

Assignment.1

To Study Linux Command

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Batch: C1

1. date

This command gives us today's date

```
student@student-Vostro-3470:~$ date
Tuesday 17 January 2023 08:24:50 AM IST
```

2. who

This command is used to see the name of user

```
student@student-Vostro-3470:~$ who
student  :0                2023-01-17 08:21 (:0)
```

3. pwd

This command prints the current working directory path, starting from the root (/). Use the pwd command to find your way in the Linux file system.

```
student@student-Vostro-3470:~$ pwd
/home/student
```

4. ls

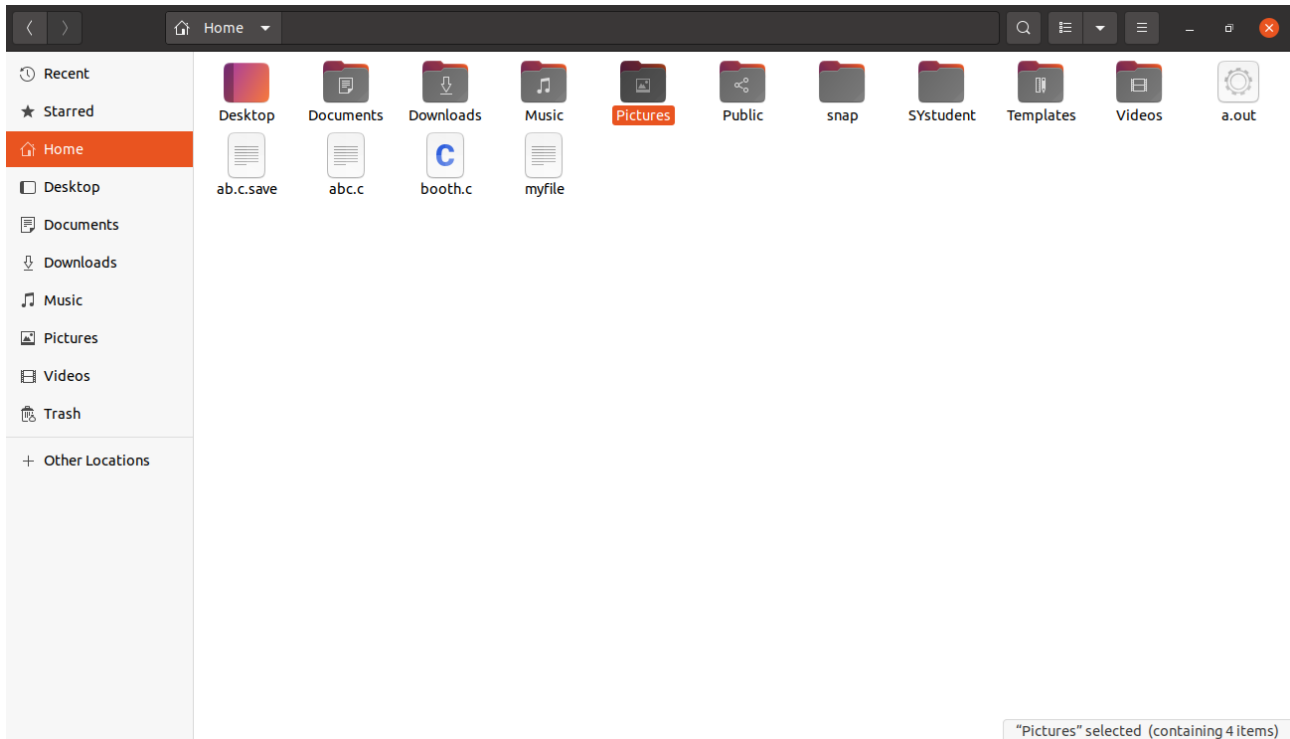
The ls command is used to list files. "ls" on its own lists all files in the current directory except for hidden files. "ls *".

```
student@student-Vostro-3470:~$ ls
abc.c  ab.c.save  a.out  booth.c  Desktop  Documents  Downloads  Music  Pictures  Public  snap  SYstudent  Templates  Videos
```

5. cat > { file name }

Using this command you can quickly create a file and put text into it. To do that, use the > redirect operator to redirect the text in the file. The file is created, and you can begin populating it with text.

```
student@student-Vostro-3470:~$ cat > myfile
```



6. `cat { file name }`

This command reads each File parameter in sequence and writes it to standard output so that we are able to see text of respective file.

