



	<p><b>finger doej@metronxt</b>  This pattern follows all the way down. If they are at a completely different university then, just type in their full email address after the finger command.</p>
ls	<p>This command lists the contents of your working directory. There are several "add ons" to this command which will change either the contents of the listing or the format of the listing. Typing:  <b>ls -a</b>  will list all of your files, including the "dot" files. There are a number of files that start with a "." that won't normally show up with when you type ls. An example of such a file is your .newsrc file. A second add on is -s. Typing:  <b>ls -s</b>  will give you a listing of your files along with their size in kilobytes. Another add on is -l. Typing:  <b>ls -l</b>  will give you a "long listing," which means that your files will be shown in one vertical column and the file size and file permissions for all files will be shown. All of these add on's can be combined, so one might type:  <b>ls -as</b>  to list all of your files and find their size.</p>
making a file	<p>After hearing about how to manipulate all these files that you have, you might be wondering HOW YOU GOT THESE FILES OR HOW TO MAKE THEM IN THE FIRST PLACE. The most common way to make files is to save your mail or make them through the various editors, such as pico.</p>
more	<p>This command displays the contents of a file. By typing:  <b>more filename</b>  the contents of the file will be displayed one screen at a time. To go onto the next screen hit either the spacebar or the return button.</p>
mv	<p>This command stands for "move" and it is used to move files within your directory structure or to rename your files. To rename your files, you type:  <b>mv filename1 filename2</b>  The moving of files within directories follows the same structure as in the copy (cp) command.</p>
rm	<p>The rm command stands for remove and it is the means to permanently delete your files. To remove a file you type:  <b>rm filename</b>  If you are in a directory and want to remove all the files, type:  <b>rm *.*</b>  and it will delete everything, but be very careful WHICH directory you are in when you do this command or you may delete files that you wanted.</p>
<b>Basic UNIX Functions</b>	
ftp	<p>ftp stands for file transfer protocol and it is used to transfer files between your computer to your account (or vice versa_) or to download files from a server. This function is also covered in the Unix Short-Bits section under FTP. There is a way to ftp files straight through your unix account, but the process is dependent on whether you are working from a Macintosh, IBM Compatible, or directly from a unix machine and is therefore hard to cover briefly.</p>
mail	<p>mail is the basic mailing system on your free account. To read mail you type:  <b>mail</b>  and to mail someone you type:  <b>mail theirlogin@their.email.address</b>  To end a letter that you are typing, on the last empty line, type a period and</p>

	<p>nothing else and then hit return. It will ask you if you want to carbon copy (Cc:) it to someone (enter their email address) and then you will be done. This mailer is not very user friendly and not very powerful. When you are writing a letter, after you hit return, you may not edit the previous line. Another problem is that you can only get a listing of the first 20 messages that you have. <b>Pine</b> is a much better mailing system, both in terms of interface and functionality.</p>
man	<p>The man command links you to the built in man (manual) pages are available on all of the various unix commands. To use the man command, you type:  <b>man command</b>  (such as <b>man rm</b>)  The man pages can be very useful, IF YOU ALREADY HAVE SOME KNOWLEDGE OF UNIX. They are not always that clear to the novice. This guide is designed to give you enough knowledge so that after having gone through this guide, you will have enough background to use the man pages without fear.</p>
pico	<p>Pico is the built in editor for the Pine mailing system but it is so friendly that it is a good editor for beginners. To run pico, type:  <b>pico filename</b>  at the % prompt. All the needed commands are written at the bottom of the screen with the '^' standing for the (control) key. To finish off a file with pico, all you do is hit (control) x, then hit "y" when it asks you if you want to save the changes or write it to a /tmp directory, and then hit return through all the remaining questions. There are no modes in pico to worry about and you can use the arrow keys to navigate through the document. (return to Making a File)</p>
pine	<p>Pine is another mailing system that is much easier to use than mail. The built-in editor of pine is pico which is very easy to use. A brief discussion of pine is given in the Pine section of the "Short Bits" area of our site.</p>
talk	<p>The talk function may allow you to "talk" to your friends or associates who have internet connections and who are logged on at the same time you are. If you know someone is logged on at the other address (archangel@magic.nowhere for example), then to talk to them you would type:  <b>talk archangel@magic.nowhere</b>  They would then get a message flashing on the screen saying you (your email address) wanted to talk to them and it would tell them what to type. Once the two of you are connected, you are given a split screen and one of you types in one half, and the other gets the other half. To get out of a talk session, you hit <b>(control) c</b>. The one downside to this function is that not all places have it because it does use up a lot of resources.</p>
telnet	<p>This command is extremely useful because it allows you to connect to other machines from the account that you are currently on. For example, if you are logged into your clem account and you want to login to an imaginary account on metronxt, you would type:  <b>telnet metronxt.mscd.edu.edu</b>  and you would then get a login prompt. This command is more useful when you are far away from your account and are using a guest login somewhere. From the guest login (if telnetting is allowed) you could telnet into your home account and not have to worry about long distance charges.</p>
<b>Other Usefull "Stuff"</b>	
cat	<p>This command is short for concatenate You can use it to add on one file to the end of a second file. To add fileA to the end of fileB, you would type:  <b>cat fileB fileA</b>  A second thing that this file does is print the output of these two files to the screen, so it will show you the two files as it adds them together.</p>

