

LINUX COMMANDS

PLAGIARISM STATEMENT

I certify that this assignment/report is my own work, based on my personal study and/or research and that I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication. I also certify that this assignment/report has not previously been submitted for assessment in any other course, except where specific permission has been granted from all course instructors involved, or at any other time in this course, and that I have not copied in part or whole or otherwise plagiarised the work of other students and/or persons. I pledge to uphold the principles of honesty and responsibility at CSE@IITH. In addition, I understand my responsibility to report honour violations by other students if I become aware of it.

Name: Siddharth Saini

Date: 08/11/2020

Signature: Siddharth

COMMAND	USE	EXAMPLE / SCREENSHOT
pwd	to check the current directory.	<pre>siddharth@debian:~\$ pwd /home/siddharth</pre>
cd	to change the directory to some other directory.	<pre>siddharth@debian:~\$ cd Downloads/ siddharth@debian:~/Downloads\$ cd-</pre>
cd..	to get back to the home directory.	
ls	to list out all the files that the current directory contains.	<pre>siddharth@debian:~\$ ls Desktop example2.c Example3.c helloWorld.o Music Pictures ProcEx4.c Templates Documents example2.o example3.o LinkedList.c numberPlate.c ProcEx2.c ProcEx5.c Videos Downloads example3.c helloWorld.c LinkedList.o numberPlate.o ProcEx3.c Public</pre>
ls -R	in addition to the use of ls command, it shows the files and folders of the sub-directory as well.	<pre>siddharth@debian:~\$ ls -R .: Desktop example2.c Example3.c helloWorld.o Music Pictures ProcEx4.c Templates Documents example2.o example3.o LinkedList.c numberPlate.c ProcEx2.c ProcEx5.c Videos Downloads example3.c helloWorld.c LinkedList.o numberPlate.o ProcEx3.c Public ./Desktop: ./Documents: ./Downloads: aptitude-common_0.8.13-2_all.deb lec06-07-Processes.pdf ltrace_0.7.3-6.1_amd64.deb</pre>
ls -a	it is used to show all the files in the directory. it also shows the hidden files in that directory.	<pre>siddharth@debian:~\$ ls -a . .cache example2.c .gnupg linkedList.o numberPlate.o ProcEx5.c Videos .. .config example2.o helloWorld.c .local Pictures ProcEx2.c .profile .bash_history Desktop example3.c helloWorld.o .mozilla ProcEx3.c Public .bash_logout Documents Example3.c .ICEauthority Music ProcEx4.c .ssh .bashrc Downloads example3.o LinkedList.c numberPlate.c</pre>
mkdir	it is used to make a new directory. it shows an error if the directory already exists.	<pre>siddharth@debian:~\$ mkdir Songs siddharth@debian:~\$ rmdir Music siddharth@debian:~\$ touch commands.txt - - - - -</pre>
rmdir	it is used to remove the directory. it only deletes the directory if it is empty.	
touch	it is used to create a new blank file in the current directory.	
find	it is used to locate a file in the current directory.	<pre>siddharth@debian:~\$ find -name commands.txt ./commands.txt</pre>
sudo	it enables us to perform tasks that require administrative rights.	
df	to get a report on system's disk usage in % and KBs	<pre>siddharth@debian:~\$ df Filesystem 1K-blocks Used Available Use% Mounted on udev 485688 0 485688 0% /dev tmpfs 101108 4936 96172 5% /run /dev/sda1 9222484 4539428 4194864 52% / tmpfs 505532 51168 454364 11% /dev/shm tmpfs 5120 4 5116 1% /run/lock tmpfs 505532 0 505532 0% /sys/fs/cgroup</pre>
df -m	to get a report on system's disk usage in % and MBs	<pre>siddharth@debian:~\$ df -m Filesystem 1M-blocks Used Available Use% Mounted on udev 475 0 475 0% /dev tmpfs 99 5 94 5% /run /dev/sda1 9007 4434 4097 52% / tmpfs 494 50 444 11% /dev/shm tmpfs 5 1 5 1% /run/lock tmpfs 494 0 494 0% /sys/fs/cgroup tmpfs 99 10 89 10% /run/user/1000 /dev/sr0 3789 3789 0 100% /media/cdrom0</pre>
head -n 5	to show the first 5 line of a file. if there is another integer in place of 5, it will show that many lines.	<pre>siddharth@debian:~\$ head -n 5 example2.c #include<unistd.h> #include<sys/syscall.h> #include<errno.h> #include<stdio.h></pre>
head	to show first 10 lines of the file.	
tail	to show last 10 lines of the file.	
tail -n 5	to show the last 5 line of a file. if there is another integer in place of 5, it will show that many lines.	<pre>siddharth@debian:~\$ tail -n 5 example2.c rc = syscall(SYS_chmod, "/etc/passwd", 0444); if(rc == -1) fprintf(stderr, "chmod failed, errno = %d\n", errno); printf("This is Example2"); }</pre>
chmod	to change read, write pr execute permissions of files or directories.	

