CYSE 270: Linux System for Cybersecurity

Assignment 2

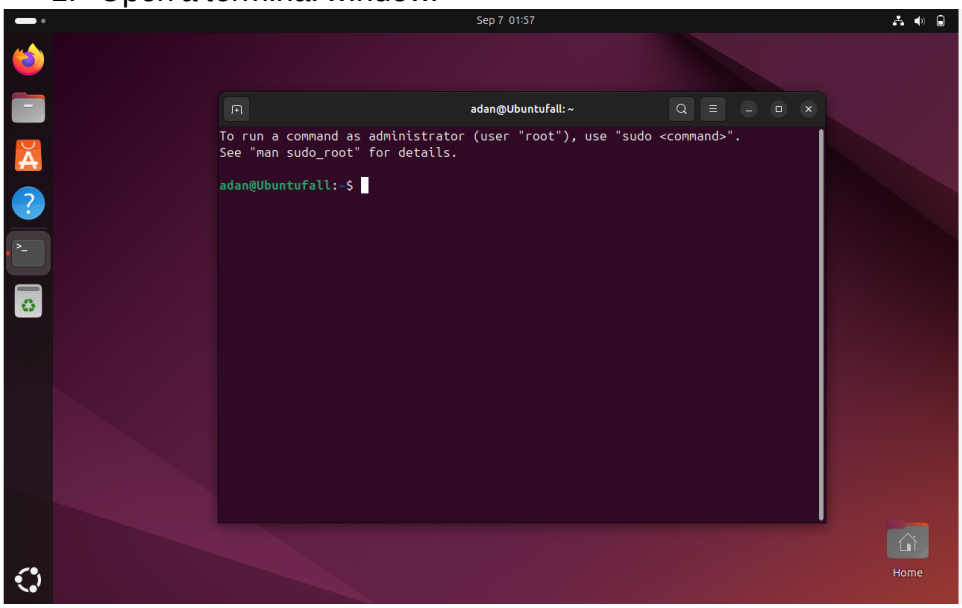
Total: 100 Points

Instructions:

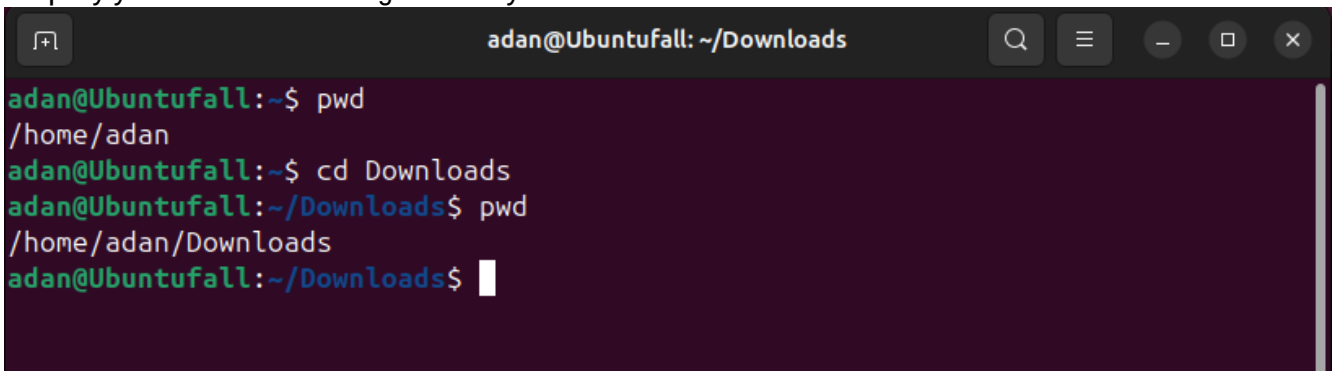
1. Execute the correct commands for all the steps listed below.
2. Take screenshots after completing each step.
3. Submit your screenshots in a single Word or PDF file.
4. Clearly label each screenshot with the corresponding step number.

