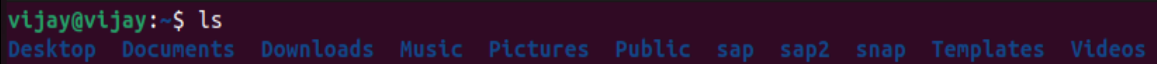
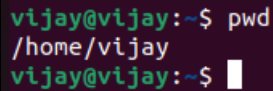


LINUX SHELL COMMANDS

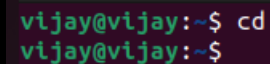
1. **ls** - The most frequently used command in Linux to list directories

O/P: 

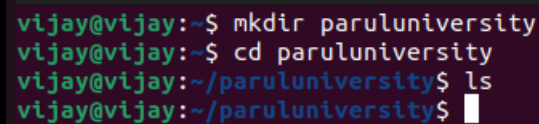
2. **pwd** - Print working directory command in Linuxclearclear

O/P: 

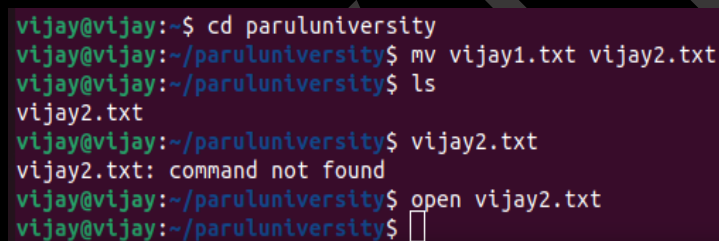
3. **cd** - Linux command to navigate through directories

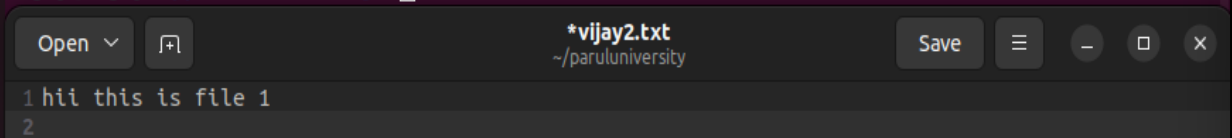
O/P: 

4. **mkdir** - Command used to create directories in Linux

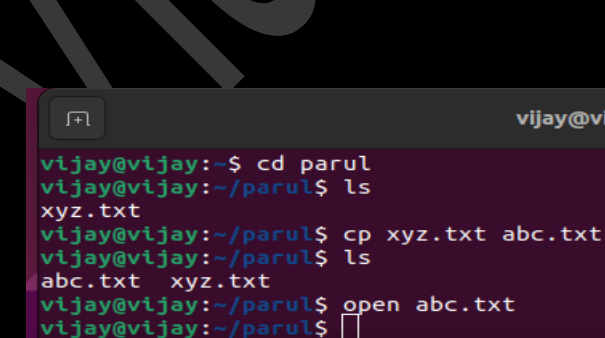
O/P: 

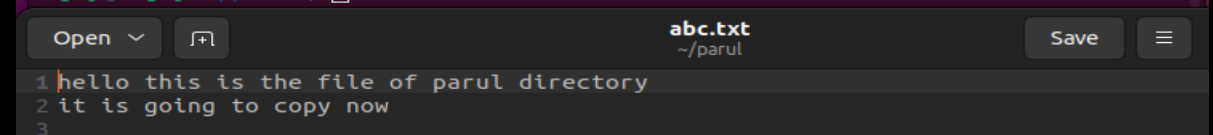
5. **mv** - Move or rename files in Linux

O/P: 



6. **cp** - Similar usage as mv but for copying files in Linux

O/P: 



7. **rm** - Delete files or directories

O/P:

```
vijay@vijay: ~/paruluniversity
vijay@vijay:~$ cd paruluniversity
vijay@vijay:~/paruluniversity$ ls
vijay2.txt
vijay@vijay:~/paruluniversity$ rm vijay2.txt
vijay@vijay:~/paruluniversity$ ls
vijay@vijay:~/paruluniversity$
```

8. **touch** - Create blank/empty files

O/P:

```
vijay@vijay: ~/paruluniversity
vijay@vijay:~$ cd paruluniversity
vijay@vijay:~/paruluniversity$ ls
vijay@vijay:~/paruluniversity$ touch a.txt
vijay@vijay:~/paruluniversity$ ls
a.txt
vijay@vijay:~/paruluniversity$
```

9. **ln** - Create symbolic links (shortcuts) to other files

O/P:

```
vijay@vijay: ~
vijay@vijay:~$ ln -s a.txt x.txt
vijay@vijay:~$ ls -l x.txt
lrwxrwxrwx 1 vijay vijay 5 Oct 21 15:41 x.txt -> a.txt
vijay@vijay:~$
```

