

## unix commands

### directory commands

<code>ls -al</code>	list contents of a directory showing long details and including all files (including hidden dot files)
<code>cd ~</code>	change directory to home directory
<code>cd ..</code>	change directory up one level
<code>cd dirNm</code>	change directory to the directory named <i>dirNm</i> which must be in the current dir
<code>mkdir dirNm</code>	make a new directory in the current dir and call it <i>dirNm</i>
<code>rm -r dirNm</code>	recursively removes the specified directory and its contents
<code>pwd</code>	print working directory shows the full path for the current directory
<code>du   sort -n</code>	disk usage of each directory and subdirectory sorted by size

### copying, removing, renaming files

<code>cp fileFrom fileTo</code>	copies <i>fileFrom</i> creating <i>fileTo</i>
<code>rm fileNm</code>	removes the file <i>fileNm</i>
<code>mv fileFrom fileTo</code>	moves (renames) the file

### viewing, editing text files

<code>cat fileNm</code>	view file, but it scrolls quickly
<code>more fileNm</code>	view file one page at a time. Use <b>q</b> to quit.
<code>less fileNm</code>	view file like more, but with extra features
<code>vi fileNm</code>	edit file using the vi editor
<code>cat &gt;fileNm</code>	creates a file named <i>fileNm</i> using input from the terminal. Multiple lines with ENTER are ok. It writes it out when you press CTRL-D.

### showing and killing processes

<code>CTRL-C</code>	Cancel current executable
<code>ps -f -u userName</code>	lists processes for the specified user
<code>kill -9 processId</code>	kills the specified <i>processId</i>

### changing access permissions

<code>chmod u+rw fileNm</code>	changes the specified file(s) to give you read (r) and write (w)
<code>chmod a+rx fileNm</code>	changes the specified file(s) to give all users read and execute
<code>chmod a-rw fileNm</code>	changes the specified file(s) to remove read and write from all users.
<code>chmod o+r fileNm</code>	changes the specified file(s) to give other users read.

## file redirection and pipes

<code>command &gt;fileNm</code>	redirects the output of <i>command</i> to the specified file. <i>e.g.</i> , <code>ls &gt;ls.out</code> will place the output of <code>ls</code> into <code>ls.out</code>
<code>command &lt;fileNm</code>	redirects the input to <i>command</i> from the specified file. <i>e.g.</i> , <code>sort &lt;stuff.txt</code> would sort the contents of file <code>stuff.txt</code>
<code>command1   command2</code>	pipes the output of <i>command1</i> into the input for <i>command2</i> . <i>e.g.</i> , <code>ls -al   more</code> will pipe the output of <code>ls -al</code> into <code>more</code>
<code>command &gt;&gt;fileNm</code>	appends the output of the command onto the existing file
<code>command &lt;file1 &gt; file2</code>	redirects input to be from <i>file1</i> and output to be to <i>file2</i>

## file name patterns

Many commands support the use of file name patterns for determining their arguments. This can speed up doing things.

<code>rm *.o</code>	would remove all files with a name that ends with <code>.o</code> . Be careful!!! <code>rm *.o</code> would remove all files since there is a space before the <code>.o</code>
<code>mv *.c dirNm</code>	moves all the <code>.c</code> files from the current directory to the specified directory
<code>ls -l cs1713p[1-5]*.c</code>	would list the files that begin with <code>cs1713p</code> , followed by any of the characters <code>1</code> through <code>5</code> , followed by any character, and then ended with a <code>.c</code>
<code>ls -al ../*.c</code>	would list all the files which are one directory up and end in <code>.c</code>

## miscellaneous commands

<code>man command</code>	This will show a manual page for the specified command. Use <b>q</b> to quit.
<code>gcc -g -o execFileNm fileNm.c</code>	compiles <i>fileNm.c</i> with debugger information, producing <i>execFileNm</i>
<code>passwd</code>	change your password
<code>echo \$variable</code>	show the value of the shell/environment variable
<code>command &amp;</code>	invokes the specified command (you can also include its parameters) as a background process
<code>wget URLFileAddress</code>	web get will get a file on the web at the specified address <code>wget cs.utsa.edu/~clark/cs1713/p2Input.txt</code> The retrieved file might have <code>\r\n</code> from windows.
<code>od -c &lt;fileNm</code>	Shows <code>\r\n</code> when the file contains them.
<code>sed -i 's/\r//' fileNm</code>	Removes carriage returns from the file.

## shell typing features

<code>↑</code> <code>↓</code>	While typing commands in the Unix shell, use the up arrow and down arrow to scroll through the previously entered command lines
<code>TAB</code>	While typing commands in the Unix shell, use the tab key to prefill filenames. You can type part of a filename and press tab, showing filenames that match.