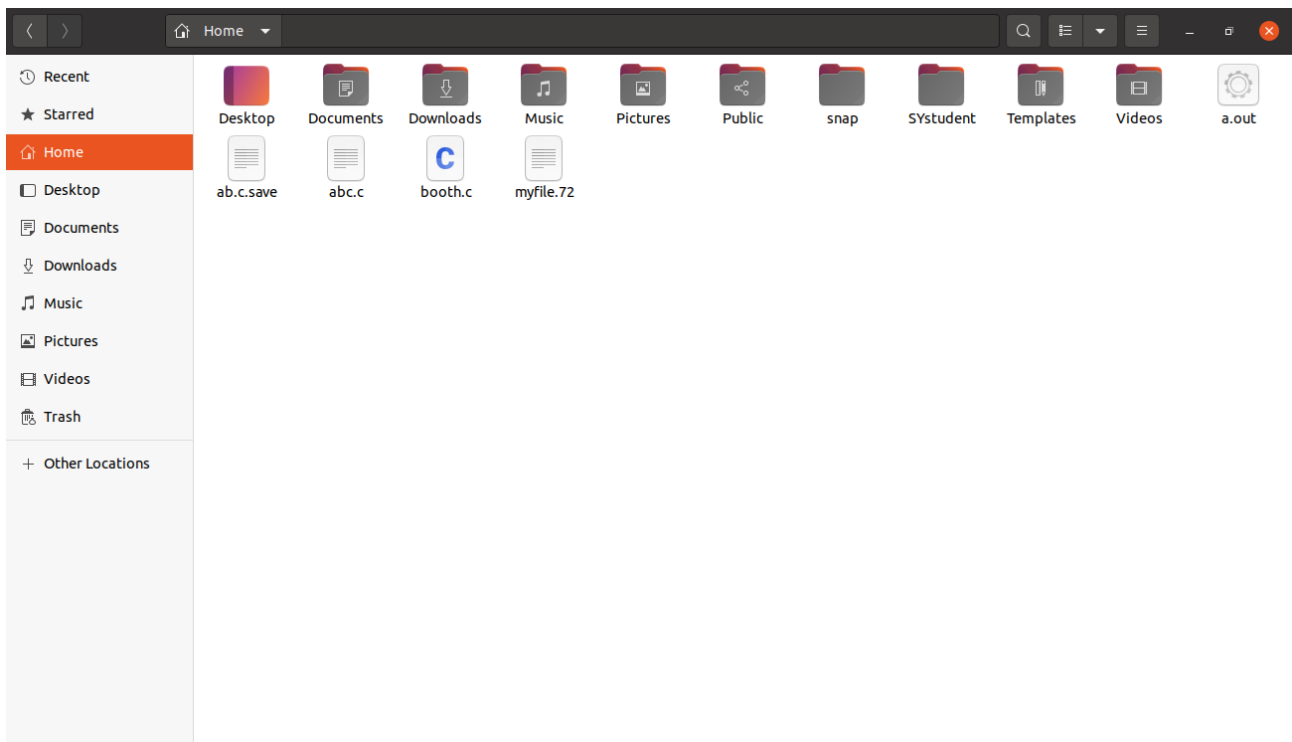
```
student@student-Vostro-3470:~$ cat myfile
```

Linux Commands

7. `mv {file 1} {file 2}`

This mv command to move or rename files. For example: `mv file1 file2` moves the contents of file1 to file2 and deletes file1.

