

## **Bash shell commands used in this workshop:**

### **Getting around**

`pwd` - prints the current directory path to the screen. Stands for "print working directory."

`cd` - changes into a different directory.

`ls` - lists the contents of the directory. Note that the `ls` command has many useful options

### **File/folder operations**

`mkdir` - creates a new directory. Example: `mkdir my_new_directory`

`rmdir` - removes a directory

`cp` - copy a file. Example: `cp myfile myfile.bak`

`rm` - remove a file

`mv` - move (and/or rename) a file Example: `mv myfile.bak ./backups/`

### **Working with files**

`cat` - concatenates files, but is often used just to print the contents of a single file

`more` - displays output of a file for perusal

`less` - a lot like `more`

`head` - print the first part of a file

`tail` - print the last part of a file

`wc` - counts words, lines, characters, and bytes in a file (stands for word count)

`gunzip` - unzip a zipped file or directory

`nano` - edit a file using the nano text editor. Other text editors available include `vi` (vim) and `pico`

`grep` - search the contents of a file for some text or a pattern

`uniq` - removes repeated lines

`sort` - sorts lines

`shuf` - shuffles lines

### **More commands**

`history` - prints out the history of commands you ran

`man` - prints the manual for a command

`echo` - prints text to the console

`wget` - downloads files from the web

`|` - pipe the output of one command to the next one

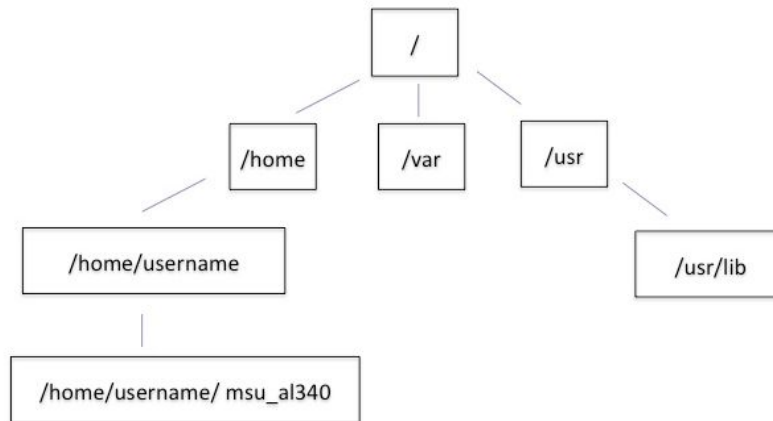
`>` - redirect the output to a file (and will overwrite)

`>>` - redirects and appends the output to a file

`;` - separates between commands in a list

## The File system

We refer to the base of the file system as the **root directory**, denoted by a forward-slash: /



Source: <http://www.datacarpentry.org/2015-11-04-ACUNS/shell-intro/>

Path shortcuts:

- .. the parent directory, i.e. "one level up"
- .
- ~ your home directory (example: /home/yourusername)
- \* wildcard (example: data\*.csv - may match several filenames)

Absolute vs. relative paths:

Example of a full/absolute path: /home/janedoe/data

Example of a relative path: ../data (does *\*not\** start with / )

## Piping and Redirection

Commands can often be linked together, so that the output of one command can be fed into another command. You can "pipe" commands using the | character. For example:

```
echo "this is my command"
```

Prints the phrase "this is my command" to the screen. Instead we can pipe the result to `wc -w`

```
echo "this is my command" | wc -w
```

The output of this command would be 4 since four words were sent to the word count program.

You can also redirect the output to a file. Use > to create or overwrite a file, or >> to append to a file. For example, the following command would create a file called `words.txt` :

```
echo "this is my command" | wc -w > words.txt
```