Linux/Unix basic commands

Basic command structure: `command -[options] some_argument`

```
ls [-l, -rt, -h]        List contents in the directory

mkdir                   Make a new directory

cd [directory]          Change into a directory

man [command_name]      Open the manual for a command

cp [-r]                 Copy file (or a directory with -r)

mv                      Move/Rename file or directory

rm [-r]                 Remove a file (or a directory with -r)
```

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```
pwd                     Show the full path of current directory

cat [file]              View file, scrolling

more                    View file, one screen at a time

less                    Like more, more features

diff [file1] [file2]    Display differences between file1 & file2

grep 'pattern' file     Find a regular expression in a file
```

Example: Look for the pattern PBS in a file submit job

```
$ grep 'PBS' submit.job
-->
$ #PBS -l nodes=1:ppn=4
$ #PBS -l walltime=2:00:00
```

Pipes and redirection

Very useful feature of the command line.

```
command > file              Redirect output of command to a file

command >> file             Redirect to file, append

command < file1 > file2     Get input from file1, direct output to
                            file2

command1 | command2         Pipe output of command1 to command2
```

Example: Take input from a data file, run an executable, and print to an output file

```
$ test.x < data.input > data.output
```