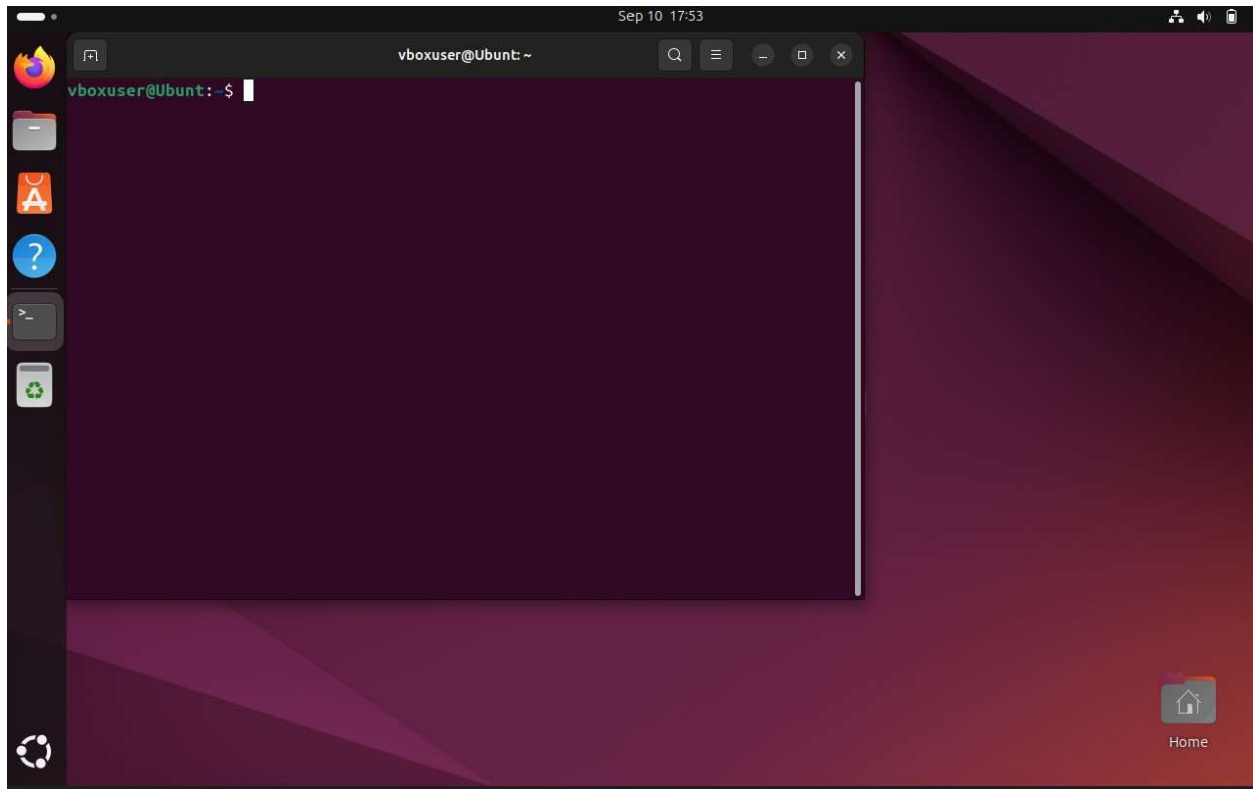
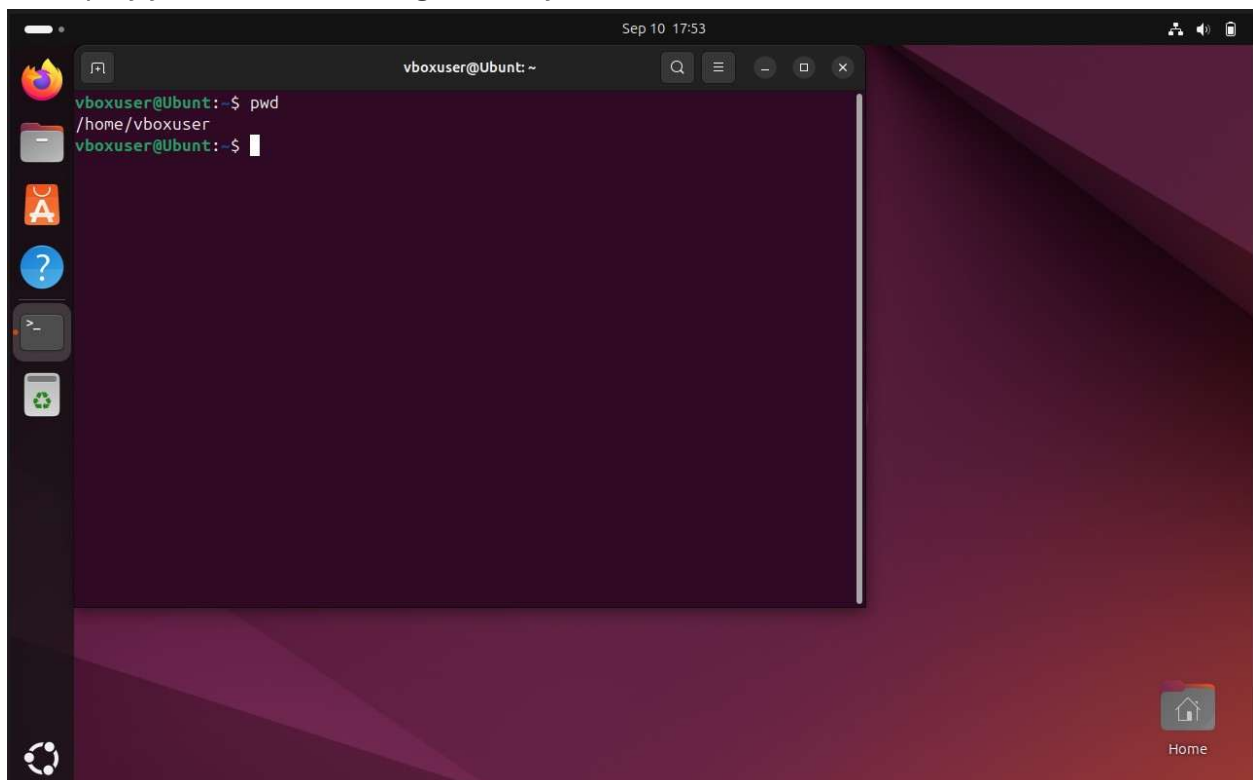