Steps:

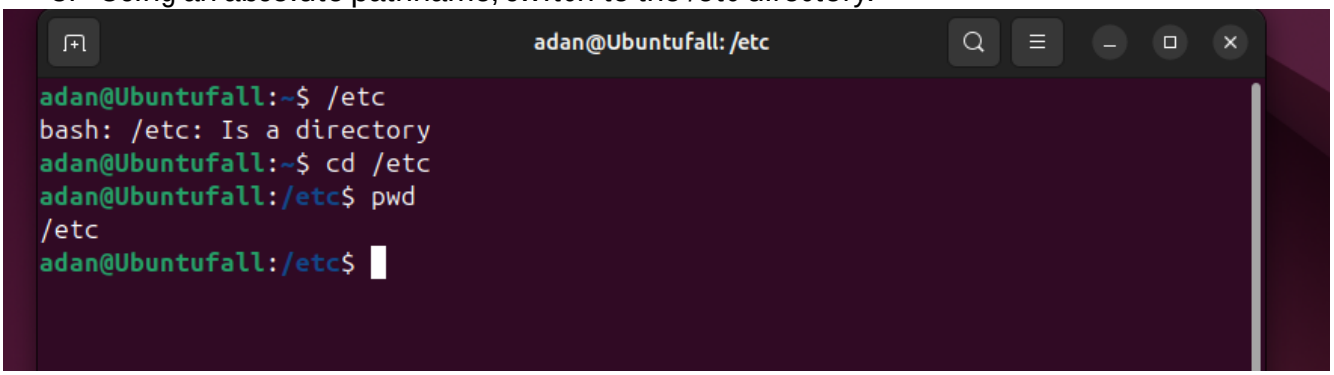
1. Open a terminal window.



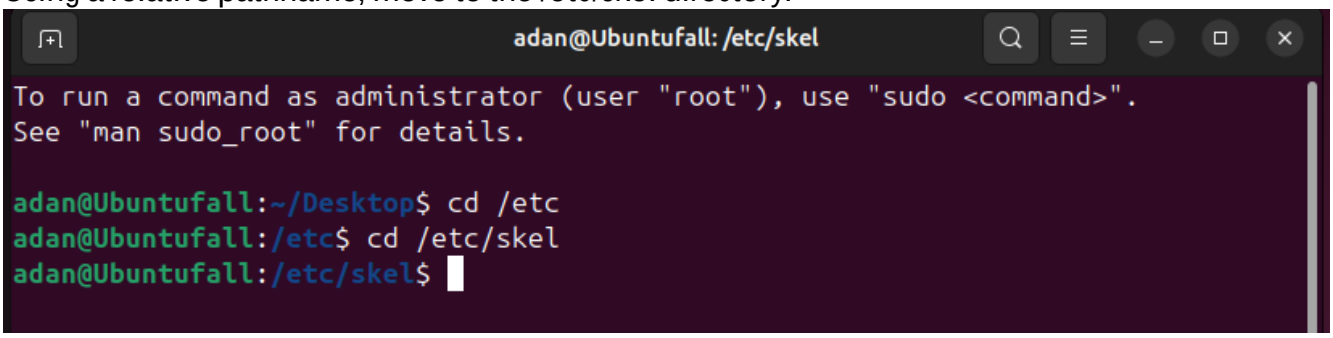
2. Display your current working directory.



