Week #	Slide #	Command (case sensitive)	Simple Explanation	Additional Info	Basic Syntax	General Info
8	18	man	MANual - for help with any command	press [TAB] [TAB] to use the auto-complete feature press spacebar to move on press q to quit	man ls	used to find a command's arguments, options, syntax, synopsis, description, history etc.
8	20	cd	Change Directory- to switch directories (folders)	cd goes to home cd .. goes back one level	cd Downloads cd /etc	
8	20	pwd	Print Working Dirctory		pwd	helps locate where you're at
8	20	echo	prints to screen (or file)		echo hi echo "hi"	
8	20	ls	LiSting directory/file		ls ls Downloads ls /etc/python	
8	20	cat	conCATenate - lists contents of a file		cat pillow	
8	20	mv	MoVe - moves files/folders or renames them (if no file/folder with destination name)		mv pillow Downloads mv Downloads/pillow /home/kali	
8	20	rm	ReMove	be extremely careful with this - ther	rm pillow	
8	20	rmdir	ReMove DIRectory	be extremely careful with this - ther	rmdir directory1	
8	20	less	lists contents with paging	q to quit	less /etc/passwd	similar to cat
8	20	touch	Creates a file or updates timestamp (if file already exists)		touch pillow2	can choose whatever timestamp you want
8	20	copy	CoPy- copies files and directories	cp [original] [full path of copyee]	cp pillow2 /home/kali/newpillow	similar to mv
8	20	find	to find a file/directory		find /etc	
8	20	wget	to download from the internet		wget https://ipconfig.io/ip	
8	24	|	pipe- connects the output from one command to the input of another command	does one command and dumps the results on another command - related	cat /etc/group | wc -l	metacharacter- used to connect or expand commands
8	25	;	semicolon- allows sequential commands - several commands one after another	the shell waits until the first command is executed before starting the second... - these commands are not related	echo hi; date; whoami	metacharacter- used to connect or expand commands
8	26	&	ampersand- allows background commands - you can run a large command without it tying up your shell	fg allows for bringing background commands to the foreground	wget http://download.hugefile.com/1gb&	metacharacter- used to connect or expand commands

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8	27	() or ``	command substitution- output of a command interpreted by the shell instead of by the command in front of it - standard output a command becomes an argument for another command	tells your shell to look at the command in parentasis/backticks first and then plug it into the other command (just like parentasis in Algebra)	echo "ZSH is located at:" $(which zsh)	metacharacter- used to connect or expand commands
8	28	<	directs contents of a file to the command	can be used instead of doing 2 commands and piping	**command** argument < source file	metacharacter- used to connect or expand commands
8	28	>	directs standard output of a command to a file	be careful with this command, it replaces file contents WITHOUT WARNING set -o noclobber configures your shell not to override an existing file	echo hi > letter	metacharacter- used to connect or expand commands
8	28	>>	directs standard output of a command to a , adding the output to the end of the existing file		echo "How are you?" >> letter	metacharacter- used to connect or expand commands
8	29	alias	to create a shortcut for any command	alias lists all current aliases	alias x= 'y'	
8	29	unalias	to remove an alias		unalias y	
8	30	$	precedes pre-defined shell variables ex: $HOME (home directory)	set displays all variables for current shell insert \ before the $ to make the shell read it as a dollar sign instead of a shell variable	$USER	
9	5	tail	prints last 10 lines	can change number of lines printed using -n option -f option prints in real time can do multiple files at a time	tail /etc/passwd	used when you don't want all the info to print
9	5	head	prints first 10 lines	can change number of lines printed using -n option can do multiple files at a time	head /etc/passwd	used when you don't want all the info to print
9	5	dmesg	print or control the kernel ring buffer		dmesg	gives hardware information, logs, and anything going on on the physical linux machine - lowest level info

