1. Display your current directory.

```
user@user-HP-Notebook:~$ pwd
/home/user
user@user-HP-Notebook:~$ mkdir foss
user@user-HP-Notebook:~$ cd foss
user@user-HP-Notebook:~/foss$ pwd
/home/user/foss
user@user-HP-Notebook:~/foss$
```

2. Change to the /etc directory.

```
user@user-HP-Notebook:~/foss$ cd /etc
user@user-HP-Notebook:/etc$
```

3. Now, change to your home directory using a single command.

```
user@user-HP-Notebook:/etc$ cd ~
user@user-HP-Notebook:~$ pwd
/home/user
user@user-HP-Notebook:~$
```

4. Change to the parent directory of the current directory.

```
user@user-HP-Notebook:~/foss$ mkdir file1
user@user-HP-Notebook:~/foss$ cd file1
user@user-HP-Notebook:~/foss/file1$ cd ..
user@user-HP-Notebook:~/foss$
```

5. Go to the root directory.

```
user@user-HP-Notebook:~$ cd /
user@user-HP-Notebook:/$ pwd
/
```

6. Give a long listing of the root directory.

```
user@user-HP-Notebook:~$ cd /
user@user-HP-Notebook:/$ ls
bin    cdrom   etc    initrd.img  lib64       media  opt   root  sbin  srv  tmp  var
boot   dev     home   lib         lost+found  mnt    proc  run   snap  sys  usr  vmlinuz
```

7. Give a listing of the last 10 files in the root directory.

```
user@user-HP-Notebook:/$ ls | tail -10
root
run
sbin
snap
srv
sys
tmp
usr
var
vmlinuz
```

8. Stay where you are, and list the contents of /etc.

```
var
vmlinuz
user@user-HP-Notebook:/$ ls /etc
acpi                        dbus-1              hosts             logrotate.d              profile.d         subgid
adduser.conf                dconf               hosts.allow       lsb-release              protocols         subgid-
alternatives                debconf.conf        hosts.deny        ltrace.conf              pulse             subuid
anacrontab                  debian_version      hp                machine-id               python            subuid-
apg.conf                    default             ifplugd           magic                    python2.7         sudoers
apm                         deluser.conf        iftab             magic.mime               python3           sudoers.d
apparmor                    depmod.d            ImageMagick-6     mailcap                  python3.5         sysctl.conf
apparmor.d                  dhcp                init              mailcap.order            rc0.d             sysctl.d
apport                      dictionaries-common init.d            manpath.config           rc1.d             systemd
appstream.conf              dnsmasq.d           initramfs-tools   mime.types               rc2.d             terminfo
apt                         doc-base            inputrc           mke2fs.conf              rc3.d             thermald
aptdaemon                   dpkg                insserv           modprobe.d               rc4.d             thunderbird
at-spi2                     drirc               insserv.conf      modules                  rc5.d             timezone
avahi                       emacs               insserv.conf.d    modules-load.d           rc6.d             tmpfiles.d
bash.bashrc                 environment         iproute2          mtab                     rc.local          ucf.conf
bash_completion             firefox             issue             mtools.conf              rcS.d             udev
bash_completion.d           fonts               issue.net         nanorc                   resolvconf        udisks2
bindresvport.blacklist      fstab               kbd               network                  resolv.conf       ufw
binfmt.d                    fuse.conf           kernel            NetworkManager           rmt               updatedb.conf
bluetooth                   fwupd.conf          kernel-img.conf   networks                 rpc               update-manager
brlapi.key                  gai.conf            kerneloops.conf   newt                     rsyslog.conf      update-motd.d
brltty                      gconf               ldap              nsswitch.conf            rsyslog.d         update-notifier
brltty.conf                 gdb                 ld.so.cache       opt                      sane.d            UPower
ca-certificates             ghostscript         ld.so.conf        os-release               securetty         upstart-xsessions
ca-certificates.conf        gnome               ld.so.conf.d      pam.conf                 security          usb_modeswitch.conf
ca-certificates.conf.dpkg-old gnome-app-install legal             pam.d                    selinux           usb_modeswitch.d
calendar                    groff               libao.conf        papersize                sensors3.conf     vim
chatscripts                 group               libaudit.conf     passwd                   sensors.d         vtrgb
compizconfig                group-              libnl-3           passwd-                  services          wgetrc
console-setup               grub.d              libpaper.d        pcmcia                   sgml              wpa_supplicant
cracklib                    gshadow             libreoffice       perl                     shadow            X11
cron.d                      gshadow-            lightdm           pki                      shadow-           xdg
cron.daily                  gss                 lintianrc         pm                       shells            xml
cron.hourly                 gtk-2.0             locale.alias      pnm2ppa.conf             signond.conf      zsh_command_not_found
cron.monthly                gtk-3.0             locale.gen        polkit-1                 signon-ui
crontab                     guest-session       localtime         popularity-contest.conf  skel
cron.weekly                 hdparm.conf         logcheck          ppp                      speech-dispatcher
cups                        host.conf           login.defs        printcap                 ssh
cupshelpers                 hostname            logrotate.conf    profile                  ssl
user@user-HP-Notebook:/$ 
```