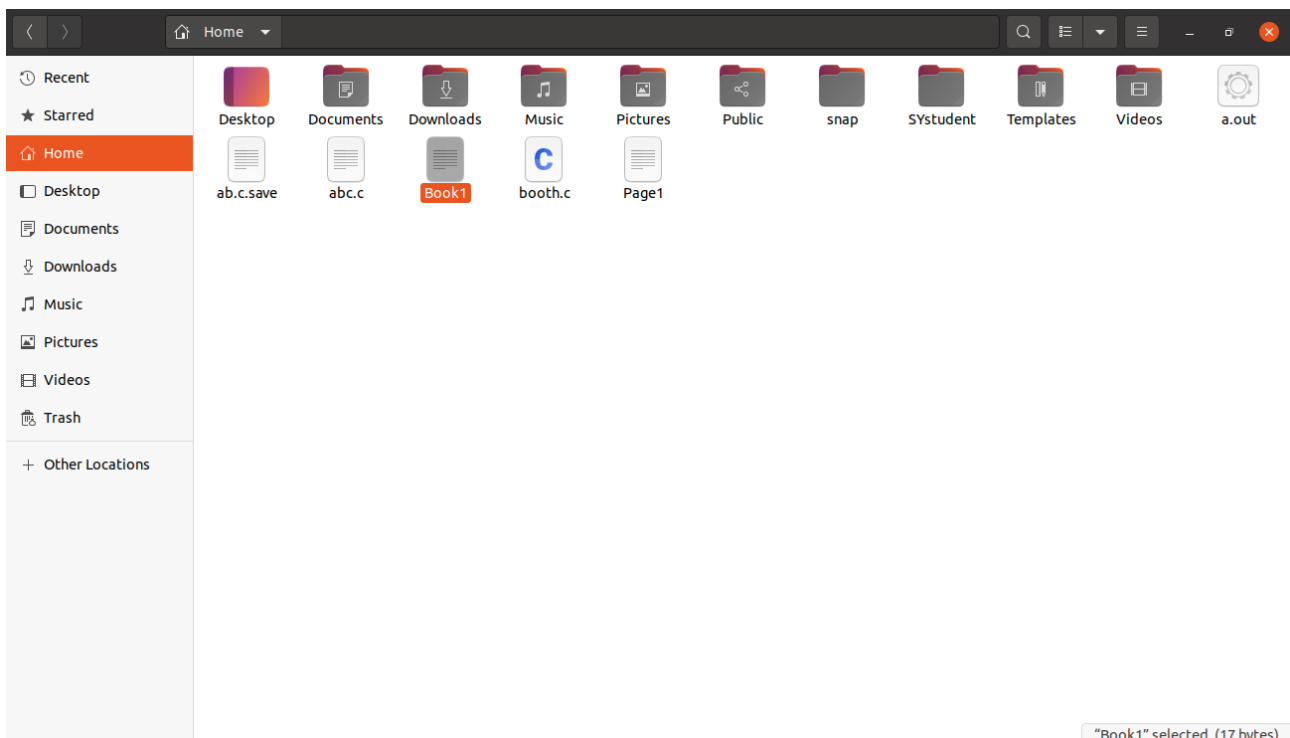
```
student@student-Vostro-3470:~$ mv myfile myfile.72
student@student-Vostro-3470:~$
```



8. rm file name

This command to remove files you no longer need. The rm command removes the entries for a specified file, group of files, or certain select files from a list within a directory.

```
student@student-Vostro-3470:~$ rm myfile.72
student@student-Vostro-3470:~$
```



9. `chmod {u|g|o|a} {+|-} {r|w|x} {filename}`

The `chmod` (short for *change mode*) command is used to manage file system access permissions on Unix and Unix-like systems. There are three basic file system permissions, or *modes*, to files and directories:

- ⑩ read (r)
- ⑩ write (w)
- ⑩ execute (x)

Each mode can be applied to these classes:

- ⑩ user (u)
- ⑩ group (g)
- ⑩ other (o)

The **user** is the account that owns the file. The **group** that owns the file may have other accounts on the system as members. The remaining class, **other** (sometimes referred to as *world*), means *all other* accounts on the system.

To give the permission “+” sign used and to remove the permission “-” sign used.

```
student@student-Vostro-3470:~$ chmod u+rwX Page1
student@student-Vostro-3470:~$
```

10. `pwd`

The `pwd` command stands for print working directory. When invoked the command prints the complete path of the current working directory.

```
student@student-Vostro-3470:~$ pwd
/home/student
```

11. `wc {filename}`

The `wc` command in Linux is short for word count. It's a simple tool that does exactly what its name suggests: it calculates numbers words in a file. It can also count similar things like number of characters, number of lines and number of bytes in a file.

```
student@student-Vostro-3470:~$ wc myfile
0 0 0 myfile
student@student-Vostro-3470:~$
```

12. `grep {word-to-lookup} {filename}`

If you're looking for a file that contains a certain keyword and you know the name of the file, you can use this command. This command will search recursively through the directory /path/to/search for the file named filename and print out any lines that contain the keyword.

```
student@student-Vostro-3470:~$ grep cloud myfile
cloud computing
```

13. tail -|+ {linenumber} {filename}

As mentioned above, the tail command will show the last ten lines of a file by default. To display a specified number of lines, you need to pair it with the {linenumber}

```
student@student-Vostro-3470:~$ tail +3 myfile
abc
linux command
```