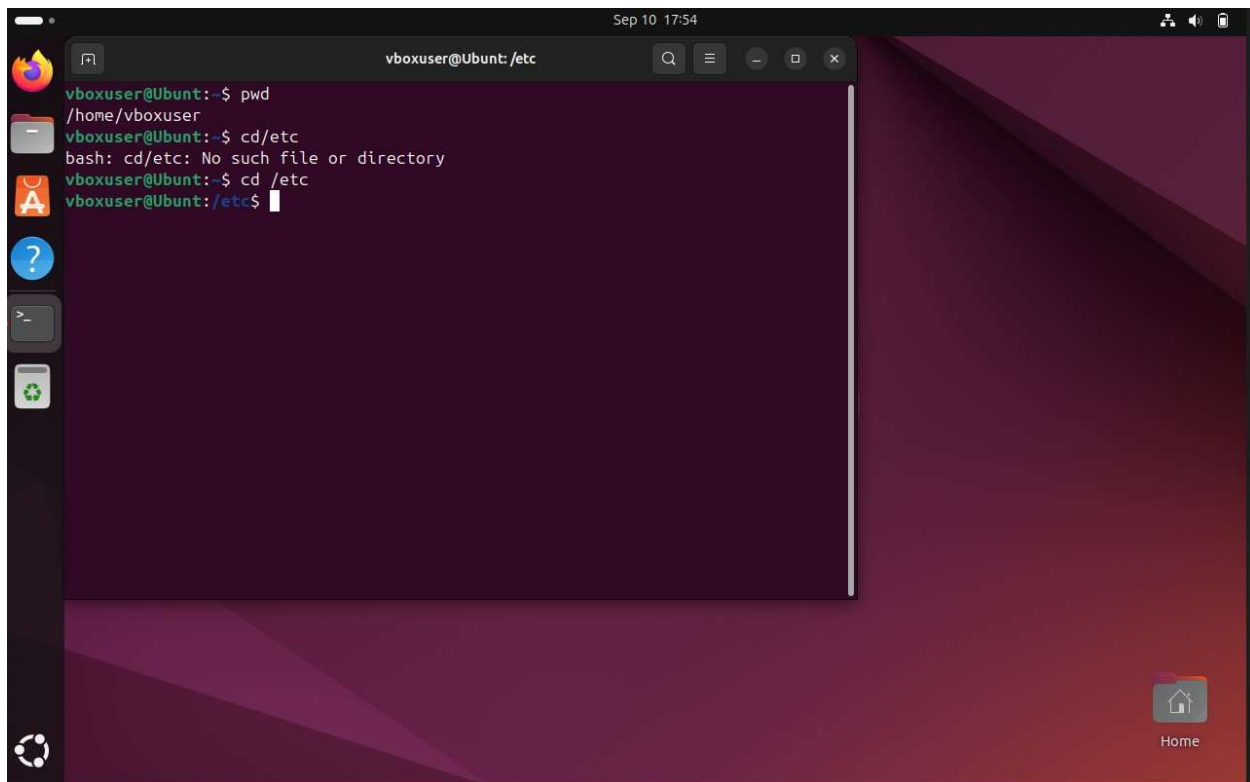
1. Open a terminal window.



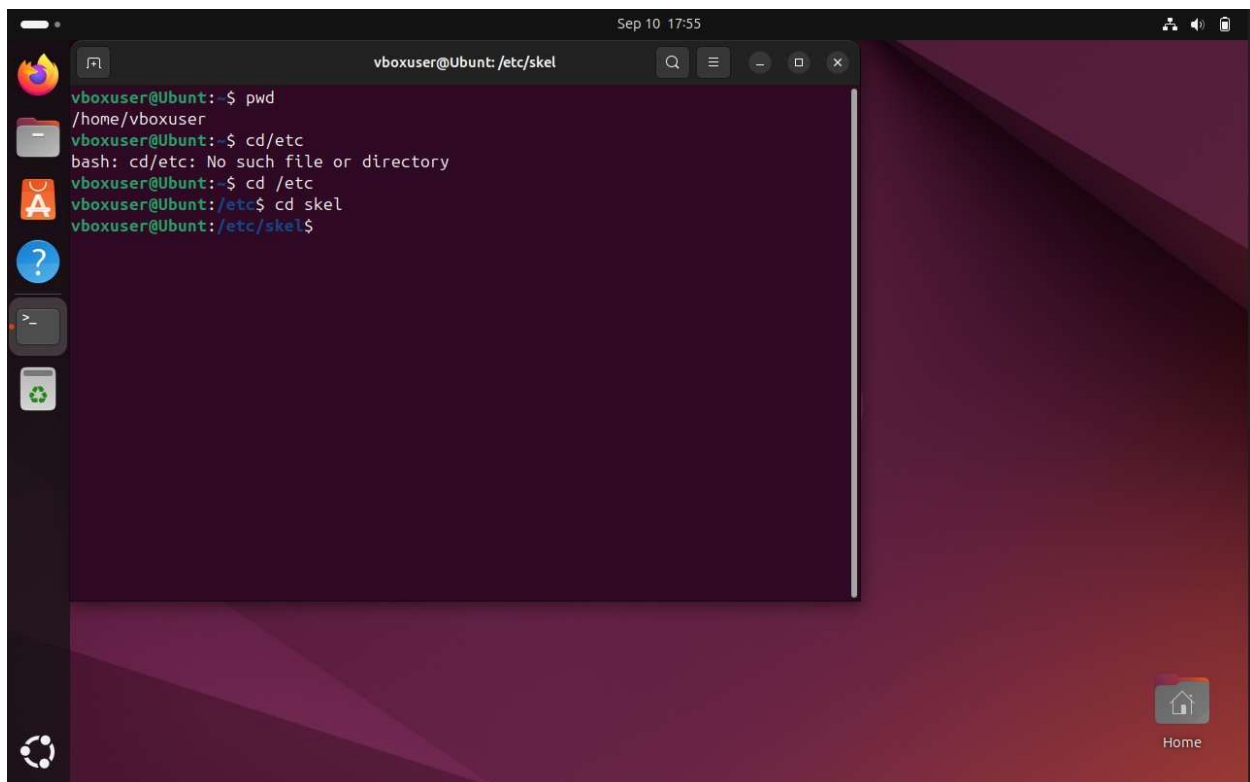
2. Display your current working directory.