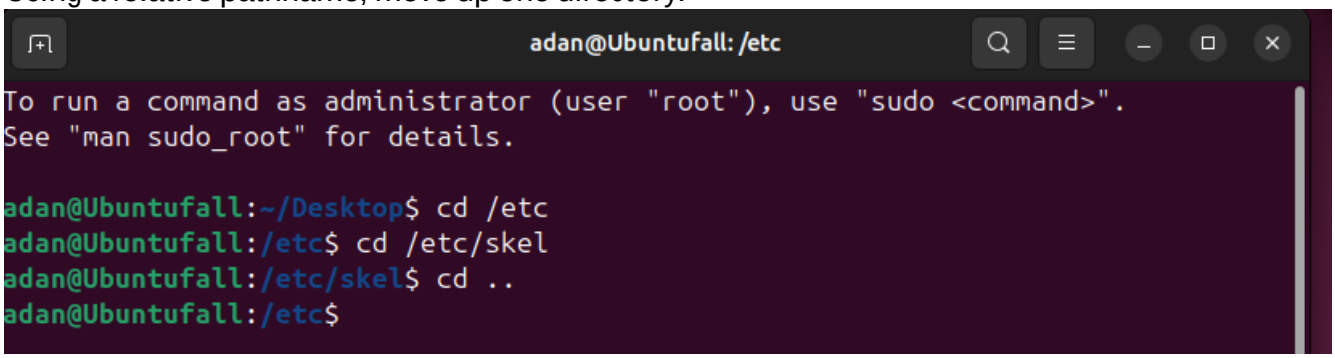
3. Using an absolute pathname, switch to the /etc directory.



4. Using a relative pathname, move to the /etc/skel directory.



5. Using a relative pathname, move up one directory.



6. List the files in the current directory.

```
adan@Ubuntufall:~/Desktop$ cd /etc
adan@Ubuntufall:/etc$ cd /etc/skel
adan@Ubuntufall:/etc/skel$ cd ..
adan@Ubuntufall:/etc$ ls
adduser.conf            hdparm.conf          ppp
alsa                    host.conf            profile
alternatives            hostname             profile.d
anacrontab              hosts                protocols
apg.conf                hosts.allow          pulse
apm                     hosts.deny           python3
apparmor                hp                   python3.12
apparmor.d              ifplugd              rc0.d
apport                  init                 rc1.d
apt                     init.d               rc2.d
avahi                   initramfs-tools      rc3.d
bash.bashrc             inputrc              rc4.d
bash_completion         insserv.conf.d       rc5.d
bindresvport.blacklist  ipp-usb              rc6.d
binfmt.d                iproute2             rcS.d
bluetooth               issue                resolv.conf
brlapi.key              issue.net            rmt
brltty                  kernel               rpc
brltty.conf             kerneloops.conf      rsyslog.conf
ca-certificates         krb5.conf.d          rsyslog.d
ca-certificates.conf    ldap                 rygel.conf
chatscripts             ld.so.cache          sane.d
cloud                   ld.so.conf           security
colord                  ld.so.conf.d         selinux
console-setup           legal                sensors3.conf
```

7. Perform a "**long display**" listing of the files in the current directory.

```
gss                     pm                   xml
gtk-2.0                 pnm2ppa.conf         zsh_command_not_found
gtk-3.0                 polkit-1
adan@Ubuntufall:/etc$ ls -l
total 1120
-rw-r--r--  1 root               root                3444 Jul  5  2023 adduser.conf
drwxr-xr-x  3 root               root                4096 Aug  5 16:50 alsa
drwxr-xr-x  2 root               root                4096 Aug  5 16:53 alternatives
-rw-r--r--  1 root               root                 335 Apr  8  2024 anacrontab
-rw-r--r--  1 root               root                 433 Apr  8  2024 apg.conf
drwxr-xr-x  5 root               root                4096 Aug  5 16:50 apm
drwxr-xr-x  2 root               root                4096 Aug  5 16:50 apparmor
drwxr-xr-x  9 root               root                4096 Aug  5 16:53 apparmor.d
drwxr-xr-x  3 root               root                4096 Aug  5 16:51 apport
drwxr-xr-x  9 root               root                4096 Sep  4 15:41 apt
drwxr-xr-x  3 root               root                4096 Aug  5 16:51 avahi
-rw-r--r--  1 root               root                2319 Mar 31  2024 bash.bashrc
-rw-r--r--  1 root               root                  45 Jan 24  2020 bash_completion
-rw-r--r--  1 root               root                 367 Aug  2  2022 bindresvport.blackli
st
drwxr-xr-x  2 root               root                4096 Apr 19  2024 binfmt.d
drwxr-xr-x  2 root               root                4096 Aug  5 16:51 bluetooth
-rw-r-----  1 root               root                  33 Aug  5 16:53 brlapi.key
drwxr-xr-x  7 root               root                4096 Aug  5 16:51 brltty
-rw-r--r--  1 root               root               30571 Mar 31  2024 brltty.conf
drwxr-xr-x  3 root               root                4096 Aug  5 16:48 ca-certificates
-rw-r--r--  1 root               root                6288 Aug  5 16:48 ca-certificates.conf
drwxr-s---  2 root               dip                 4096 Aug  5 16:51 chatscripts
drwxr-xr-x  5 root               root                4096 Sep  4 16:12 cloud
drwxr-xr-x  2 colord             colord              4096 Sep  4 16:12 colord
drwxr-xr-x  2 root               root                4096 Sep  4 15:51 console-setup
drwxr-xr-x  2 root               root                4096 Aug  5 16:51 cracklib
```

