

man — get help (display manual page).

man — display manual pages (get help!)
man man — display manual page for the *man* command
man ls — display manual page for the *ls* command
man -k file — list all commands with the keyword *file*

```
unix> man pwd
PWD(1)                                FSF                                PWD(1)

NAME
    pwd - print name of current/working directory

SYNOPSIS
    pwd [OPTION]

DESCRIPTION
    Print the full filename of the current working directory.
    ...
```

pwd — print working directory.

```
unix> pwd
/home/sklar/teaching/cs1007/slides
```

cd — change working directory.

```
unix> pwd
/home/sklar/
unix> cd classes
unix> pwd
/home/sklar/classes
```

ls — list the files in the current directory

ls -aF — list all files and show their file types

```
unix> ls -aF
./
../
.cshrc
classes/
mail/
hello.java
```

ls -l — list files in long format

```
unix> ls -l hello.java
-rw-r--r--  1 sklar  faculty   187 Sep 5 10:45 hello.java
```

mkdir — make (create) a directory

```
unix> ls -aF
./
../
.cshrc
classes/
mail/
hello.java
unix> mkdir junk
unix> ls -aF
./
../
.cshrc
classes/
junk/
mail/
hello.java
```

rmdir — remove (delete) a directory.

```
unix> ls -aF
./
../
.cshrc
classes/
junk/
mail/
hello.java
unix> rmdir junk
unix> ls -aF
./
../
.cshrc
classes/
mail/
hello.java
```

cp — copy a file.

```
unix> ls -aF
./
../
.cshrc
classes/
mail/
hello.java
unix> cp hello.java hi.java
unix> ls -aF
./
../
.cshrc
classes/
mail/
hello.java
hi.java
```

mv — move (rename) a file.

```
unix> ls -aF
./
../
.cshrc
classes/
mail/
hello.java
unix> mv hello.java howdy.java
unix> ls -aF
./
../
.cshrc
classes/
mail/
howdy.java
```

rm — remove (delete) a file.

```
unix> ls -aF
./
../
.cshrc
classes/
mail/
hi.java
howdy.java
unix> rm hi.java
unix> ls -aF
./
../
.cshrc
classes/
mail/
howdy.java
```

chmod — change file mode

- 9 characters: -uuugggooo
- WHO: u = user, g = group, o = other users, a = all users (u + g + o)
- WHAT: r = read, w = write, x = execute
- MODE: + = allow, - = don't allow

```
unix> ls -l hi.java
-rwxr-xr-x  1 sklar  faculty   187 Sep 5 10:45 hi.java
unix> chmod a+w hi.java
unix> ls -l hi.java
-rwxrwxrwx  1 sklar  faculty   187 Sep 5 10:45 hi.java
```

quick and dirty *emacs*.

```
unix> ejava hello.java
or
unix> emacs -nw hello.java
```

Ctrl-B	move cursor Back
Ctrl-F	move cursor Forward
Ctrl-P	move cursor to Previous line
Ctrl-N	move cursor to Next line
Ctrl-D	Delete character under cursor
Ctrl-K	Kill (delete) to end of line
Ctrl-Y	Yank back (undelete) killed text
Ctrl-X Ctrl-S	Save the file
Ctrl-X Ctrl-C	eXit emacs
Ctrl-H	Help
Ctrl-G	Gets you out of trouble!

your first Java application: source code.

```
file name = hello.java
/*-----
  Prof Sklar, 05-Sep-02, hello.java

  This class demonstrates output from a Java application.
  -----*/
public class hello {
    public static void main ( String[] args ) {
        System.out.println( "hello world!\n" );
    } // end of main()
} // end of class hello()
```

homework #1.

DUE TUE SEP 17!!!

- create a Java application that outputs instructions for how to change a lightbulb
- compile and run it
- submit it electronically

⇒ description available on web page:

<http://www.columbia.edu/cs1007/hw1.html>