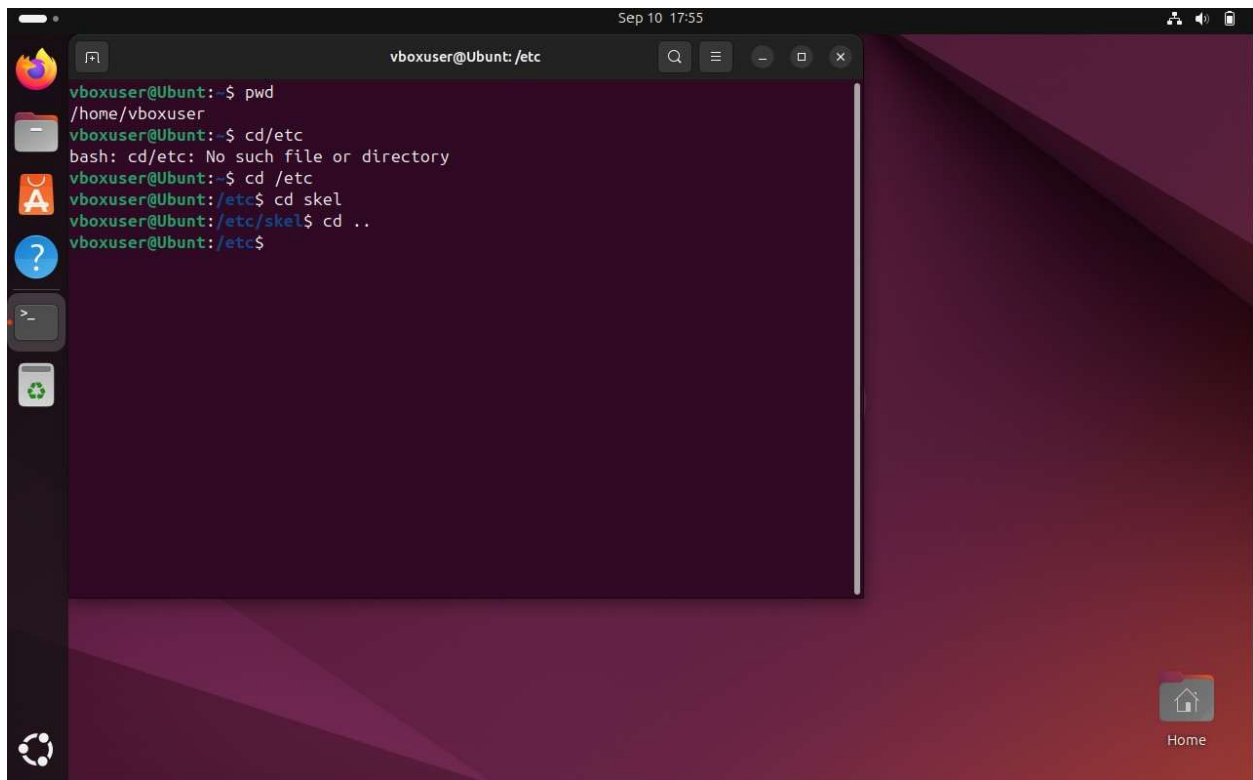
3. Using an absolute pathname, switch to the /etc directory.



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



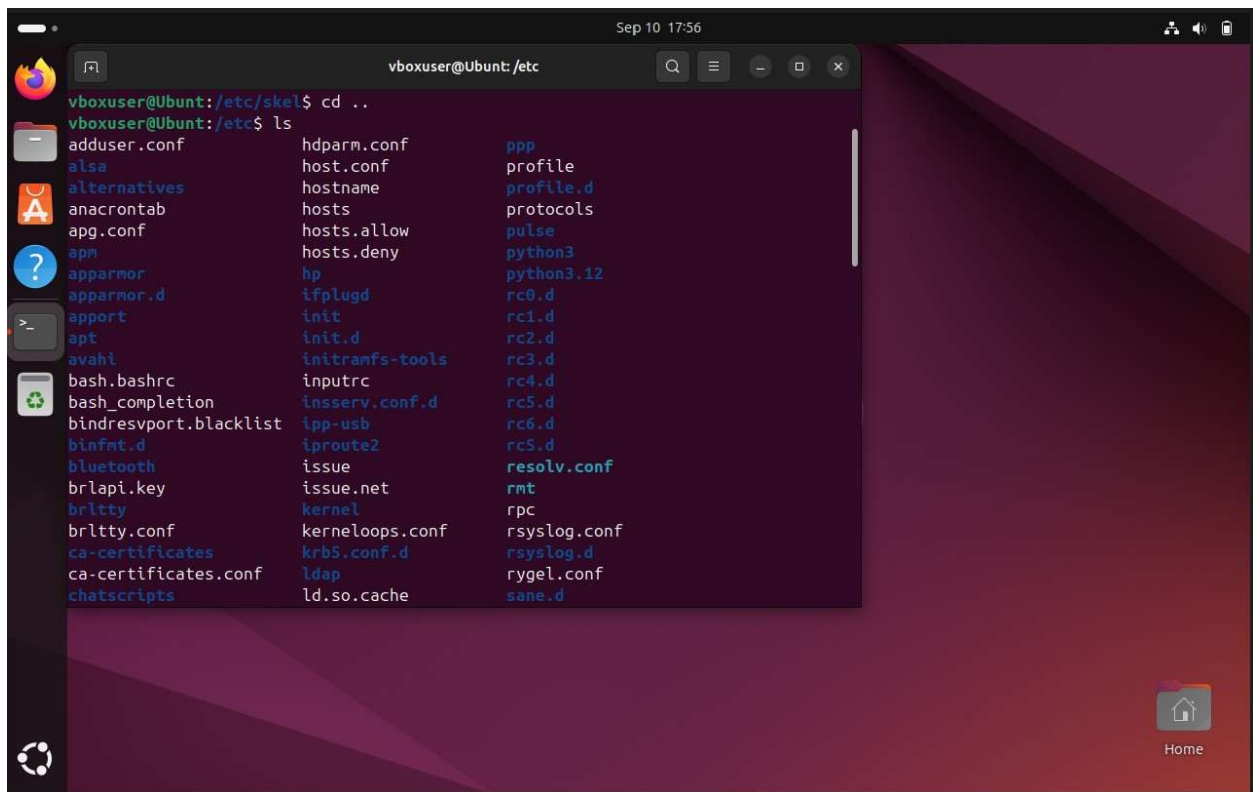
5. Using a relative pathname, move up one directory.



