i> | kill 23098 kill -9 23098 |
| nice | <i>process priority</i> | nice ./a.out |
| ps | <i>list processes</i> | ps -ef sort more |
| which | <i>command filename</i> | which netscape |

Customizing:

sample usage

| | | |
|---------------------|-------------------------|--|
| alias | <i>command shortcut</i> | alias dir '/bin/ls -al \!* more' |
| finger | <i>user identity</i> | finger smith finger @newton |
| passwd | <i>change password</i> | passwd |
| set | <i>variables</i> | set path=(\$path /usr/local/tex/bin) |
| setenv | <i>variables</i> | setenv TEXHOME /usr/local/tex |
| w who whoami | <i>user identities</i> | w who whoami |

Compilers and file utilities:

sample usage

| | | |
|-----------------------|--------------------------------|--|
| cc c++ gcc g++ | <i>C and C++ compilers</i> | cc -o myprogram progA.c |
| f77 f90 f95 | <i>Fortran compilers</i> | f90 -o myprogram progA.f90 |
| diff | <i>line-by-line difference</i> | diff file1.txt file2.txt |
| strings | <i>text embedded in binary</i> | strings a.out |
| tar | <i>archiving files</i> | tar cf myarchive.tar file1 file2 dir3 dir4 |
| gzip | <i>compress file</i> | gzip myarchive.tar |
| gunzip | <i>uncompress file</i> | gunzip myarchive.tar.gz |

SYNTAX:

sample usage

| | | |
|-------------------|--------------------------------|--|
| & | <i>run in background</i> | nice ./a.out & |
| > | <i>redirect to file</i> | nice ./a.out > results.out & |
| >> | <i>append to file</i> | nice ./a.out >> more.out & |
| < | <i>input from file</i> | nice ./a.out < input.dat > results.out & |
| | <i>pipe to another program</i> | cat *.dat more |
| ; | <i>separates commands</i> | ./a.out < input1.dat ; ./a.out < input2.dat ; ls |
| \$VARIABLE | <i>variables</i> | set ; echo \$PATH |
| * and ? | <i>wildcard characters</i> | ls *.tex ; ls a* ; ls *.*?? ; ls file?.txt |
| !! \$! | <i>last command, last word</i> | echo "!!" |

FILES:

what the file is for

| | | |
|---------------------------|----------------------------|---|
| ~/.cshrc | <i>initialization file</i> | define shell variables and aliases |
| ~/.login | <i>initialization file</i> | set 1-time login information |
| ~/.ssh/known_hosts | <i>ssh keys file</i> | keys accepted from other hosts; sometimes needs editing |