chmod

This command is somewhat complicated, but it is very powerful and useful. It is used to change the **file permissions** of both files and directories within your account. The reason YOU MIGHT BE CONCERNED WITH FILE PERMISSIONS is that you might be trying to set up a homepage for Mosaic or you might want to allow people to copy unix programs or files off your account.

To see what permissions your various files naturally have set, you would type:

```
ls -l
```

at your prompt and it would give you a long listing of your files. Here is an example of what an ls -l would give you:

```
drwx----- 2 doej          512 May 25 09:18 Mail/
drwx----- 4 doej          512 Jul 12 11:59 News/
drwx----- 2 doej          512 Jun 15 11:18 cyber/
-rw----- 1 doej          705 Jul 18 09:19 end
drwx----- 2 doej        1024 Jun 27 12:01 features/
drwxr-xr-x 2 doej          512 Jul 14 18:13 public_html/
-rwxr-xr-x 1 doej        1565 Aug 14 1993 sigswitch*
```

(return to ls command) The lines all the way to the left show the file permissions. The first space, on the left (#1), is reserved to tell whether the object is a directory 'd' or not. The next three spaces (#2 through 4) describe whether the object is readable (r), writable (w), and/or executable(x) by you. The next three spaces (#5 - 7) say whether the file is "r,w,x" by a group. Most of time, you won't have any use for these spaces, because groups are defined and created by the system administrator of the machine (clem, etc...) you are on and there must be specific reasons for them. The last three spaces (#8-10) determine whether the object is "r,w,x" by "others," which means everyone else in existence. These spaces are important because they allow or disallow people access to these programs. There are numerous examples of different files with different access modes in the lines above. The line that ends with "Mail/" is a directory named Mail (d) and it is readable (r), writable (w), and executable (x) by doej and doej alone. The line that ends in "end" is a file named "end" and it is only "r,w" by doej and doej alone.

The "public\_html" line is a directory set up for a homepage and it is "r,w,x" by doej, "r,x" by any groups that doej is in, and "r,x" by everyone else. Homepages for the World Wide Web must have this specific "mode" if a Web Client, (NCSA Mosaic, for example) is going to be able to access them.

Now that you sort of understand what file permissions are, you can learn how to use chmod TO CHANGE THESE MODES.

There are two basic ways to use chmod to change a file's access mode. You can use either letters or numbers (whatever you feel more comfortable with). For numbers the standard is:

```
400      read by owner
200      write by owner
100      execute (search in directory) by owner
070      read, write, execute (search) by group
007      read, write, execute (search) by others
```

What this means can best be explained by examples. If you wanted to make a file readable, writable, and executable by you and you alone, you would type:

```
chmod 700 filename
```