A terminal window titled 'vboxuser@Ubuntu: /etc' showing a series of commands to navigate the file system. The user starts in their home directory, moves to /etc, then to /etc/skel, and finally back to /etc using a relative path. The desktop background is a dark purple Ubuntu theme with a 'Home' icon in the bottom right.

```
vboxuser@Ubuntu:~$ pwd
/home/vboxuser
vboxuser@Ubuntu:~$ cd /etc
bash: cd/etc: No such file or directory
vboxuser@Ubuntu:~$ cd /etc
vboxuser@Ubuntu:/etc$ cd skel
vboxuser@Ubuntu:/etc/skel$ cd ..
vboxuser@Ubuntu:/etc$
```

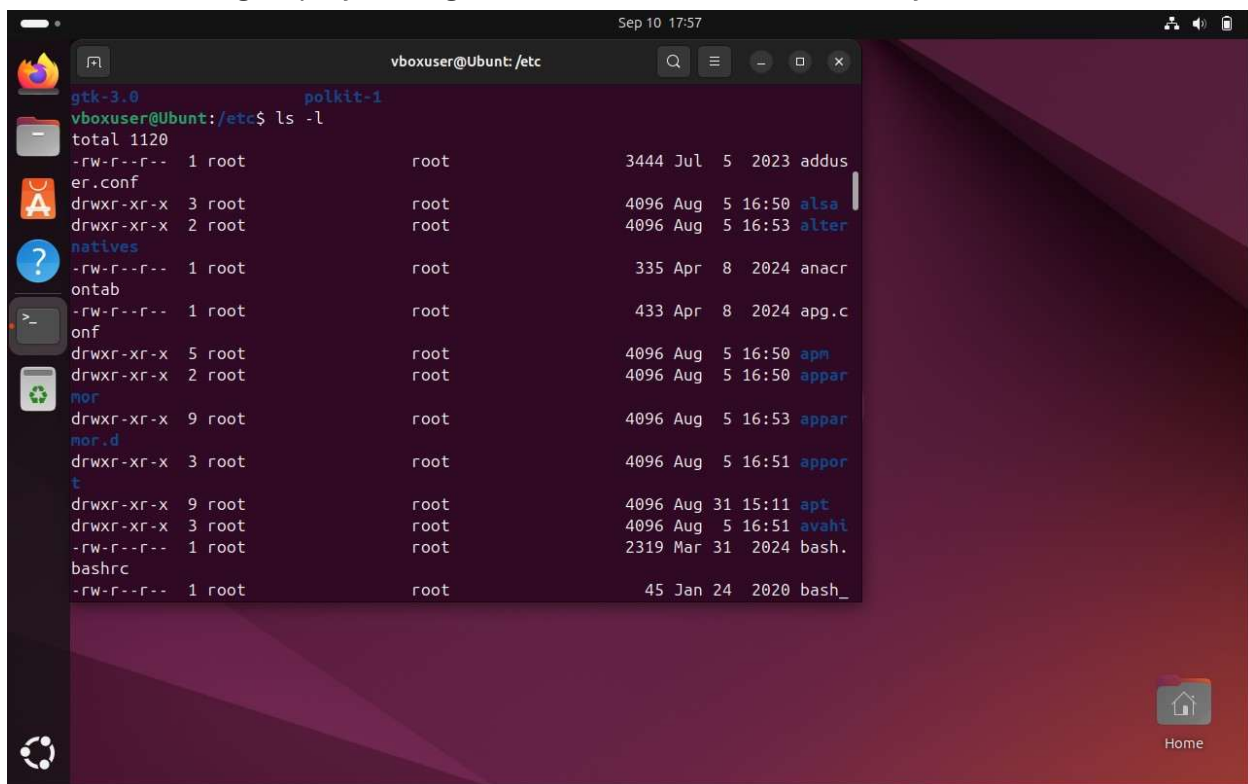
6. List the files in the current directory.



The same terminal window, now titled 'vboxuser@Ubuntu: /etc', shows the user navigating to /etc/skel and running the 'ls' command. The output lists various system configuration files and directories in three columns. The desktop background remains the same Ubuntu theme.

```
vboxuser@Ubuntu:/etc/skel$ cd ..
vboxuser@Ubuntu:/etc$ ls
adduser.conf      hdparm.conf      ppp
alsa              host.conf        profile
alternatives      hostname         profile.d
anacrontab        hosts            protocols
app.conf          hosts.allow      pulse
appm              hosts.deny       python3
apparmor          hp               python3.12
apparmor.d        ifplugd          rc0.d
appport           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
```