8. List all the files in the current directory that begin with the letter **s**.

```
adan@Ubuntufall:/etc$ ls s*
sensors3.conf  shadow   shells  subgid-  subuid-    sudoers            sysctl.conf
services       shadow-  subgid  subuid   sudo.conf  sudo_logsrvd.conf

sane.d:
abaton.conf          dc210.conf          hp4200.conf      mustek_pp.conf   sm3840.conf
agfafocus.conf       dc240.conf          hp5400.conf      mustek_usb.conf  snapscan.conf
airscan.conf         dc25.conf           hp.conf          nec.conf         sp15c.conf
apple.conf           dell1600n_net.conf  hpsj5s.conf      net.conf         st400.conf
artec.conf           dll.conf            hs2p.conf        p5.conf          stv680.conf
artec_eplus48u.conf  dll.d               ibm.conf         pie.conf         tamarack.conf
avision.conf         dmc.conf            kodakaio.conf    pieusb.conf      teco1.conf
bh.conf              epjitsu.conf        kodak.conf       pixma.conf       teco2.conf
canon630u.conf       epson2.conf         kvs1025.conf     plustek.conf     teco3.conf
canon.conf           epson.conf          leo.conf         plustek_pp.conf  test.conf
canon_dr.conf        epsonds.conf        lexmark.conf     qcam.conf        u12.conf
canon_lide70.conf    escl.conf           ma1509.conf      ricoh.conf       umax1220u.conf
canon_pp.conf        fujitsu.conf        magicolor.conf   rts8891.conf     umax.conf
cardscan.conf        genesys.conf        matsushita.conf  s9036.conf       umax_pp.conf
coolscan2.conf       gphoto2.conf        microtek2.conf   saned.conf       xerox_mfp.conf
coolscan3.conf       gt68xx.conf         microtek.conf    sceptre.conf
coolscan.conf        hp3900.conf         mustek.conf      sharp.conf

security:
access.conf      group.conf   namespace.conf  opasswd         pwquality.conf
capability.conf  limits.conf  namespace.d     pam_env.conf    sepermit.conf
faillock.conf    limits.d     namespace.init  pwhistory.conf  time.conf
```

9. Run the command that will determine the type of contents in the **/etc/group** file.

```
adan@Ubuntufall: /etc
adan@Ubuntufall:/etc$ file /etc/group
/etc/group: ASCII text
adan@Ubuntufall:/etc$
```

10. Display only the **last five lines** of the **/etc/group** file.

```
adan@Ubuntufall:/etc$ file /etc/group
/etc/group: ASCII text
adan@Ubuntufall:/etc$ tail -n 5 /etc/group
nm-openvpn:x:122:
lxd:x:123:
gamemode:x:986:
gnome-initial-setup:x:985:
adan:x:1000:
adan@Ubuntufall:/etc$
```