10. **cat** - Display file contents on the terminal

O/P:

```
vijay@vijay: ~/parul
vijay@vijay:~$ cd parul
vijay@vijay:~/parul$ ls
abc.txt xyz.txt
vijay@vijay:~/parul$ cat abc.txt
hello this is the file of parul directory
it is going to copy now
vijay@vijay:~/parul$
```

11. **clear** - Clear the terminal display

O/P:

```
vijay@vijay: ~/parul
vijay@vijay:~$ cd parul
vijay@vijay:~/parul$ ls
abc.txt xyz.txt
vijay@vijay:~/parul$ cat abc.txt
hello this is the file of parul directory
it is going to copy now
vijay@vijay:~/parul$ clear
```

12. **echo** - Print any text that follows the command

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ echo hellow world  
hellow world  
vijay@vijay:~$
```

13.less - Linux command to display paged outputs in the terminal

O/P:

```
vijay@vijay:~$ less a.c  
  
int main()  
{  
    printf("Hellow");  
    return 0;  
}  
a.c (END)
```

14.man - Access manual pages for all Linux commands

O/P:

```
vijay@vijay:~$ man printf  
PRINTF(1)                                User Commands                                PRINTF(1)  
  
NAME  
    printf - format and print data  
  
SYNOPSIS  
    printf FORMAT [ARGUMENT]...  
    printf OPTION  
  
DESCRIPTION  
    Print ARGUMENT(s) according to FORMAT, or execute according to OPTION:  
  
    --help display this help and exit
```

15.uname - Linux command to get basic information about the OS

O/P:

```
vijay@vijay:~$ uname  
Linux  
vijay@vijay:~$
```

16.whoami - Get the active username

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ whoami  
vijay  
vijay@vijay:~$
```

17.tar - Command to extract and compress files in Linux

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ tar cvf file.tar *.c  
a.c  
vijay@vijay:~$ tar xvf file.tar  
a.c  
vijay@vijay:~$
```

18. **grep** - Search for a string within an output

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ grep -i "grep" b.txt  
hello this is a file used for the grep command. grep command is used to find the deleted word  
in the file. grep command is used in linux. grep command is very easy. grep command is simpl  
e.  
vijay@vijay:~$ # the following command is used for the count the selected word:  
vijay@vijay:~$ grep -c "grep" b.txt  
1  
vijay@vijay:~$
```

19. **head** - Return the specified number of lines from the top

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ head b.txt  
hello this is a file used for the grep command. grep command is used to find the deleted word  
in the file. grep command is used in linux. grep command is very easy. grep command is simpl  
e.  
vijay@vijay:~$
```

20. **tail** - Return the specified number of lines from the bottom

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ tail b.txt  
hello this is a file used for the grep command. grep command is used to find the deleted word  
in the file. grep command is used in linux. grep command is very easy. grep command is simpl  
e.  
vijay@vijay:~$
```

21. **diff** - Find the difference between two files

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ diff a.txt b.txt  
1,5c1  
< int main()  
< {  
<     printf("Hellow");  
<     return 0;  
< }  
---  
> hello this is a file used for the grep command. grep command is used to find t  
he deleted word in the file. grep command is used in linux. grep command is ver  
y easy. grep command is simple.  
vijay@vijay:~$
```

22. **cmp** - Allows you to check if two files are identical

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ cmp a.txt b.txt  
a.txt b.txt differ: byte 1, line 1  
vijay@vijay:~$
```

23. **comm** - Combines the functionality of diff and cmp

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ comm a.txt b.txt  
1  
    10  
    11  
    12  
    13  
    14  
    15  
2  
3  
4  
5  
6  
7
```

24.sort - Linux command to sort the content of a file while outputting

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ cat a.txt  
abhishek  
chitransh  
satish  
rajan  
naveen  
divyam  
harsh  
vijay@vijay:~$ sort a.txt  
abhishek  
chitransh  
divyam  
harsh  
naveen  
rajan  
satish  
vijay@vijay:~$
```

25.export - Export environment variables in Linux

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ export -p  
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 GDMSESSION="ubuntu"  
declare -x GNOME_DESKTOP_SESSION_ID="this-is-deprecated"  
declare -x GNOME_SETUP_DISPLAY=":1"  
declare -x GNOME_SHELL_SESSION_MODE="ubuntu"  
declare -x GNOME_TERMINAL_SCREEN="/org/gnome/Terminal/screen/d90864c8_f3d4_482b"
```

26.zip - Zip files in Linux

O/p:

```
vijay@vijay: ~  
vijay@vijay:~$ zip myzip.zip a.c  
updating: a.c (stored 0%)
```

27.unzip - Unzip files in Linux

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ zip myzip.zip a.c  
updating: a.c (stored 0%)  
vijay@vijay:~$ unzip myzip.zip  
Archive: myzip.zip  
replace a.c? [y]es, [n]o, [A]ll, [N]one, [r]ename: A  
extracting: a.c  
vijay@vijay:~$
```