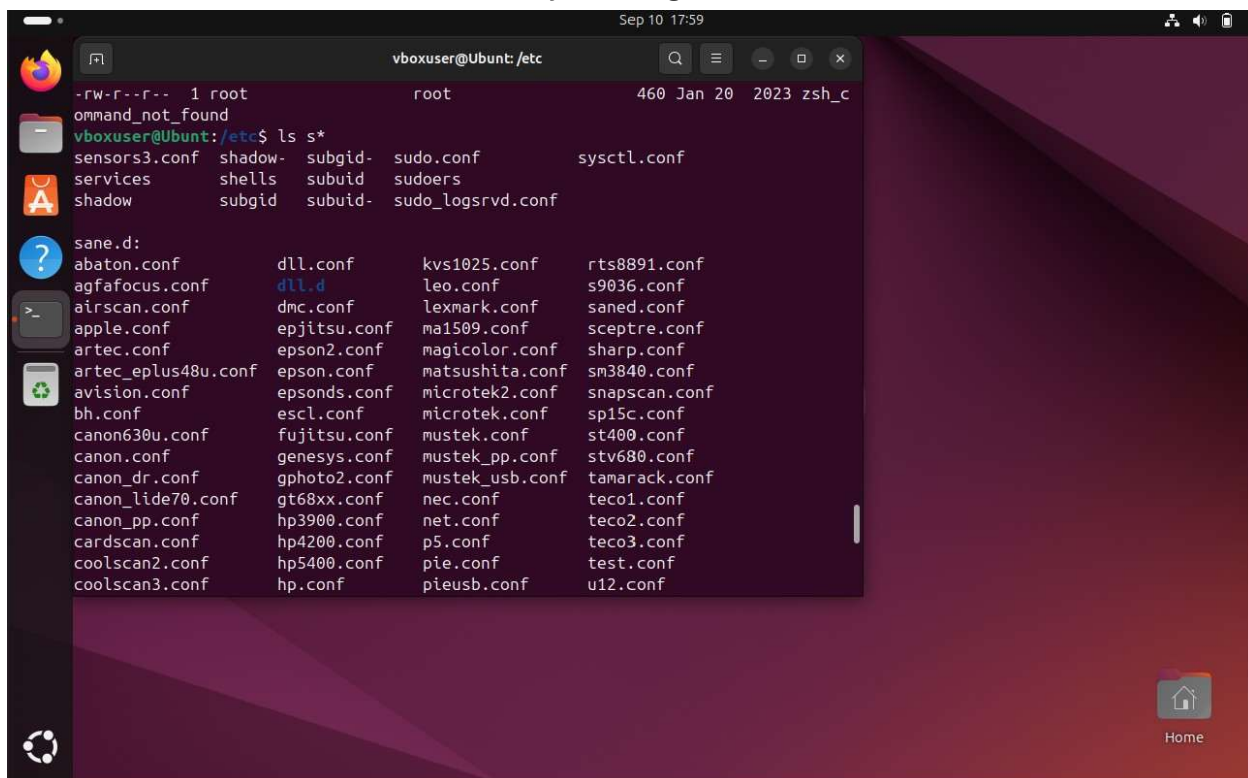
7. Perform a “long display” listing of the files in the current directory.



A terminal window titled 'vboxuser@Ubuntu: /etc' showing the output of the command 'ls -l'. The output is a long listing of files in the /etc directory, including their permissions, owner, group, size, date, and filename. The files listed are: adduser, alsa, alter, anacron, apg.c, apt, avahi, and bash.

```
gtk-3.0 polkit-1
vboxuser@Ubuntu:/etc$ ls -l
total 1120
-rw-r--r-- 1 root root 3444 Jul 5 2023 adduser
drwxr-xr-x 3 root root 4096 Aug 5 16:50 alsa
drwxr-xr-x 2 root root 4096 Aug 5 16:53 alter
-rw-r--r-- 1 root root 335 Apr 8 2024 anacron
-rw-r--r-- 1 root root 433 Apr 8 2024 apg.c
drwxr-xr-x 5 root root 4096 Aug 5 16:50 apt
drwxr-xr-x 2 root root 4096 Aug 5 16:50 appar
drwxr-xr-x 9 root root 4096 Aug 5 16:53 appar
drwxr-xr-x 3 root root 4096 Aug 5 16:51 appor
drwxr-xr-x 9 root root 4096 Aug 31 15:11 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_
```

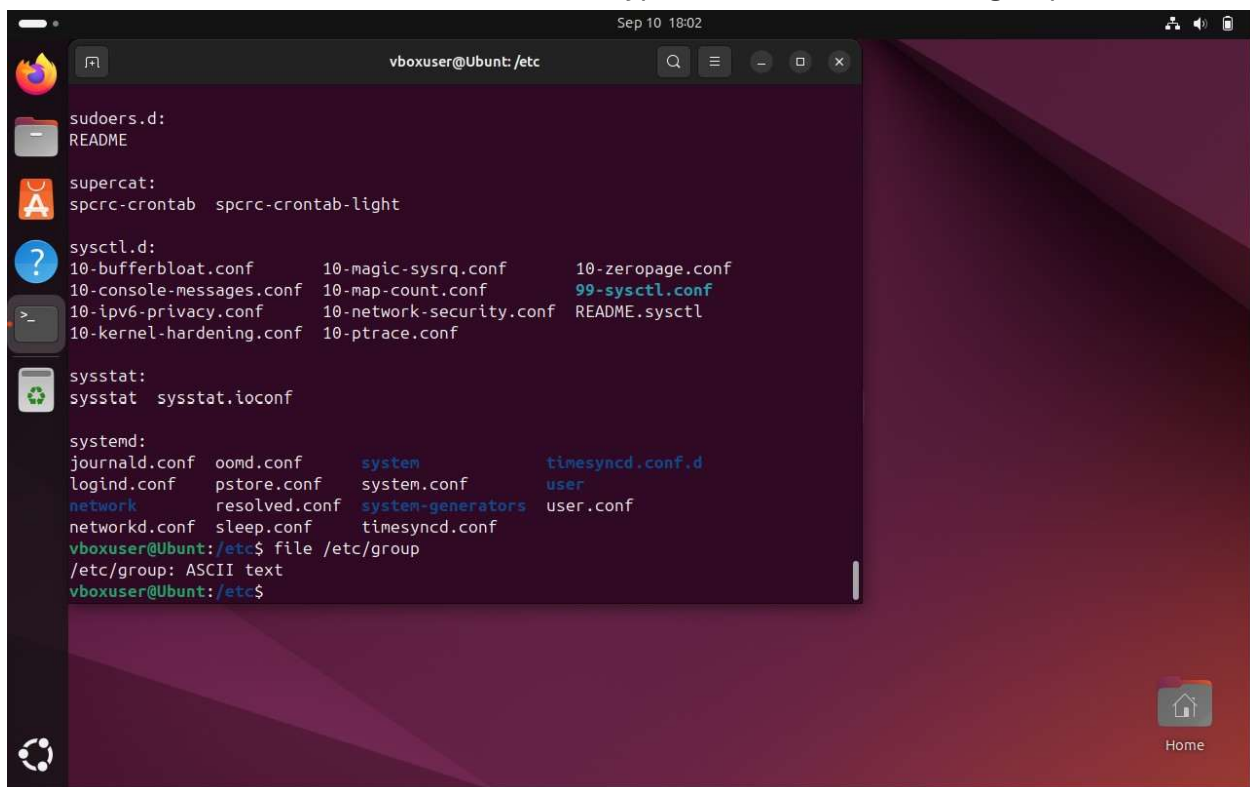
8. List all the files in the current directory that begin with the letter s.



