

Bash		File Permissions		Shell Scripting	
File system	/ - top of file hierarchy	ls -al	10 character; (1)file type + (9)file permissions	grep <word>	print lines matching a pattern
Root		rwx	read, write, execute	redirect operator	(>) send output to file instead of displaying on screen
Path	either absolute or relative	owner, group, world	order which permissions are displayed	append operator	(>>) appends data instead of displaying on screen
pwd	present working directory	r	4 - indicates read permission	cut -d" "	cut empty columns
cd	change directory	w	2 - indicates write permission	cut -d, -f1,2,4	cuts out only columns 1,2,4
~	indicates home directory	x	1 - indicates execute permission	sort	sorts alphabetically
..	moving up to folder above current	r-x	read and execute (5)	sort -n	sorts numerically
.	current folder	755	rwe-er-er	uniq	removes duplicate lines from a text file; MUST BE SORTED FORT
ls	lists all	Conditionals		tr "abc" "-xyz"	substitute <v1> to <v2>
ls -F	lists only folders	IF/THEN	if [<condition>] then <commands> fi	tr "[:lower:][:upper:]"	specify all lowercase letters to turn uppercase
ls -l	show details	fi	terminates IF/THEN	new variable	supply variable name and its value; no spaces inbetween
ls -a	show hidden files	if [_ <equation> _]		variable1=2	valid; no spaces between equals
ls -al	show hidden files + details	-eq	is equal to (integer)	\$((<equation>))	arithmetic expansion
mkdir	creates folders	-ne	is not equal to (integer)	echo \$<variable>	prints <variable value>
rmdir	removes folders	-gt	greater than (integer)	" "	does not affect use
cp	copy	-lt	less than (integer)	' '	used literally, does not call variables
mv	move; can also be used to rename a file	-ge	greater than or equal to (integer)	\$USER	lists current user
rm	remove command	-le	less than or equal to (integer)	\$PWD	prints present working directory
-i	adds interactivity; warning if will delete an existing file	=	is equal to (string)	\$HOME	home directory of current user
UNIX file systems are CASE SENSITIVE		!=	is not equal to (string)	\$RANDOM	0 and 32767
Folders are directories		ELIF	alternative to nested-if statements	sleep #	sleeps for # seconds
Copying and Moving Files		read	reads user input		
General syntax - <command> <source> <target>		bash <directory>	remember to put variables at end if variables are needed for command		
Examples - cp hello.txt hello_world.txt		<variable>			
Notes on cp & mv		s>			
'cp' is only top level files, does not get what is in folders only folders on top					
'mv' is always recursive					
'cp -r' - copies a directory including all its content					
Invasive Commands					
'cp', 'mv', and 'rm' - no recovery possible					



By **uhandreams**

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find

find	search for files
find [where to start searching from][expression to fine][options][what to find]	takes 2 arguments; where to search & what to find; wildcards can be used
find /home -user alice -empty	finds files in the home folder from alice which are empty

Wildcards & Examples

Wildcards

?	matches a single character
*	matches any zero or more characters
[x..y]	matches a range of letters or numbers

Examples

ls	lists all files + extensions
ls *.doc	lists only files with .doc extensions
rm -r <target>	removes folders with content; be very careful

While Loops

while	run until a specific conditions is met
CTRL+C	to close script

vim - file editor

vim "filena-me"	starts up in command mode
i	insert mode - start typing
:w	write
:q	quit vim type
:wp	save and quit
:q!	quit w/o saving

vim - file editor (cont)

/word	search towards end of file for first occurrence of word
? word	search towards beginning of the file for the word
n	search for next occurrence
N	search for previous occurrence
less	view file contents one screen at a time
head	top of file to see if it is the one you need
head -3	show the first three results
tail	bottom of file to see new log entries
-n	default output of ten line
-n#	changes number of lines outputed
-n & -n#	to be used with head or tail

YUM

YUM	yellowdog updater modifier - package modifier
su changes \$ -> #	

chmod

chmod	updates permissions on files and folders
su	grants super user privileges
ls -laF	lists all folders + access
chmod 775 engineering	changes permissions for the engineering folders
chown	change ownership
chgrp	change group
chown dave README	changes owner of README to dave
chgrp sales_grp README	changes the group that can access README to sales_grp

Encryption

aesencrypt	secret key encryption
-e	encrypt the file
-d	decrypt the file
-p <password>	password to use; if omitted, the command will prompt the user
-o <filename>	output file
md5sum	easy way to generate a checksum
#! /bin/bash	turns list of commands into one command // no need for bash ...

For Loops

for var in <item/directory> do <commands> done	how to format for loops
Sequences	{#..#}
#..#	first # starting value .. second# ending value
#1..#2..#3	#3 is increment between each number series



By [uhandreams](https://uhandreams.com)

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