14. cmp {fil1} {file 2}

The tool compares two files byte by byte. As a difference is found, the tool stops and produces an output that tells which line and byte the difference is in.

```
student@student-Vostro-3470:~$ cmp myfile myfile.old
myfile myfile.old differ: byte 1, line 1
```

15. diff {file 1} {file 2}

diff stands for **difference**. This command is used to display the differences in the files by comparing the files line by line.

```
student@student-Vostro-3470:~$ diff myfile myfile.old
1,4c1,2
< cloud computing
< 222 5 88 3 55 9 56 74 23 87
< abc
< linux command
---
> Computer Engineering
> Third year
```

16. pr {filename}

In Linux/Unix **pr** command is used to **prepare a file for printing** by adding suitable footers, headers, and the formatted text. **pr** command actually adds 5 lines of margin both at the top and bottom of the page. The header part shows the date and time of the last modification of the file with the file name and the page number.

```
student@student-Vostro-3470:~$ pr myfile

2023-01-21 11:11                                myfile                                Page 1

cloud computing
222 5 88 3 55 9 56 74 23 87
abc
linux command
```

17. ps

The **ps** command is one of the most commonly used commands when troubleshooting issues on Linux systems.

```
student@student-Vostro-3470:~$ pr myfile

2023-01-21 11:11                                myfile                                Page 1

cloud computing
222 5 88 3 55 9 56 74 23 87
abc
linux command
```

18. ps -ag

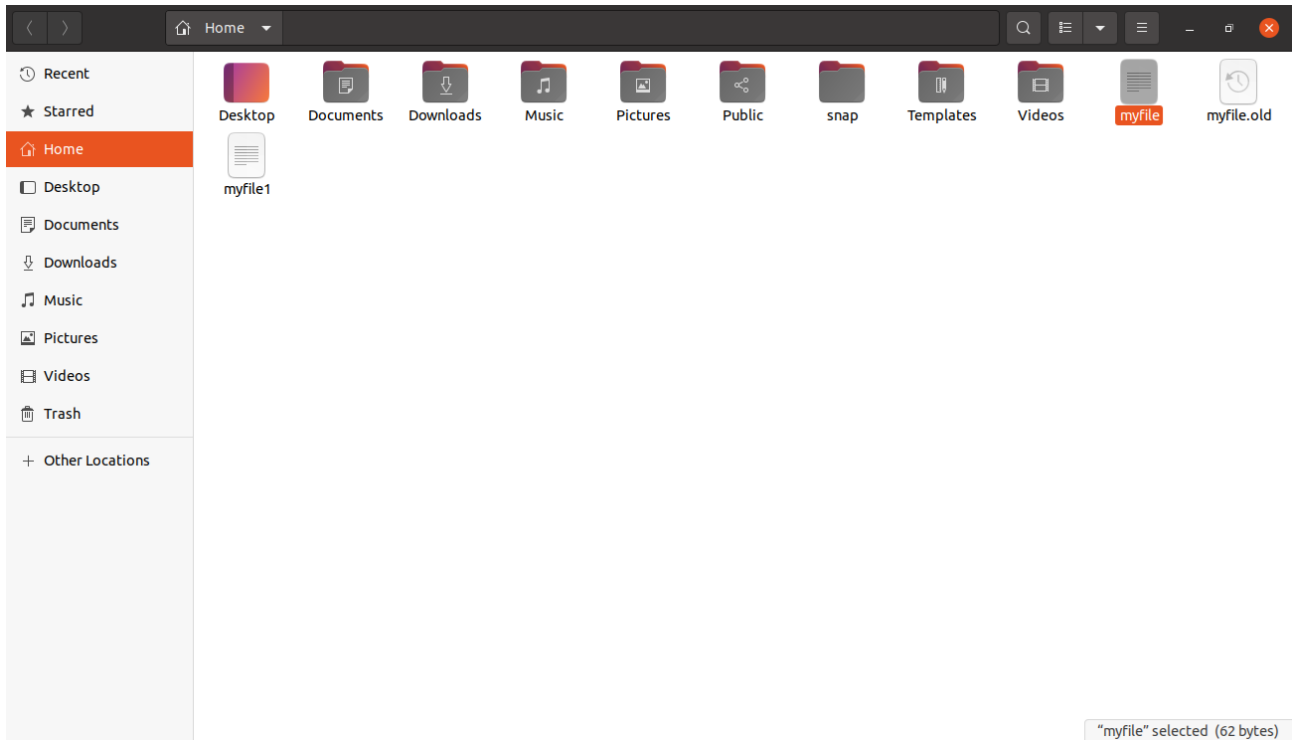
This command gives us all information about running processes.

```
student@student-Vostro-3470:~$ ps -ag
  PID TTY          STAT       TIME COMMAND
 1534 tty2      Ssl+      0:00 /usr/lib/gdm3/gdm-x-session --run-script env GNOME_
 1536 tty2      Sl+       1:18 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user
 1545 tty2      Sl+       0:00 /usr/libexec/gnome-session-binary --systemd --syste
 5717 pts/0      Ss        0:00 bash
 6007 pts/0      T         0:00 cat
 6886 pts/0      T         0:00 cat
 8837 pts/0      R+        0:00 ps -ag
```