A terminal window titled 'vboxuser@Ubuntu: /etc' showing the output of the command 'ls s*'. The output is a listing of files in the /etc directory that begin with the letter s, including their permissions, owner, group, size, date, and filename. The files listed are: sane.d, abaton.conf, agfafocus.conf, airscan.conf, apple.conf, artec.conf, artec_eplus48u.conf, avision.conf, bh.conf, canon630u.conf, canon.conf, canon_dr.conf, canon_lide70.conf, canon_pp.conf, cardscan.conf, coolscan2.conf, coolscan3.conf, dll.conf, dlm.d, dmc.conf, epjitsu.conf, epson2.conf, epson.conf, epsonds.conf, escl.conf, fujitsu.conf, genesys.conf, gphoto2.conf, gt68xx.conf, hp3900.conf, hp4200.conf, hp5400.conf, hp.conf, kvs1025.conf, leo.conf, lexmark.conf, ma1509.conf, magicolor.conf, matsushita.conf, microtek2.conf, microtek.conf, mustek.conf, mustek_pp.conf, mustek_usb.conf, nec.conf, net.conf, p5.conf, pie.conf, pieusb.conf, rts8891.conf, s9036.conf, saned.conf, sceptre.conf, sharp.conf, sm3840.conf, snapscan.conf, sp15c.conf, st400.conf, stv680.conf, tamarack.conf, tecol.conf, teco2.conf, teco3.conf, test.conf, and u12.conf.

```
vboxuser@Ubuntu:/etc$ ls s*
sane.d:
abaton.conf      dll.conf          kvs1025.conf      rts8891.conf
agfafocus.conf   dlm.d             leo.conf           s9036.conf
airscan.conf     dmc.conf          lexmark.conf       saned.conf
apple.conf       epjitsu.conf      ma1509.conf        sceptre.conf
artec.conf       epson2.conf       magicolor.conf     sharp.conf
artec_eplus48u.conf epson.conf        matsushita.conf    sm3840.conf
avision.conf     epsonds.conf      microtek2.conf     snapscan.conf
bh.conf          escl.conf         microtek.conf      sp15c.conf
canon630u.conf   fujitsu.conf      mustek.conf        st400.conf
canon.conf       genesys.conf      mustek_pp.conf     stv680.conf
canon_dr.conf    gphoto2.conf     mustek_usb.conf    tamarack.conf
canon_lide70.conf gt68xx.conf       nec.conf           tecol.conf
canon_pp.conf    hp3900.conf       net.conf           teco2.conf
cardscan.conf    hp4200.conf       p5.conf           teco3.conf
coolscan2.conf   hp5400.conf       pie.conf          test.conf
coolscan3.conf   hp.conf           pieusb.conf        u12.conf
```

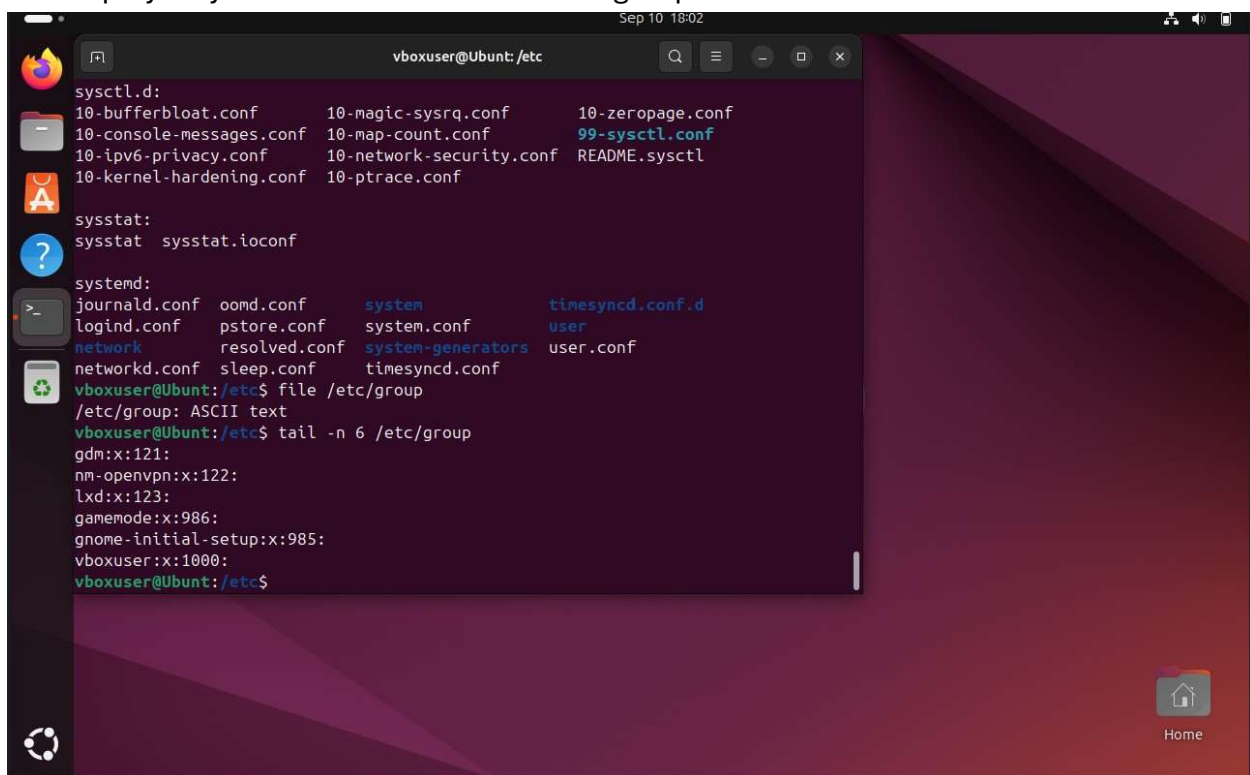
9. Run the command that will determine the type of contents in the /etc/group file.



