The ls Command (Include -l option for listing)

Command	*Displays*
`ls -a`	All filenames including those beginning with a dot
`ls -d .*`	Only filenames beginning with a dot
`ls -R`	Recursive file list
`ls -l`	Long listing in ASCII collating sequence
`ls /etc`	Filenames in /etc
`ls -d /etc`	Only /etc
`ls -ld /etc`	Listing of /etc
`ls -l /etc`	Listing of all filenames in /etc
`ls -lRa /`	Recursive listing of all filenames in file system
`ls -t`	Filenames sorted by last modification time
`ls -u`	Filenames sorted by last access time
`ls -i`	Inode number

Switching Directories (Setting CDPATH makes navigation easier)

Command	*Action*
`cd ~sharma`	Switches to home directory of sharma
`cd ~/sharma`	Switches to directory $HOME/sharma
`cd -`	Toggles between current and previous directory
`cd`	Switches to $HOME

Wild-cards vs Regular Expressions (EREs available in grep -E, egrep and awk)

Wild-card	*Regular Expression*	*Matches*
`*`	`.*`	Any number of characters including none
`?`	`.`	A single character
-	`*`	Zero or more occurrences of the previous character
-	`g*`	Nothing or g, gg, ggg, etc.
-	`g?`	Nothing or g (ERE)
-	`g+`	g, gg, ggg, etc. (ERE)
`[ijk]`	`[ijk]`	i, j or k
`[b-m]`	`[b-m]`	Any character between b and m
`[!b-m]`	`[^b-m]`	Any character not between b and m
`[!a-zA-Z0-9]`	`[^a-zA-Z0-9]`	Any non-alphanumeric character
-	`^#include`	#include at beginning of line
-	`*/$`	*/ at end of line
-	`^MARK$`	MARK as only word in line
-	`^$`	Lines containing nothing
-	`GIF|JPEG`	GIF or JPEG (ERE)
-	`(lock|ver)wood`	lockwood or verwood (ERE)

Filters

Command	*Displays from* `foo`
`head -n 5 foo`	First 5 lines
`tail -n 3 foo`	Last 3 lines
`tail +5 foo`	Lines 5 through end
`cut -d":" -f1,3 foo`	Fields 1 and 3 delimited by :
`cut -f5- foo`	Fields 5 through end delimited by tab
`sort -t: -k 2 foo`	Lines delimited by : and sorted on field 2
`sort -n foo`	Lines sorted numerically
`sort -u foo`	Only unique lines
`uniq foo`	Only unique lines
`uniq -u foo`	Only nonrepeated lines
`uniq -c foo`	Frequency of occurrence of each line and the line
`tr ':' '/' < foo`	Lines after replacing : with /
`tr '[a-z]' '[A-Z]' < foo`	Lines after conversion to uppercase
`tr -s ' ' < foo`	Lines after squeezing multiple contiguous spaces to single space
`tr -d '\012' < foo`	All characters except newline
`grep "printf" foo`	Lines containing `printf`
`grep -v "printf" foo`	Lines not containing `printf`
`grep -l 'printf' foo*`	Filenames containing `printf`
`sed -n '5,9p' foo`	Lines 5 through 9
`sed 's/echo/printf/' foo`	After replacing first occurrence of echo with `printf` in each line
`sed 's/echo/printf/g' foo`	After globally replacing echo with `printf`
`sed 's/;$//' foo`	After deleting every ; at end of line

The `find` Command (Search assumed to start from /)

Command	*Matches Filename(s)*
`find / -name a.out -print`	`a.out`
`find / -name "*.c" -print`	with `.c` extension
`find / ! -name "*.[ch]" -print`	Other than `.c` and `.h`
`find / -type d -print`	Only directories (`f` for regular, `l` for symlink)
`find / -user henry -print`	Owned by henry
`find / -size +4 -print`	Having size greater than 4 blocks
`find / -size 2048c -print`	With exactly 2048 characters
`find / -mtime +180 -print`	Modified 180 days back or more
`find / -type f -atime +365 -exec rm {} \;`	Not accessed in a year or more, and removes them
`find / -type f -atime +365 -ok rm {} \;`	As above, but after user confirmation
`find / -type d -perm -0070 -print`	Directories having all permssions for group
`find / -perm -4000 -ls`	With SUID bit set and displays listing
`find / -type f -newer /etc/passwd -print`	Newer than `/etc/passwd` (only regular files)

Shell Parameters

Expression	*Significance*
`$#`	Number of command line arguments
`$0`	Name of executed command
`$*`	All parameters as a single string
`"$@"`	As above, but quoted strings treated as separate arguments
`$?`	Exit status of last command
`$$`	PID of the current shell
`$!`	PID of the last background job

test Expressions

String Comparison (e.g. `if [ $stg = "yes" ] ; then ....`*)*

Expression	*True if*
`$s1 = $s2`	String s1 and s2 are identical
`$s1 != $s2`	String s1 and s2 are not identical
`-n $stg`	String stg is not a null string
`-z $stg`	String stg is a null string

Integer Comparison (e.g. `if [ $count -gt 4 ] ; then ....`*)*

Expression	*True if*
`$n1 -gt $n2`	Integer n1 is greater than integer n2
`$n1 -ge $n2`	Integer n1 is greater than or equal to integer n2
`$n1 -eq $n2`	Integer n1 is equal to integer n2
`$n1 -ne $n2`	Integer n1 is not equal to integer n2
`$n1 -le $n2`	Integer n1 is less than or equal to integer n2
`$n1 -lt $n2`	Integer n1 is less than integer n2

File Attribute Testing (e.g. `if [ -f foo ] ; then ....`*)*

Expression	*True if*
`-e foo`	foo exists
`-s foo`	foo has a size greater than zero
`-r foo`	foo is readable
`-w foo`	foo is writable
`-x foo`	foo is executable
`-f foo`	foo is a regular file
`-d foo`	foo is a directory
`-L foo`	foo is a symbolic link
`-u foo`	foo has SUID bit set
`-g foo`	foo has SGID bit set
`-k foo`	foo has sticky bit set