ping	to check connectivity status to a server.	<pre>siddharth@debian:~\$ ping google.com PING google.com (142.250.67.142) 56(84) bytes of data. 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=1 ttl=63 time=72.6 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=2 ttl=63 time=69.0 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=3 ttl=63 time=69.1 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=4 ttl=63 time=64.10 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=5 ttl=63 time=69.3 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=6 ttl=63 time=66.1 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=7 ttl=63 time=88.2 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=8 ttl=63 time=67.4 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=9 ttl=63 time=63.5 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=10 ttl=63 time=66.3 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=11 ttl=63 time=79.4 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=12 ttl=63 time=67.2 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=13 ttl=63 time=79.4 ms 64 bytes from bom12s06-in-f14.1e100.net (142.250.67.142): icmp_seq=14 ttl=63 time=68.2 ms ^C</pre>
history	to show the list of commands used by a user in the terminal.	<pre>siddharth@debian:~\$ history 1 gcc -o helloWorld.o helloWorld.c 2 sudo apt-get install build-essential 3 sudo apt-get install gcc 4 sudo nano /etc/apt/sources.list 5 sudo apt-update 6 sudo apt update 7 sudo apt install ltrace</pre>
uname	shows the information about the UNIX machine.	<pre>siddharth@debian:~\$ uname Linux</pre>
top	to show the list of running processes and how much CPU is used in those processes.	<pre>siddharth@debian:~\$ top top - 14:05:22 up 1:10, 1 user, load average: 0.05, 0.15, 0.17 Tasks: 142 total, 4 running, 138 sleeping, 0 stopped, 0 zombie %Cpu(s): 1.8 us, 0.0 sy, 0.0 ni, 97.8 id, 0.4 wa, 0.0 hi, 0.0 si, 0.0 st MiB Mem : 987.4 total, 62.6 free, 696.9 used, 227.9 buff/cache MiB Swap: 1022.0 total, 258.9 free, 763.1 used, 98.4 avail Mem PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND 774 siddhar+ 20 0 2592096 171600 47660 R 1.1 17.0 5:59.13 gnome-shell 1919 siddhar+ 20 0 2978492 198244 39988 S 0.7 19.6 1:05.48 Web Content 1770 siddhar+ 20 0 3504912 127492 45264 S 0.4 12.6 2:16.81 firefox-esr 2674 siddhar+ 20 0 4145000 244400 15704 R 0.4 2.4 0:02.66 gnome-terminal- 3247 siddhar+ 20 0 11148 3228 2780 R 0.4 0.3 0:00.05 top</pre>
useradd	to add a new user in the OS.	
passwd	to change the password of that particular user in the OS.	
echo	to insert a line of text in a file.	<pre>siddharth@debian:~\$ echo command1: "ltrace">> commands.txt</pre>
hostname	to show the hostname.	<pre>siddharth@debian:~\$ hostname debian</pre>
hostname -i	to show the IP Address of the hostname.	<pre>siddharth@debian:~\$ hostname -i 127.0.1.1</pre>
apt-get	used to manage packages in LINUX.	<pre>siddharth@debian:~\$ apt-get apt 1.8.2.1 (amd64) Usage: apt-get [options] command apt-get [options] install remove pkg1 [pkg2 ...] apt-get [options] source pkg1 [pkg2 ...] apt-get is a command line interface for retrieval of packages and information about them from authenticated sources and for installation, upgrade and removal of packages together with their dependencies.</pre>
arch	used to print computer architecture.	<pre>siddharth@debian:~\$ arch x86_64</pre>
cat	to read data from a file .	
date	used to print system date and time.	<pre>siddharth@debian:~\$ date Sun Nov 8 15:52:22 IST 2020</pre>
exit	used to exit the shell where it is currently running.	
free	to display the amount of free space along with the memory in use.	<pre>siddharth@debian:~\$ free total used free shared buff/cache available Mem: 1011068 624960 122656 38924 263452 208340 Swap: 1046524 977552 68972</pre>
man	shows the user manual for the command that follows this command.	Example: man ls
pinky	gives the information about all the users who have logged in and the time of logging in.	<pre>siddharth@debian:~\$ pinky Login Name TTY Idle When Where siddharth siddharth _ tty2 02:58 2020-11-08 12:54 tty2</pre>