28.ssh - Secure Shell command in Linux

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ ssh  
usage: ssh [-46AaCfGgKkMMNnqsTtVvXxYy] [-B bind_interface]  
          [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]  
          [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]  
          [-i identity_file] [-J [user@]host[:port]] [-L address]  
          [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]  
          [-Q query_option] [-R address] [-S ctl_path] [-W host:port]  
          [-w local_tun[:remote_tun]] destination [command [argument ...]]  
vijay@vijay:~$
```

29.service - Linux command to start and stop services

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ service --status-all  
[ + ] acpid  
[ - ] alsa-utils  
[ - ] anacron  
[ + ] apparmor  
[ + ] apport  
[ + ] avahi-daemon  
[ - ] bluetooth  
[ - ] console-setup.sh  
[ + ] cron  
[ + ] cups  
[ + ] cups-browsed  
[ + ] dbus  
[ + ] gdm3  
[ - ] grub-common
```

30.ps - Display active processes

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ ps  
  PID TTY          TIME CMD  
 2780 pts/0    00:00:00 bash  
 3711 pts/0    00:00:00 ps  
vijay@vijay:~$
```

31.kill and killall - Kill active processes by process ID or name

O/P:

```
vijay@vijay:~$ kill
kill: usage: kill [-s sigspec | -n signum | -sigspec] pid | jobspec ... or kill
-l [sigspec]
vijay@vijay:~$ killall
Usage: killall [OPTION]... [--] NAME...
        killall -l, --list
        killall -V, --version

-e,--exact          require exact match for very long names
-I,--ignore-case    case insensitive process name match
-g,--process-group  kill process group instead of process
-y,--younger-than   kill processes younger than TIME
-o,--older-than     kill processes older than TIME
-i,--interactive    ask for confirmation before killing
-l,--list           list all known signal names
-q,--quiet          don't print complaints
-r,--regex          interpret NAME as an extended regular expression
-s,--signal SIGNAL  send this signal instead of SIGTERM
-u,--user USER      kill only process(es) running as USER
-v,--verbose        report if the signal was successfully sent
-V,--version        display version information
-w,--wait           wait for processes to die
-n,--ns PID         match processes that belong to the same namespaces
                    as PID
```

32.df - Display disk filesystem information

O/P:

```
vijay@vijay:~$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
tmpfs            352420      1448    350972   1% /run
/dev/sda3       102856616 14059136  83526492  15% /
tmpfs           1762084         0    1762084   0% /dev/shm
tmpfs            5120         4      5116   1% /run/lock
/dev/sda2        524252     5364    518888   2% /boot/efi
tmpfs           352416     2408    350008   1% /run/user/1000
/dev/sr0         62390     62390         0 100% /media/vijay/VBox_GAs_6.1.38
vijay@vijay:~$
```

33.mount - Mount file systems in Linux

O/P:

```
vijay@vijay:~$ mount a.c
mount: /home/vijay/a.c: can't find in /etc/fstab.
vijay@vijay:~$
```

34.chmod - Command to change file permissions

O/P:

```
vijay@vijay:~$ chmod -r a.txt
vijay@vijay:~$ ls -l a.txt
--w--w---- 1 vijay vijay 52 Oct 24 07:44 a.txt
vijay@vijay:~$
```

35.chown - Command for granting ownership of files or folders

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ chown vijay a.txt  
vijay@vijay:~$ ls -l a.txt  
--w--w---- 1 vijay vijay 52 Oct 24 07:44 a.txt  
vijay@vijay:~$
```

36.exit – Used to exit from the shell

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ exit
```

37.sudo – This command stands for “superuser do,” and it lets you act as a superuser or root

O/P:

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

38.wget - Direct download files from the internet

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ wget https://en.wikipedia.org/wiki/India  
--2022-10-27 08:10:57-- https://en.wikipedia.org/wiki/India  
Resolving en.wikipedia.org (en.wikipedia.org)... 103.102.166.224, 2001:df2:e500:  
edia::1  
Connecting to en.wikipedia.org (en.wikipedia.org)|103.102.166.224|:443... connec  
ted.  
HTTP request sent, awaiting response... 200 OK  
Length: 1258084 (1.2M) [text/html]  
Saving to: 'India'  
  
India 100%[=====] 1.20M 948KB/s in 1.3s  
2022-10-27 08:10:59 (948 KB/s) - 'India' saved [1258084/1258084]  
vijay@vijay:~$
```