11. Execute the command to return to **your home directory.**

```
adan@Ubuntufall:/etc$ file /etc/group
/etc/group: ASCII text
adan@Ubuntufall:/etc$ tail -n 5 /etc/group
nm-openvpn:x:122:
lxd:x:123:
gamemode:x:986:
gnome-initial-setup:x:985:
adan:x:1000:
adan@Ubuntufall:/etc$ cd ~
adan@Ubuntufall:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
adan@Ubuntufall:~$
```

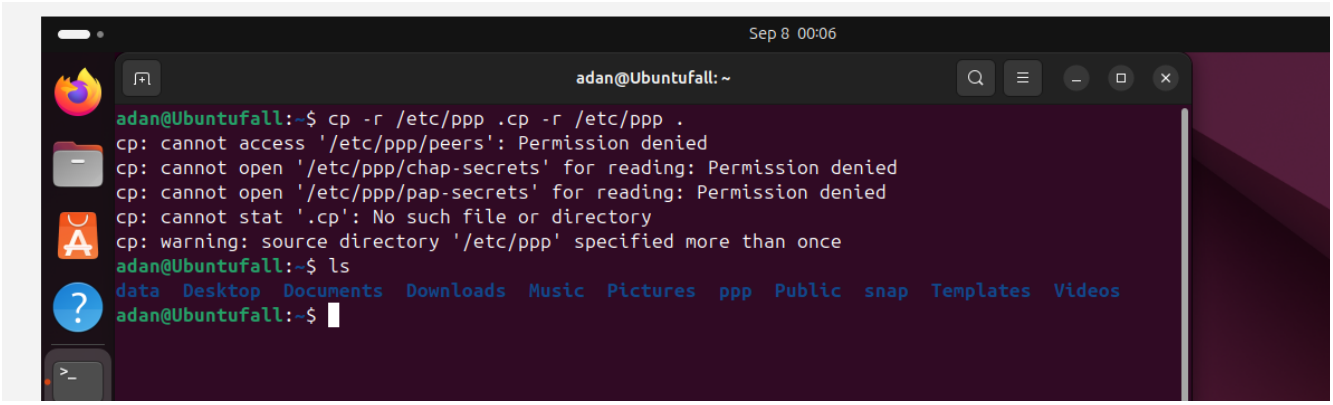
12. Make a directory named **data** in the current directory.

```
adan@Ubuntufall:~$ mkdir data
adan@Ubuntufall:~$ ls
data  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
adan@Ubuntufall:~$ ls -l
total 40
drwxrwxr-x 2 adan adan 4096 Sep  8 00:01 data
drwxr-xr-x 2 adan adan 4096 Sep  4 16:28 Desktop
drwxr-xr-x 3 adan adan 4096 Sep  7 02:03 Documents
drwxr-xr-x 2 adan adan 4096 Sep  4 16:28 Downloads
drwxr-xr-x 2 adan adan 4096 Sep  4 16:28 Music
drwxr-xr-x 2 adan adan 4096 Sep  4 16:28 Pictures
drwxr-xr-x 2 adan adan 4096 Sep  4 16:28 Public
drwx------ 4 adan adan 4096 Sep  8 00:00 snap
drwxr-xr-x 2 adan adan 4096 Sep  4 16:28 Templates
drwxr-xr-x 2 adan adan 4096 Sep  4 16:28 Videos
adan@Ubuntufall:~$
```

13. Copy the **/etc/passwd** file into the **data** directory.

```
adan@Ubuntufall:~$ /etc/passwd
bash: /etc/passwd: Permission denied
adan@Ubuntufall:~$ cp /etc/passwd data/
adan@Ubuntufall:~$ ls data
passwd
adan@Ubuntufall:~$
```