	<p>The number "700" stands for r,w,x by owner because it is the addition of the 400,200, and 100 that correspond to the chart above. As you can then logically guess, to make a file (or directory) r,w,x for yourself and a group, it would be:  <b>chmod 770 filename</b> (or directoryname)</p> <p>For another example, if you wanted to make a directory r,w,x for you, but r,x for everyone else (meaning that everyone else can see the directory, use the cd command on it, and see what is inside) the command would be:  <b>chmod 755 directoryname</b></p> <p>{700= r(400)+w(200)+x(100) for you, +50= r(40)+x(10) for groups, +5= r(4)+x(1)}</p> <p>This is as clear as it gets using numbers.</p> <p>The letters are really easy to use also. Instead of numeric values, you would just use u,g,o and r,w,x. For example to make a file r,w,x for you alone, it would be:  <b>chmod u+rwX filename</b></p> <p>As another example, to make a directory r,w,x for you, but only r,x for everyone else, you would type:  <b>chmod ugo+rwX,go-w directoryname</b></p> <p>(the + stands for add while the - means subtract) As you can see, the letters make it easier to see in one sense, but the numbers are not as many keystrokes and they look cleaner.</p>
clear	<p>This command is very clear and straightfoward. It will clear your screen of all writing and leave you with the next prompt.</p>
grep	<p>This command stands for "get regular expression." It is a search command that will allow you to search files for particular expressions which it will then print to the screen. The normal format for grep is: grep (options) expression filename (or filenames--you can search more than one file at a time for an expression). For example to search a file named "bullwinkle" that contained these lines:</p> <pre>Get ready to read and ask Ogre if he and the band have gone bowling lately.</pre> <p>Ogre doesn't bowl (at least, not to my knowledge). Kenny bowls on rare occasions. I don't think any of them went bowling the entire 6 months they were down here recording in the L.A. area. Then again, if you're staying in Zuma Beach, even making a market run to Malibu becomes a Major Expedition :-)</p> <p>for the word "Ogre," you would type:  <b>grep Ogre bullwinkle</b></p> <p>The output would look like:</p> <pre>Get ready to read and ask Ogre if he and the band have gone bowling lately. Ogre doesn't bowl (at least, not to my knowledge). Kenny bowls on rare</pre> <p>grep will print out the lines in which it finds a matching expression. There are also many options that you can use that will give added information. For example, if you had typed:  <b>grep -n Ogre bullwinkle</b></p> <p>your output would have been:</p> <pre>27:Get ready to read and ask Ogre if he and the band have</pre>

	<p>gone bowling lately.  29:Ogre doesn't bowl (at least, not to my knowledge).  Kenny bowls on rare</p> <p>As you can see, line numbers were added to the output. Here is a list of some of the useful options that you can add to the grep function (when it says "printed" it means printed to the screen).</p> <ul style="list-style-type: none"> <li>-v All lines but those matching are printed.</li> <li>-x (Exact) only lines matched in their entirety are printed.</li> <li>-c Only a count of matching lines is printed.</li> <li>-l The names of files with matching lines are listed (once) separated by newlines.</li> <li>-n Each line is preceded by its relative line number in the file.</li> <li>-i The case of letters is ignored in making comparisons - that is, upper and lower case are considered identical.</li> <li>-w The expression is searched for as a word (as if surrounded by `&lt;&lt;:' and `&gt;:', see ex(1).) (grep only)</li> <li>-e expression  Same as a simple expression argument, but useful when the expression begins with a -.</li> </ul> <p>If you play around with these options, you will quickly get the hang of them. The last thing to remember is that grep is case-sensitive unless you use the -i option.</p>
kill	<p>This command is used in conjunction with the ps command. With the kill command you can kill something that is running on your account. An example of this occurrence is when you are running elm and are kicked out of the internet for some reason. If you login again and try to run elm, it says that another copy of elm is running and that you can't start it up. Using the ps command you can get the pid number of the "old" elm and then use kill to stop the "old" elm from running anymore. For example if the old pid # was 12669, then you would type:  <b>kill 12669</b></p>
mkdir rmdir	<p>The mkdir command allows you to make a directory while the rmdir removes a directory. to make a directory, you would type:  <b>mkdir directoryname</b>  To remove a directory, it must be empty of all files. After all the files have been removed, you return to the home directory and then type:  <b>rmdir directoryname</b></p>
.plan	<p>The .plan is a file that you can edit and which will be shown whenever someone uses the finger command to get information on you. A few things must be done first, before it will be visible and useful to anyone. First of all, you must edit it using pico or some other text editor. The second thing that must be done is to make the .plan readable to the world. In other words, the file permissions of the .plan must be -rw-r--r-. To get the file this way you must use the chmod command and type:  <b>chmod 644 .plan</b> or <b>chmod u+rw,go+r .plan</b></p>

	Anything can be put in the .plan file, but remember that it is going to be seen by anyone using the finger command to find you.
ps	This command is often used in conjunction with the kill command. The ps command will give you a listing of all the recent processes that your account has run and which pid (process ID) number each process has. The pid number is a way of referencing every process that it is started on a machine. It is a basic accounting feature. Once you know the pid you can use the kill command to stop the process.
pwd	This command will tell you what directory you are working in. If you have a lot of subdirectories and have logins to many machines which you use simultaneously, this command is very useful, otherwise you not have reason to use it very much.
signature	This file is something that will be appended to every article you post in nn. It can only be 4 lines long, but it is nice to have something standard attached to all of your posts. To create this file, you must make it with one of the built-in text editors.