9. Create a directory testdir in your home directory.

```
user@user-HP-Notebook:~$ mkdir testdir
user@user-HP-Notebook:~$ ls
a       b         Documents  examples.desktop  file    fork2.c  foss      Music     Public  Templates  Videos        word
a.out   Desktop   Downloads  f.c               filter  fork.c   foss2.odt Pictures  tat     testdir   wait.c.save
```

10. Change to the /etc directory, stay there and create a directory newdir in your home directory(using a single command).

```
user@user-HP-Notebook:/etc$ mkdir ~/newdir
user@user-HP-Notebook:/etc$ cd ~
user@user-HP-Notebook:~$ ls
a       b         Documents  examples.desktop  file    fork2.c  foss      Music     Pictures  tat        testdir  wait.c.save
a.out   Desktop   Downloads  f.c               filter  fork.c   foss2.odt newdir    Public    Templates  Videos   word
user@user-HP-Notebook:~$ 
```

11. Create in one command the directories ~/dir1/dir2/dir3 (dir3 is a subdirectory from dir2, and dir2 is a subdirectory from dir1).

```
user@user-HP-Notebook:~$ mkdir -p ~/dir1/dir2/dir3
user@user-HP-Notebook:~$ ls dir1
dir2
user@user-HP-Notebook:~$ ls dir1/dir2
dir3
```

12. Display the calendar for April 2019.

```
user@user-HP-Notebook:~$ cal 4 2019
       April 2019
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
```

13. Display that 'There are .... files in my current directory' . The .....
should be filled with the count of the files.

```
user@user-HP-Notebook:~$ echo There are $(ls | wc -l) files in my current directory.
There are 24 files in my current directory.
user@user-HP-Notebook:~$ ls
a       b           Documents  examples.desktop  file    fork2.c  foss       Music    Pictures  tat        testdir   wait.c.save
a.out   Desktop     Downloads  f.c               filter  fork.c   foss2.odt  newdir   Public    Templates  Videos    word
```

14. List all the files (including hidden files) in your home directory.

```
user@user-HP-Notebook:~$ ls -a
.               .bashrc     examples.desktop  .fork2.c.swp  .ICEauthority  .profile                  wait.c.save
..              .cache      f.c               fork.c        .local         Public                    .wait.c.swp
a               .config     .f.c.swp          foss          .mozilla       .sudo_as_admin_successful  word
a.out           Desktop     file              foss2.odt     Music          tat                       .Xauthority
b               .dmrc       .file             .gconf        .nano          Templates                 .xinputrc
.bash_history   Documents   filter            .git          newdir         testdir                   .xsession-errors
.bash_logout    Downloads   fork2.c           .gnupg        Pictures       Videos                    .xsession-errors.old
```

15. Redirect the output of the above command to a new file FileList.txt.

```
user@user-HP-Notebook:~$ ls -a >> FileList.txt
user@user-HP-Notebook:~$ cat FileList.txt
.
..
a
a.out
b
.bash_history
.bash_logout
.bashrc
.cache
.config
Desktop
.dmrc
Documents
Downloads
examples.desktop
f.c
.f.c.swp
file
.file
FileList.txt
filter
fork2.c
.fork2.c.swp
fork.c
foss
foss2.odt
.gconf
.git
.gnupg
.ICEauthority
.local
.mozilla
Music
.nano
newdir
Pictures
.profile
Public
.sudo_as_admin_successful
tat
Templates
```