A terminal window titled 'vboxuser@Ubuntu: /etc' showing the output of the 'file /etc/group' command. The output indicates that the file is an ASCII text file. The terminal also displays a directory listing of the /etc directory, showing various configuration files and subdirectories like 'sudoers.d', 'supercat', 'sysctl.d', 'sysstat', and 'systemd'.

```
vboxuser@Ubuntu: /etc$ file /etc/group
/etc/group: ASCII text
vboxuser@Ubuntu: /etc$
```

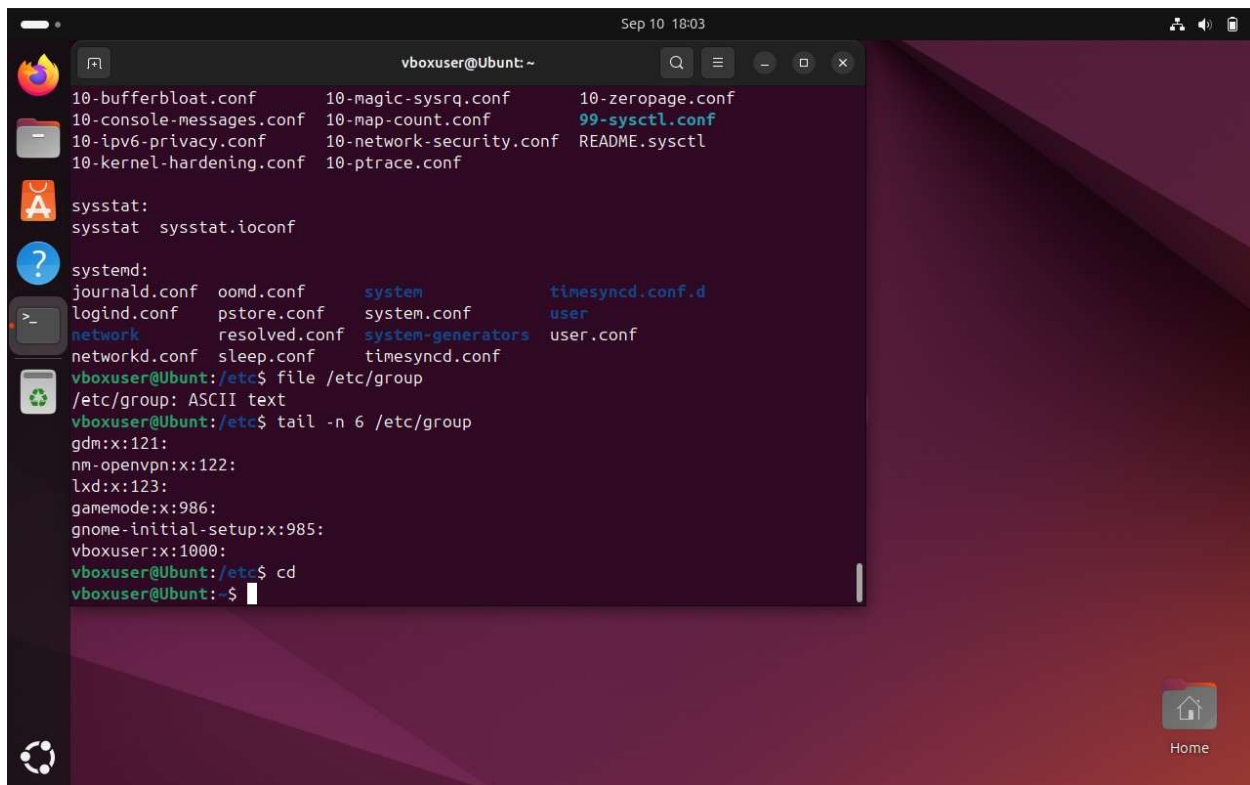
10. Display only the last five lines of the /etc/group file.



A terminal window titled 'vboxuser@Ubuntu: /etc' showing the output of the 'tail -n 6 /etc/group' command. The output displays the last six lines of the /etc/group file, which define system users like gdm, nm-openvpn, lxd, gamemode, and vboxuser. The terminal also shows the same directory listing as in the previous screenshot.

```
vboxuser@Ubuntu: /etc$ tail -n 6 /etc/group
gdm:x:121:
nm-openvpn:x:122:
lxd:x:123:
gamemode:x:986:
gnome-initial-setup:x:985:
vboxuser:x:1000:
vboxuser@Ubuntu: /etc$
```

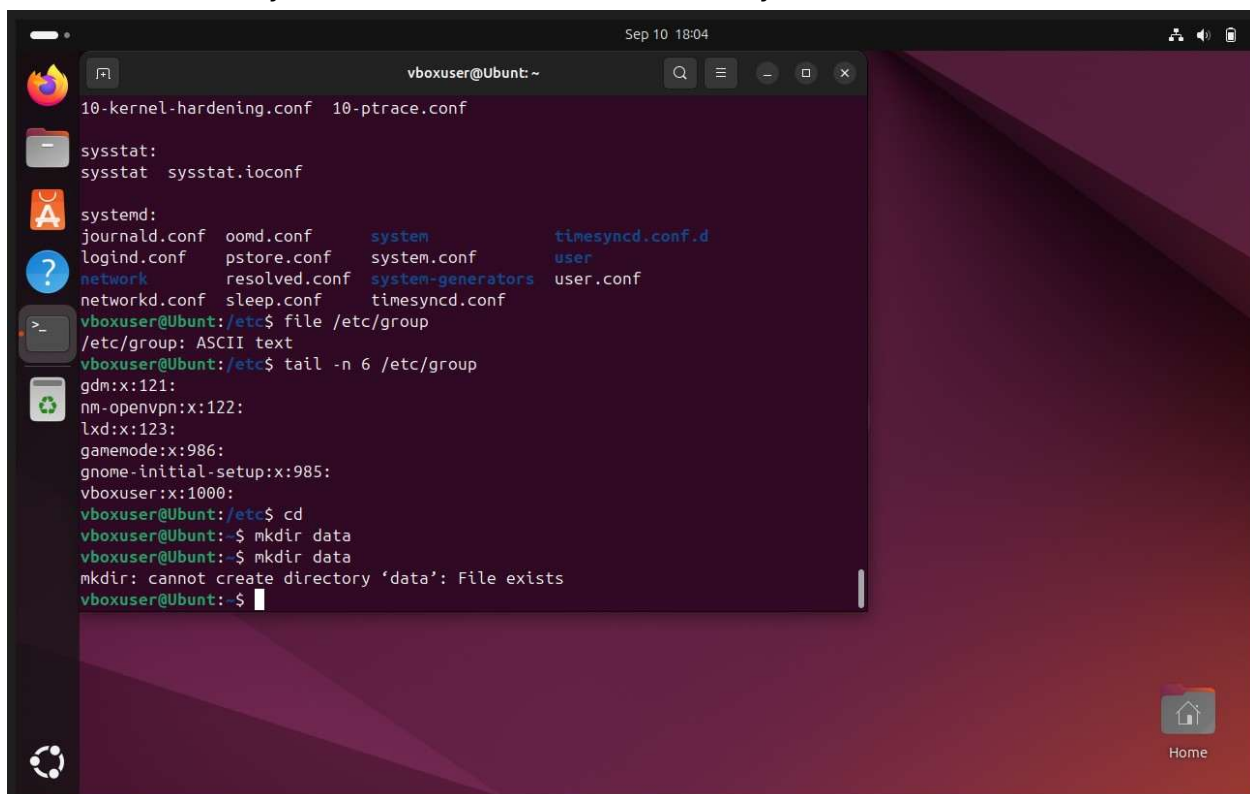
11. Execute the command to return to your home directory.