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9	5	df	Disk Free- full disk- displays how much space is left on your partition	the file mounted on the root (/) folder is the most important one here -h option displays human readable form - MB/GB	df	
9	5	du	Disk Usage- displayed based on file and directory size	-sh option to summarize in human readable	du	
9	5	diff	DIFFerence- compares 2 or more files line by line		diff file1 file2	great tool before deleting a seemingly duplicate file or before updating to a new version of something
9	5	tar	compresses or decompress files using .tar, .xz, or .tar.gz extension	tar does not remove the original file by default can create a new compressed file or add to an existing one the file extension doesn't mean anything to the OS, it's for the user's reference	sudo tar -cvpzf compressed.tar.gz originalfile (compress) sudo tar -xvpzf compressed.tar.gz originalfile (decompress)	can be helpful when backing up a system always needs arguments; generally has several of them
9	5	uname	displays info about the OS		uname	
9	5	zip	compresses files using .zip extenstion		zip compressed.zip original	similar to tar
9	5	unzip	decompresses files with .zip extenstion		unzip compressed.zip	similar to tar
9	5	rar	compresses files using .rar extenstion	doesn't come with the OS, need to install it - it's not natively supported		
9	5	unrar	decompresses files with .rar extenstion	doesn't come with the OS, need to install it - it's not natively supported		
9	5	free	RAM usage - displays free and used memory in the system		free	
9	5	ps	ProceSses- see what's currently running on the machine	displays 2 most recent processes	ps	like task manager on Windows - can kill tasks...
9	5	top	processes in real time	gets updated every few seconds not an active command - just displays info	top	also similar to task manager on Windows but can't kill anyone
9	5	w	displays logged on users		w	practical usage: to make sure that you are not messing up anyone else's work while backing up, changing configurations etc.

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9	6	1>	directs standard output of a command to a file	STDOUT - standard output - data stream leaving a process	echo hi 1> letter	same as >; see above
9	6	2>	redirects error messages only	STDERR - standard error	find / -name "sshd_config" 2> /dev/null	practical usage: redirect errors while backing up, will tell you if you are running out of space, access denied etc.
9	7	*	matches any number of characters	aka the wild card	ls t*	operator- allows for working with files more effeciently
9	7	?	matches a single character	each ? represents a character ex: ??? = 3 characters	ls t?	operator- allows for working with files more effeciently
9	7	[]	matches any one of the characters between the brackets	a hyphen-separated matches a range of numbers or letters (still case sensitive)	ls [m-z]*	operator- allows for working with files more effeciently similar to {}
9	7	{}	expand out a set of characters across file or directory names		touch myfile{1..10}	operator- allows for working with files more effeciently similar to [] great way to automate stuff
9	13	chmod	Change MODe- change permissions of a file; read, write, and execute	to add permissions use + to remove permissions use - u = user/owner g = group o = everyone else a = all 3 categories	chmod a+rwx filename chmod g+r filename chmod u-x filename	this command uses many options ls -l = long listing format- displays file permissions
9	13	chown	Change OWNer- change file owner and group	If changing to or from root, use sudo	chown newowner filename	
9	14	sudo	applies root privileges to specified command only	running user must be in /etc/sudoers file sudo privileges can be restricted, require a password	sudo ls -a /root	root privileges are limited to prevent users from doing serious damage by mistake
9	19	locate	find files by name	has it's own database so need to run updatedb before running this command	locate /bin/zsh	similar to find but goes faster because it's a database, it's not searching through the whole system downside: if you don't do updatedb it won't have newer files that weren't backed up yet faster than find
9	19	updatedb	updates files database		updatedb	

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9	19	find	searches for files	more granular than locate - can actually play around with the files		for more complex searches
9	19	grep	searches for patterns *within* files	patterns found are displayed in red text	grep what /where	
9	19	nano	edits files		nano /home/kali/.zshrc	basic command line editor when only resource available is the command line, use this command for editing
9	19	mousepad	opens file in mousepad	has GUI	mousepad /home/kali/.zshrc	
9	22	update upgrade install remove purge	managing software purge- deletes settings, configurations etc.	apt= application tool	sudo apt update sudo apt upgrade sudo apt install program1 program2 sudo apt remove program1 sudo apt purge program1	Managing Software needs higher privileges to access the apt folder
9	25	crontab	used to create cronjobs- scheduled tasks		crontab -e for a wizard to prompt you use *crontab.guru* for syntax	similar to Windows Task Scheduler