16. Redirect the number of lines of FileList.txt to CountFile.txt.

```
user@user-HP-Notebook:~$ wc -l < FileList.txt >> CountFile.txt
user@user-HP-Notebook:~$ cat CountFile.txt
50
```

17. List all the files in your home directory starting with 's' .

```
user@user-HP-Notebook:~$ ls | grep '^s'
sos
swe
```

18. List all the file-names starting with "a", "b" or "s" .

```
user@user-HP-Notebook:~$ ls [abc]*
a  a.out  b  bat  cat
```

19. Create two files 'Countries.txt', containing country names and their corresponding capital cities and 'Story.txt' contains some arbitrary lines of text.

```
user@user-HP-Notebook:~$ nano Countries.txt
user@user-HP-Notebook:~$ nano Story.txt
user@user-HP-Notebook:~$ cat Countries.txt
India New Delhi
Australia Canberra
China Beijing
Greece Athens
Italy Rome
Nepal Kathmandu

user@user-HP-Notebook:~$ cat Story.txt
This is a work based on FOSS Lab for S4 students of computer science branch.
```

20. Convert all lowercase characters from 'Story.txt' to uppercase and store it in a file 'Capstory.txt'.

```
user@user-HP-Notebook:~$ cat Story.txt
This is a work based on FOSS LAB for s4 students of computer science department.
user@user-HP-Notebook:~$ cat Story.txt | tr a-z A-Z > Capstory.txt
user@user-HP-Notebook:~$ cat Capstory.txt
THIS IS A WORK BASED ON FOSS LAB FOR S4 STUDENTS OF COMPUTER SCIENCE DEPARTMENT.
user@user-HP-Notebook:~$ cat Story.txt
This is a work based on FOSS LAB for s4 students of computer science department.
```

21. Toggle the cases in 'Story.txt' and store it in a file 'Togglestory.txt'.

```
user@hp-notebook:~$ (tr 'a-zA-Z' 'A-Za-z' < Story.txt) > Togglestory.txt
user@hp-notebook:~$ cat Togglestory.txt
tHIS IS A WORK BASED ON foss lab FOR S4 STUDENTS OF COMPUTER SCIENCE DEPARTMENT.
user@hp-notebook:~$ cat Story.txt
This is a work based on FOSS LAB for s4 students of computer science department.
```

22. Sort the contents of 'Countries.txt'with Capital as the primary sort key and write the sorted output to 'SortCountry.txt' .

```
user@hp-notebook:~$ (sort -k2 Countries.txt) > SortCountry.txt
user@hp-notebook:~$ cat SortCountry.txt

Greece Athens
China Beijing
Australia Canberra
Nepal Kathmandu
India New Delhi
Italy Rome
user@hp-notebook:~$ cat Countries.txt
India New Delhi
Australia Canberra
China Beijing
Greece Athens
Italy Rome
Nepal Kathmandu
```

23. Display only the capital cities from 'Countries.txt'.

```
user@hp-notebook:~$ awk '{print $2 $3}' Countries.txt
NewDelhi
Canberra
Beijing
Athens
Rome
Kathmandu
```

24. Locate all '.txt' and '.doc' files in the current directory .

```
user@hp-notebook:~$ find . type f \( -name "*.txt" -o -name "*.doc" \)
./Togglestory.txt
./.mozilla/firefox/02l1ok9z.default/AlternateServices.txt
./.mozilla/firefox/02l1ok9z.default/SecurityPreloadState.txt
./.mozilla/firefox/02l1ok9z.default/SiteSecurityServiceState.txt
./.mozilla/firefox/02l1ok9z.default/pkcs11.txt
./.mozilla/firefox/02l1ok9z.default/revocations.txt
./.mozilla/firefox/02l1ok9z.default/TRRBlacklist.txt
./Story.txt
./SortCountry.txt
./.config/libreoffice/4/user/uno_packages/cache/log.txt
./Countries.txt
./cat.txt
./Capstory.txt
./bat.txt
./CountFile.txt
./FileList.txt
find: 'type': No such file or directory
find: 'f': No such file or directory
```

25. Count the number of occurence of 'the' in 'Story.txt'.

```
user@hp-notebook:~$ grep -o the Story.txt | wc -l
0
user@hp-notebook:~$ cat Story.txt
This is a work based on FOSS LAB for s4 students of computer science department.
```