



# COMMON LINUX COMMANDS

\*green commands are needed for Cybersec\_

1	<b>cd</b> <b>cd /home/gope/twerk</b>	Stands for "change directory"  <b>cd .</b> - current directory <b>cd ..</b> - go to above directory in hierarchy <b>/home/gopedir/ed</b> (currently in ed) - cmd will take to gopedir b/c it is above/before current dir <b>cd ~</b> - default home directory <b>cd -</b> - previous directory you were in
2	<b>ls</b> <b>ls /home/gope</b>	lists all files in the directory  <b>ls -a</b> (all) - shows all files in the dir, even if they are hidden <b>ls -l</b> (long) - Shows detailed info like file permission, number of links, owner name, file size/stamp, modified date etc <b>ls -la</b> - Combination of <b>-a</b> and <b>-l</b>
3	<b>touch</b> <b>touch [filename]</b>	Used to create new files, updates the timestamps of files
4	<b>file</b> <b>file gopefile.gif</b>	Used to determine the actual file type and description of the file (in linux files do not confirm to their file ext.) gope.js is can be any file not just JS
5	<b>cat</b> <b>cat gopefile gopefile2</b>	See the contents of a file(s) (small files), stands for concatenate because it can combine the contents of multiple files. Can also be used to create new files

		<code>cat &gt; gope.txt</code> - makes a text file and allows you to edit it. Use CTRL+C to exit the file and input a new command
6	<code>less</code> <code>less gopefile</code>	Shows the file in a page format <code>q</code> - quit <code>g</code> - beginning of page <code>G</code> - end of page <code>/search</code> - search for specific text <code>h</code> - get help of using less cmd
7	<code>history</code>	Look at all the previous commands
8	<code>echo</code>	Print a statement to screen  <code>echo simp</code> - will print simp to the console <code>echo gope &gt; gope.txt</code> - will create 'gope.txt' and add gope to it <code>echo simp &gt;&gt; gope.txt</code> - will add 'simp' to the end of gope.txt file, used to append
9	<code>clear</code>	Clears the display
10	CTRL + C	Exit a file, bring up user prompt to enter a new command
11	<code>cp</code> <code>cp file.py /home/username/dir</code>	Copy files to a specified path
12	Wild cards	<code>*</code> - represents all character/strings <code>ls *.gif /home/gope</code> - lists all .gif files in gope  <code>?</code> - represents a single character <code>ls *.??g</code> - lists all files like jpg and png, but not mpeg b/c it is four chars. <code>ls ?x*.png</code> - all png files with second letter x  <code>[]</code> - defines a range <code>ls [a-z]</code> - list all files with names a.. or z... <code>ls [^a-z]</code> - lists all files that are not name a or z, note the use of the caret ^

13	Flags	<p><b>-r</b> - (recursive) used to copy or remove all files (children) within a dir (including the dir)  <code>cp -r gopedir/ home/gope</code></p> <p><b>-i</b> - used to prompt the user before overwriting or deleting files          *when used with <b>grep -i</b> is for insensitive, which searches for all lines matching the given string no matter the case.</p> <p><b>-b</b> - used to make a backup of a file which is overwritten, renames the file with ~</p> <p><code>mv -b gopefile /home/gopedir</code> - will overwrite the file 'gopefile' that is in gopedir and make a backup of it.</p> <p><b>-p</b> - parent flag, used to make subdirectories inside a dir</p> <p><code>mkdir -p /gopedir2/chrislap/nut</code> - makes two dir inside the parent dir (gopedir2)</p> <p><b>-f</b> - forcefully remove all files even those that are write protected</p> <p>*there are many other flags</p>
14	<b>mv</b>	<p>used to move or rename a file  <code>mv gopefile gopetwerk</code> - gopefile is renamed to gopetwerk</p> <p><code>mv gopefile gope2 /home/gopedir</code> - gopefile and gope2 are moved to gopedir</p>
15	<b>mkdir</b>	<p>make directory inside parent directory, default is usually '/home'</p> <p><code>mkdir gopedir2 gopetwerk</code> - makes two dir called 'gopedir2' and 'gopetwerk' inside 'home'</p>
16	<b>rm</b>	remove files