19. touch {filename}

It is used to create a file without any content. The file created using touch command is empty. This command can be used when the user doesn't have data to store at the time of file creation.

```
student@student-Vostro-3470:~$ touch myfile1
student@student-Vostro-3470:~$
```



20. clear

clear is a standard Unix computer operating system command that is used to clear the terminal screen.

21. echo

The **echo** command is a built-in Linux feature that prints out arguments as the standard output. **echo** is commonly used to display text strings or command results as messages.

```
student@student-Vostro-3470:~$ echo linux
linux
```

22. less {filename}

Less command is a Linux utility that can be used to read the contents of a text file one page(one screen) at a time. It has faster access because if file is large it doesn't access the complete file, but accesses it page by page.

24. uname

When we run `uname` command without any options, it just prints the core operating system name. We can also use `-s` option to get the same output, it prints the kernel name of the system.

```
student@student-Vostro-3470:~$ uname
Linux
```

25. whoami

`whoami` command is used both in *Unix Operating System* and as well as in *Windows Operating System*. It is basically the concatenation of the strings “**who**”, “**am**”, “**i**” as **whoami**. It displays the username of the current user when this command is invoked.

```
student@student-Vostro-3470:~$ whoami
student
```

26. export

`Export` command in Linux without any argument will generate or display all exported variables.

```
student@student-Vostro-3470: ~
Try 'tar --help' or 'tar --usage' for more information.
student@student-Vostro-3470:~$ export
declare -x COLORTERM="truecolor"
declare -x DBUS_SESSION_BUS_ADDRESS="unix:path=/run/user/1000/bus"
declare -x DESKTOP_SESSION="ubuntu"
declare -x DISPLAY=":0"
declare -x GNOMESESSION="ubuntu"
declare -x GJS_DEBUG_OUTPUT="stderr"
declare -x GJS_DEBUG_TOPICS="JS ERROR;JS LOG"
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/dab76d35_7097_484e_8ac5_e987937da618"
declare -x GNOME_TERMINAL_SERVICE=":1.123"
declare -x GPG_AGENT_INFO="/run/user/1000/gnupg/S.gpg-agent:0:1"
declare -x GTK_MODULES="gail:atk-bridge"
declare -x HOME="/home/student"
declare -x IM_CONFIG_PHASE="1"
declare -x INVOCATION_ID="6d199bbf9ee34281af6f20b13ee994ed"
declare -x JOURNAL_STREAM="8:44211"
declare -x LANG="en_IN"
declare -x LANGUAGE="en_IN:en"
declare -x LESSCLOSE="/usr/bin/lesspipe %s %s"
declare -x LESSOPEN="| /usr/bin/lesspipe %s"
declare -x LOGNAME="student"
declare -x LS_COLORS="rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:mi=00:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lz4=01;31:*.lzh=01;31:*.lzm=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tzt=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xpm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=00;36:*.au=00;36:*.flac=00;36:*.m4a=00;36:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*.ra=00;36:*.wav=00;36:*.oga=00;36:*.opus=00;36:*.spx=00;36:*.xspf=00;36:"
declare -x MANAGERPID="1441"
declare -x OLDPWD
declare -x PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin"
```