39.ufw - Firewall command

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ sudo ufw allow http  
[sudo] password for vijay:  
Rules updated  
Rules updated (v6)  
vijay@vijay:~$
```


40. **iptables** - Base firewall for all other firewall utilities to interface with

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ sudo iptables -L -v  
Chain INPUT (policy ACCEPT 0 packets, 0 bytes)  
  pkts bytes target     prot opt in     out     source            destination  
  
Chain FORWARD (policy ACCEPT 0 packets, 0 bytes)  
  pkts bytes target     prot opt in     out     source            destination  
  
Chain OUTPUT (policy ACCEPT 0 packets, 0 bytes)  
  pkts bytes target     prot opt in     out     source            destination  
vijay@vijay:~$
```

41. **apt** - Package managers depending on the distro

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ apt --help  
apt 2.4.6 (amd64)  
Usage: apt [options] command  
  
apt is a commandline package manager and provides commands for  
searching and managing as well as querying information about packages.  
It provides the same functionality as the specialized APT tools,  
like apt-get and apt-cache, but enables options more suitable for  
interactive use by default.  
  
Most used commands:  
  list - list packages based on package names  
  search - search in package descriptions  
  show - show package details  
  install - install packages  
  reinstall - reinstall packages  
  remove - remove packages  
  autoremove - Remove automatically all unused packages  
  update - update list of available packages  
  upgrade - upgrade the system by installing/upgrading packages  
  full-upgrade - upgrade the system by removing/installing/upgrading packages  
  edit-sources - edit the source information file  
  satisfy - satisfy dependency strings
```

42. **find** - It defines the directory where to begin searching.

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ find -H  
.  
./profile  
./gnupg  
./gnupg/pubring.kbx  
./gnupg/trustdb.gpg  
./sap2  
./sap2/file1.txt  
./sap2/sap3  
./ssh  
./Downloads  
./snap
```

43. **cal** - View a command-line calendar

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ cal  
October 2022  
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  
vijay@vijay:~$
```

44.alias - Create custom shortcuts for your regularly used commands

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ 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$//'\''\n)'\n'  
alias egrep='egrep --color=auto'  
alias fgrep='fgrep --color=auto'  
alias grep='grep --color=auto'  
alias l='ls -CF'  
alias la='ls -A'  
alias ll='ls -alF'  
alias ls='ls --color=auto'  
vijay@vijay:~$
```

45.du - short for disk usage, is used to estimate file space usage

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ du parul  
12      parul  
vijay@vijay:~$
```

46.whereis - Locate the binary, source, and manual pages for a command

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ whereis paruluniversity b.txt  
paruluniversity:  
b.txt:  
vijay@vijay:~$
```

47.whatis - Find what a command is used for

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ whatis cat  
cat (1) - concatenate files and print on the standard output  
vijay@vijay:~$
```

48.top - View active processes live with their system usage

O/P:

```
vijay@vijay: ~  
top - 09:12:20 up 6 min, 1 user, load average: 0.16, 0.21, 0.10  
Tasks: 212 total, 1 running, 211 sleeping, 0 stopped, 0 zombie  
%Cpu(s): 0.4 us, 0.2 sy, 0.0 ni, 99.4 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st  
MiB Mem : 3441.6 total, 1865.9 free, 739.4 used, 836.3 buff/cache  
MiB Swap: 4410.0 total, 4410.0 free, 0.0 used. 2449.5 avail Mem  


| PID  | USER  | PR | NI | VIRT    | RES    | SHR    | S | %CPU | %MEM | TIME+   | COMMAND  |
|------|-------|----|----|---------|--------|--------|---|------|------|---------|----------|
| 1144 | vijay | 20 | 0  | 5199536 | 333752 | 135220 | S | 4.7  | 9.5  | 0:43.27 | gnome-s+ |
| 1861 | vijay | 20 | 0  | 562148  | 52460  | 40040  | S | 1.7  | 1.5  | 0:03.38 | gnome-t+ |
| 105  | root  | 20 | 0  | 0       | 0      | 0      | I | 0.3  | 0.0  | 0:00.17 | kworker+ |
| 562  | root  | 20 | 0  | 0       | 0      | 0      | I | 0.3  | 0.0  | 0:00.18 | kworker+ |
| 1548 | vijay | 20 | 0  | 162220  | 2524   | 2128   | S | 0.3  | 0.1  | 0:01.09 | VBoxCli+ |
| 2079 | vijay | 20 | 0  | 21832   | 4116   | 3308   | R | 0.3  | 0.1  | 0:00.04 | top      |


```

49.useradd - Add new user or change existing users data

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ sudo useradd vijay_patil  
[sudo] password for vijay:  
vijay@vijay:~$ cat /etc/passwd | grep vijay_patil  
vijay_patil:x:1002:1002::/home/vijay_patil:/bin/sh  
vijay@vijay:~$
```

50.passwd - Create or update passwords for existing users

O/P:

```
vijay@vijay: ~  
vijay@vijay:~$ passwd  
Changing password for vijay.  
Current password:  
New password:
```