14. Copy the **/etc/ppp** directory into the current directory (and ignore any "Permission denied" error messages).



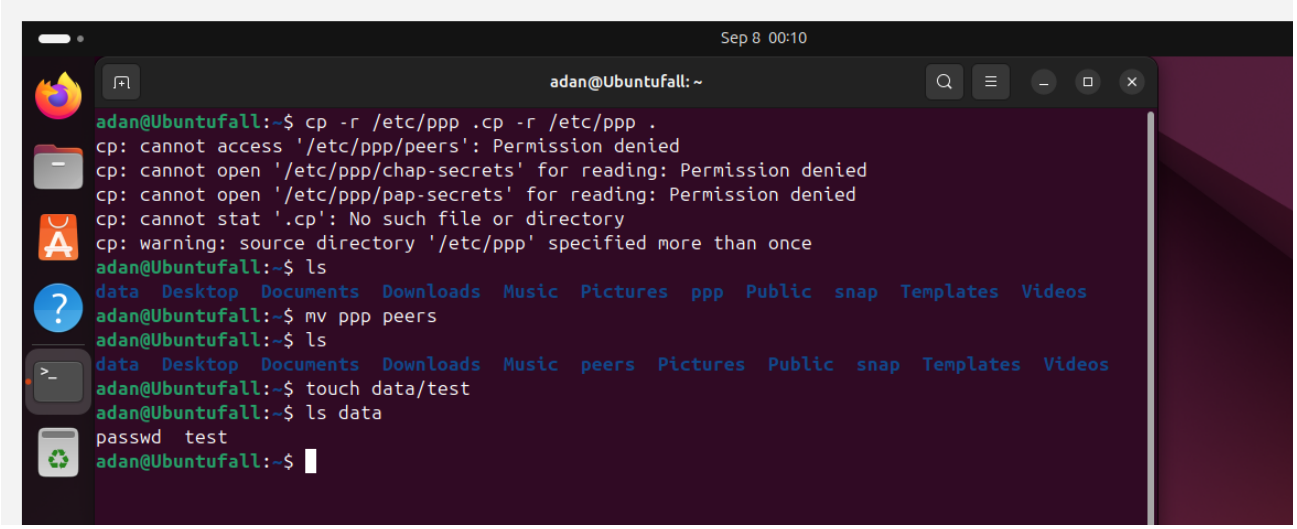
15. Rename the **ppp** directory that is located in the current directory to **peers**.

```
data  Desktop  Documents  Downloads  Music  Pictures  ppp  Public  snap  Templates  Videos
adan@Ubuntufall:~$ mv ppp peers
adan@Ubuntufall:~$ ls
data  Desktop  Documents  Downloads  Music  peers  Pictures  Public  snap  Templates  Videos
adan@Ubuntufall:~$
```

16. Execute the command (ls) to verify the change in the name of the directory.

```
data  Desktop  Documents  Downloads  Music  Pictures  ppp  Public  snap  Templates  Videos
adan@Ubuntufall:~$ mv ppp peers
adan@Ubuntufall:~$ ls
data  Desktop  Documents  Downloads  Music  peers  Pictures  Public  snap  Templates  Videos
adan@Ubuntufall:~$
```

17. Create a new empty file named **test** in the **data** directory.



18. Delete the **data/passwd** file.

```
adan@Ubuntufall:~$ touch data/test
adan@Ubuntufall:~$ ls data
passwd  test
adan@Ubuntufall:~$ rm data/passwd
adan@Ubuntufall:~$ ls data
test
adan@Ubuntufall:~$
```

19. Delete the **peers** directory.

```
adan@Ubuntufall:~$ rm -r peers
adan@Ubuntufall:~$ ls
data  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
adan@Ubuntufall:~$
```

20. Re-execute the ls command.

```
adan@Ubuntufall:~$ rm -r peers
adan@Ubuntufall:~$ ls
data  Desktop  Documents  Downloads  Music  Pictures  Public  snap  Templates  Videos
adan@Ubuntufall:~$
```