27. df

we use the df command to find total disk space and available space on a Linux / Unix file system.

```
student@student-Vostro-3470:~$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev            1875644         0   1875644  0% /dev
tmpfs           382388      1840    380548  1% /run
/dev/sda2       959786032 9861180 901096644  2% /
tmpfs           1911924         0   1911924  0% /dev/shm
tmpfs            5120          4     5116  1% /run/lock
tmpfs           1911924         0   1911924  0% /sys/fs/cgroup
/dev/loop0        128        128         0 100% /snap/bare/5
/dev/loop1       64896     64896         0 100% /snap/core20/1778
/dev/loop4       354688    354688         0 100% /snap/gnome-3-38-2004/119
/dev/loop3       254848    254848         0 100% /snap/gnome-3-38-2004/99
/dev/loop2       64768     64768         0 100% /snap/core20/1738
/dev/loop5       66816     66816         0 100% /snap/gtk-common-themes/1519
/dev/loop6       93952     93952         0 100% /snap/gtk-common-themes/1535
/dev/loop7       55552     55552         0 100% /snap/snap-store/558
/dev/loop10      51072     51072         0 100% /snap/snapd/17950
/dev/loop9       50816     50816         0 100% /snap/snapd/17883
/dev/loop8       47104     47104         0 100% /snap/snap-store/638
/dev/sda1        523248    30156    493092  6% /boot/efi
tmpfs           382384         48    382336  1% /run/user/1000
```

28. ifconfig

The “ifconfig” command is used for displaying current network configuration information, setting up an ip address, netmask, or broadcast address to a network interface, creating an alias for the network interface, setting up hardware address, and enable or disable network interfaces.

```
student@student-Vostro-3470:~$ ifconfig
enp1s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 172.16.23.33  netmask 255.255.255.0  broadcast 172.16.23.255
    inet6 fe80::a1f9:3189:2649:4232  prefixlen 64  scopeid 0x20<link>
    ether e4:54:e8:a7:5c:13  txqueuelen 1000  (Ethernet)
    RX packets 24583  bytes 28533774 (28.5 MB)
    RX errors 0  dropped 87  overruns 0  frame 0
    TX packets 12857  bytes 1827525 (1.8 MB)
    TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 2035  bytes 199306 (199.3 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 2035  bytes 199306 (199.3 KB)
    TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

29. traceroute

traceroute command in Linux prints the route that a packet takes to reach the host. This command is useful when you want to know about the route and about all the hops that a packet takes.

```
student@student-Vostro-3470: ~
student@student-Vostro-3470:~$ traceroute
Usage:
  traceroute [ -46dFItnreAUDV ] [ -f first_ttl ] [ -g gate,... ] [ -i device ] [ -m max_ttl ] [ -N squeries ] [ -p port ] [ -t tos ] [ -l flow_label ] [ -w MAX,HERE,NEAR ] [ -q nqueries ] [ -s src_addr ] [ -z sendwait ] [ --fwmark=num ] host [ packetlen ]
Options:
  -4                               Use IPv4
  -6                               Use IPv6
  -d --debug                       Enable socket level debugging
  -F --dont-fragment              Do not fragment packets
  -f first_ttl --first=first_ttl   Start from the first_ttl hop (instead from 1)
  -g gate,... --gateway=gate,...   Route packets through the specified gateway
                                   (maximum 8 for IPv4 and 127 for IPv6)
  -I --icmp                       Use ICMP ECHO for tracerouting
  -T --tcp                        Use TCP SYN for tracerouting (default port is 80)
  -i device --interface=device     Specify a network interface to operate with
  -m max_ttl --max-hops=max_ttl    Set the max number of hops (max TTL to be
                                   reached). Default is 30
  -N squeries --sim-queries=squeries Set the number of probes to be tried
                                   simultaneously (default is 16)
  -n                               Do not resolve IP addresses to their domain names
  -p port --port=port             Set the destination port to use. It is either
                                   initial udp port value for "default" method
                                   (incremented by each probe, default is 33434), or
                                   initial seq for "icmp" (incremented as well,
                                   default from 1), or some constant destination
                                   port for other methods (with default of 80 for
                                   "tcp", 53 for "udp", etc.)
  -t tos --tos=tos               Set the TOS (IPv4 type of service) or TC (IPv6
                                   traffic class) value for outgoing packets
  -l flow_label --flowlabel=flow_label Use specified flow_label for IPv6 packets
  -w MAX,HERE,NEAR --wait=MAX,HERE,NEAR Wait for a probe no more than HERE (default 3)
                                   before trying the next probe from the same hop
```

30. sudo

Sudo stands for SuperUser DO and is used to access restricted files and operations. By default, Linux restricts access to certain parts of the system preventing sensitive files from being compromised. The sudo command temporarily elevates privileges allowing users to complete sensitive tasks without logging in as the root user.