	<code>rm chris-genesis-pswd.js</code>	<p><code>rmdir gopedir</code> - used to remove a directory, simply using 'rm' will not work</p> <p><code>rm -r gopedir</code> - also works, because it will remove all files inside the dir and the dir itself</p>
17	<code>find</code> <code>find gope.py</code>	<p>Used to look for certain files and directories</p> <p><code>-type</code> - specific type of file <code>-name</code> - specify the name of the file</p> <p><code>find -type d -name gopedir</code> - looks for the type directory defined by 'd' named 'gopedir'</p>
18	<code>man</code>	<p>Brings up the manual for a command with in-depth description</p> <p><code>man rm</code> - will bring up the manual for the 'rm' command including the flags; use 'q' to exit/quit manual</p>
19	<code>alias</code>	<p>used to assign aliases to long commands</p> <p><code>alias gope='ls -la'</code> - will create gope as an alias for 'ls -la' command. <u>NO SPACES</u> before and after the equal sign and use <u>SINGLE QUOTES</u> only; now 'gope' can be used in place of 'ls -la'</p> <p><code>unalias gope</code> - will remove 'gope' as an alias</p>
20	Head out commands	<p><code>exit</code> - exit the terminal <code>logout</code> - logout of linux <code>reboot</code> - reboot the computer <code>shutdown</code> - shutdown the computer, usually after 1 minute of inputting the cmd</p>
21	<code>date</code>	Shows the date and time
22	<code>top</code>	Shows information on currently running processes and CPU and memory utilization, similar to task manager in Windows

23	<p><b>grep</b></p> <pre>cat &gt; gope.txt gope linux chris gope linux some random text gope more random text</pre>	<p>'Global regular expression print'</p> <p>Used to search text files for specific <u>lines</u></p> <pre>grep "gope" gope.txt gope linux chris gope linux some random text gope</pre> <ul style="list-style-type: none"> <li>- will return the first two lines b/c they contain 'gope' but not the third because it has no 'gope'</li> </ul> <p>-i - case insensitive, searches for all matching strings regardless of case.</p> <p>-c - returns the number of lines that matches the given string</p> <p>*there are many other options that can be used with <b>grep</b></p>
24	<b>df</b>	gives a report of the system disk usage
25	<b>diff</b>	shows the content of two files to compare the 'difference' between them
26	<b>head</b>	outputs the first 10 lines of a file
27	<b>tail</b>	output the last 10 lines of a file
28	<p><b>kill</b></p> <pre>kill [PID]</pre>	used to send signals to processes to terminate them, using the Process ID which can be obtained by entering ' <b>top</b> '
29	<b>ping</b>	used to send an ICMP ECHO_REQUEST to a network in order to get a message back from it, sends a file and outputs how long it took to get a response

		<p>ping sphscompsci.github.io</p> <p>PING sphscompsci.github.io (185.199.108.153)</p> <p>56(84) bytes of data.</p> <p>64 bytes from 185.199.108.153 (185.199.108.153):</p> <p>icmp_seq=5 ttl=60 time=6.66 ms</p>
30	ps	stands for 'process status' used to report information on currently running processes
31	tar tar cf [name.tar] [filename(s)] tar cf gope.tar gope.py script.js	<p>used to archive file, compresses files usually into a .tar file; 'tape archive'. Also to uncompress files.</p> <p>- must use 'c' to create and 'f' for file options, 'cf' must be followed by archive name and files that will be archived</p>
32	whoami	Outputs your username
33	pwd	Output the name of the directory you are in; 'Print Working Directory'
34	sudo	<p>'Superuser do' used for admin privileges.</p> <p>To avoid typing 'sudo' for long periods of time switch to the root user to get full (root) access</p> <p>sudo su - will switch user to root using admin priv.</p> <p>username@comp_name\$ sudo su</p> <p>root@comp_name# su username - to switch back</p>
35	whatis	<p>Displays a one line description for a command</p> <p>whatis grep</p>

		<p>grep (1) - print lines that match patterns</p> <p>whatis whatis</p> <p>whatis (1) - display one-line manual page descriptions</p>
36	Creating, writing and running python files	<p>cat &gt; gope.py</p> <p>num1 = 1</p> <p>num2 = 6</p> <p>print (num1 + num2)</p> <p>sudo apt install python3 - if python isn't already installed</p> <p>python3 gope.py - use 'python' to call the python interpreter.</p> <p>7</p> <p>Will print the sum of 'num1' and 'num2'</p>
37	nano sudo nano gope.txt	<p>used to edit files; may or may not need admin privileges</p> <p>CTRL + O is usually used to save, CTRL + X to exit after saving</p>
38	!!	Run the previous command
39	apt-get	<p>used to install programs</p> <p>sudo apt-get install python3 - admin priv. is required, will install python3</p> <p>sudo apt-get remove python3 - will remove python3</p>

<https://linuxjourney.com/> - Learn command line

<https://bellard.org/jslinux/> - online LINUX terminal (some cmds may not work)

\*most basic commands are compatible across all distributions, however some may not work on other distributions. All commands listed here, work on Ubuntu 19.10