```
student@student-Vostro-3470:~$ sudo
usage: sudo -h | -K | -k | -V
usage: sudo -v [-AknS] [-g group] [-h host] [-p prompt] [-u user]
usage: sudo -l [-AknS] [-g group] [-h host] [-p prompt] [-U user] [-u user] [command]
usage: sudo [-ABEHknPS] [-r role] [-t type] [-C num] [-g group] [-h host] [-p prompt] [-T timeout] [-u user] [VAR=value] [-i|-s] [<command>]
usage: sudo -e [-AknS] [-r role] [-t type] [-C num] [-g group] [-h host] [-p prompt] [-T timeout] [-u user] file ...
```

31. cal

To see a basic calendar of the current month, just give following command.

```
student@student-Vostro-3470:~$ cal
      January 2023
Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7
 8  9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31
```

32. alias

alias are like custom shortcuts used to represent a command (or set of commands) executed with or without custom options. It is like a shortcut command which will have same functionality as if we are writing the whole command.

Without arguments, alias prints the list of aliases in the reusable form alias Name=Value on standard output.

```
student@student-Vostro-3470:~$ alias
alias alert='notify-send --urgency=low -i "${[ $? = 0 ]} && echo terminal || echo error)" "$(history|tail -n1|sed -e '\''s/^s*[0-9]\+\s*//;s/[;&]]\s*alert$//'\''")'
alias egrep='egrep --color=auto'
alias fgrep='fgrep --color=auto'
alias grep='grep --color=auto'
alias l='ls -CF'
alias la='ls -A'
alias ll='ls -aF'
alias ls='ls --color=auto'
```

33. whatis

The whatis command may be used to provide a brief manual page description of multiple of Linux commands

```
student@student-Vostro-3470:~$ whatis mkdir
mkdir (1)          - make directories
student@student-Vostro-3470:~$ whatis rm
rm (1)            - remove files or directories
```

34. top

The output displays the summary area (the dashboard with resource usage stats) and the task area (a list of all processes). top updates the information every three seconds by default.

If the process list is long, scroll through it using the **Up** and **Down** arrows and **Page Up** and **Page Down** keys. To quit **top**, press **q**.

```
student@student-Vostro-3470: ~  
rm (1) - remove files or directories  
student@student-Vostro-3470:~$  
student@student-Vostro-3470:~$ top  
  
top - 12:11:28 up 1:42, 1 user, load average: 0.18, 0.21, 0.23  
Tasks: 229 total, 2 running, 219 sleeping, 8 stopped, 0 zombie  
%Cpu(s): 10.6 us, 2.6 sy, 0.0 ni, 86.4 id, 0.3 wa, 0.0 hi, 0.1 si, 0.0 st  
MiB Mem : 3734.2 total, 190.2 free, 1724.4 used, 1819.6 buff/cache  
MiB Swap: 2048.0 total, 2044.7 free, 3.3 used, 1265.3 avail Mem  
  
  PID USER      PR  NI   VIRT   RES   SHR  S  %CPU  %MEM    TIME+  COMMAND  
 1666 student    20   0 4509560 255528 102268 S  19.6   6.7   2:54.71 gnome-shell  
 1536 student    20   0 591628  90248  53328 S  15.9   2.4   2:37.76 Xorg  
12763 student    20   0 736004  45196  34196 R  13.0   1.2   0:00.39 gnome-screensho  
 5638 student    20   0 820648  53516  39312 S   2.3   1.4   0:25.30 gnome-terminal-  
 3087 student    20   0 7171828 389212 106640 S   1.0  10.2   1:59.83 Isolated Web Co  
10742 root        20   0      0      0      0 I   1.0   0.0   0:00.92 kworker/1:0-events  
   22 root        20   0      0      0      0 S   0.7   0.0   0:06.25 ksoftirqd/1  
   14 root        20   0      0      0      0 I   0.3   0.0   0:02.21 rcu_sched  
   28 root        20   0      0      0      0 S   0.3   0.0   0:00.15 ksoftirqd/2  
  130 root        0 -20      0      0      0 I   0.3   0.0   0:03.54 kworker/u9:0-i915_flip  
  206 root        0 -20      0      0      0 I   0.3   0.0   0:00.66 kworker/2:1H-events_highpri  
 2068 student    20   0 496172  28652  19068 S   0.3   0.7   0:00.79 xdg-desktop-por  
2642 student    20   0 3657396 390916 168380 S   0.3  10.2   1:49.73 firefox  
12745 student    20   0  11996   4040   3256 R   0.3   0.1   0:00.13 top  
   1 root        20   0 167420  11444   8372 S   0.0   0.3   0:01.81 systemd  
   2 root        20   0      0      0      0 S   0.0   0.0   0:00.00 kthreadd  
   3 root        0 -20      0      0      0 I   0.0   0.0   0:00.00 rcu_gp  
   4 root        0 -20      0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp  
   5 root        0 -20      0      0      0 I   0.0   0.0   0:00.00 slub_flushwq  
   6 root        0 -20      0      0      0 I   0.0   0.0   0:00.00 netns  
   8 root        0 -20      0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri  
  10 root        0 -20      0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq  
  11 root        20   0      0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_rude_  
  12 root        20   0      0      0      0 S   0.0   0.0   0:00.00 rcu_tasks_trace  
  13 root        20   0      0      0      0 S   0.0   0.0   0:00.08 ksoftirqd/0  
  15 root        rt   0      0      0      0 S   0.0   0.0   0:00.02 migration/0  
  16 root        -51  0      0      0      0 S   0.0   0.0   0:00.00 idle_inject/0  
  18 root        20   0      0      0      0 S   0.0   0.0   0:00.00 rcu_ba/0
```

35. passwd

This command in Linux is used to change the user account passwords. The root user reserves the privilege to change the password for any user on the system, while a normal user can only change the account password for his or her own account.

```
student@student-Vostro-3470:~$ passwd  
Changing password for student.  
Current password:
```

36. w

The w command displays a list of all logged in to the server and what they are doing. This command is similar to who command, but ends up displaying more information about logged in users.

```
student@student-Vostro-3470:~$ w  
12:17:02 up 1:48, 1 user, load average: 0.10, 0.18, 0.21  
USER  TTY      FROM          LOGIN@  IDLE   JCPU   PCPU WHAT  
student :0          :0          10:40    ?xdm?  10:27  0.00s /usr/lib/gdm3/gdm-x-session --run-script env GNOME_SHELL_SESSION_MODE=ubuntu
```

37. ls -a

It will give us all hidden files present in the directory.

```
student@student-Vostro-3470:~$ ls -a  
  .  .bash_history  .bashrc  .config  Desktop  Documents  .gnupg  .mozilla  myfile  myfile.old  .profile  snap  .sudo_as_admin_successful  Videos  
  .. .bash_logout  .cache   Desktop  Downloads .local  Music   myfile1  Pictures  Public   .ssh  Templates
```

38. ls -l

This command is used to list information about files and directories within the file system.

```
student@student-Vostro-3470:~$ ls -l
total 44
drwxr-xr-x 2 student student 4096 Dec  2 20:26 Desktop
drwxr-xr-x 2 student student 4096 Dec  2 20:26 Documents
drwxr-xr-x 2 student student 4096 Jan 21 10:48 Downloads
drwxr-xr-x 2 student student 4096 Dec  2 20:26 Music
-rw-rw-r-- 1 student student  62 Jan 21 11:11 myfile
-rw-rw-r-- 1 student student   0 Jan 21 11:31 myfile1
-rw-rw-r-- 1 student student  32 Jan 21 11:17 myfile.old
drwxr-xr-x 2 student student 4096 Jan 21 12:19 Pictures
drwxr-xr-x 2 student student 4096 Dec  2 20:26 Public
drwx----- 3 student student 4096 Dec 20 13:26 snap
drwxr-xr-x 2 student student 4096 Dec  2 20:26 Templates
drwxr-xr-x 2 student student 4096 Dec  2 20:26 Videos
```

39. rm -rf

Linux rm -rf command **deletes directory forcefully**. It means a file or directory will be deleted anyhow even if it has read-only permission. To delete a file forcefully, use command: rm -f <file name>

```
student@student-Vostro-3470:~$ rm -rf myfile
student@student-Vostro-3470:~$
```

40. who | sort

Output of who command is given as input to sort command so that it will print sorted list of users.

```
student@student-Vostro-3470:~$ who | sort
student  :0                2023-01-21 10:40 (:0)
```