A terminal window titled 'vboxuser@Ubuntu: ~' showing the output of the 'ls' command. The output lists various configuration files in the /etc directory, including 10-bufferbloat.conf, 10-console-messages.conf, 10-ipv6-privacy.conf, 10-kernel-hardening.conf, 10-magic-sysrq.conf, 10-map-count.conf, 10-network-security.conf, 10-pttrace.conf, 10-zero-page.conf, 99-sysctl.conf, README.sysctl, sysstat, sysstat.ioconf, systemd, journald.conf, oomd.conf, system, timesyncd.conf.d, logind.conf, pstore.conf, system.conf, user, network, resolved.conf, system-generators, user.conf, networkd.conf, sleep.conf, timesyncd.conf. The user then runs 'file /etc/group' and 'tail -n 6 /etc/group', which outputs the contents of the /etc/group file. Finally, the user runs 'cd' to return to the home directory, and the prompt changes from '/etc\$' to '~\$'.

```
vboxuser@Ubuntu: ~  
10-bufferbloat.conf 10-magic-sysrq.conf 10-zero-page.conf  
10-console-messages.conf 10-map-count.conf 99-sysctl.conf  
10-ipv6-privacy.conf 10-network-security.conf README.sysctl  
10-kernel-hardening.conf 10-pttrace.conf  
  
sysstat:  
sysstat sysstat.ioconf  
  
systemd:  
journald.conf oomd.conf system timesyncd.conf.d  
logind.conf pstore.conf system.conf user  
network resolved.conf system-generators user.conf  
networkd.conf sleep.conf timesyncd.conf  
  
vboxuser@Ubuntu:/etc$ file /etc/group  
/etc/group: ASCII text  
vboxuser@Ubuntu:/etc$ tail -n 6 /etc/group  
gdm:x:121:  
nm-openvpn:x:122:  
lxd:x:123:  
gamemode:x:986:  
gnome-initial-setup:x:985:  
vboxuser:x:1000:  
vboxuser@Ubuntu:/etc$ cd  
vboxuser@Ubuntu:~$
```

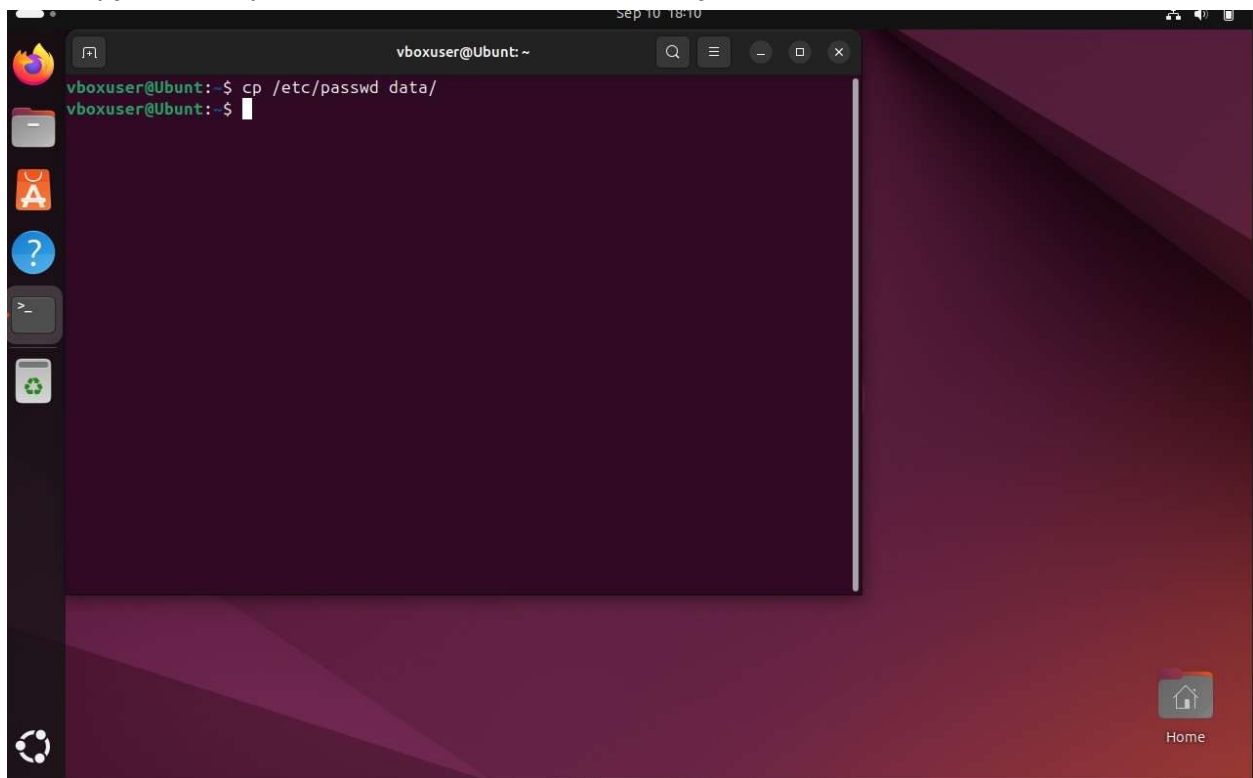
12. Make a directory named data in the current directory.



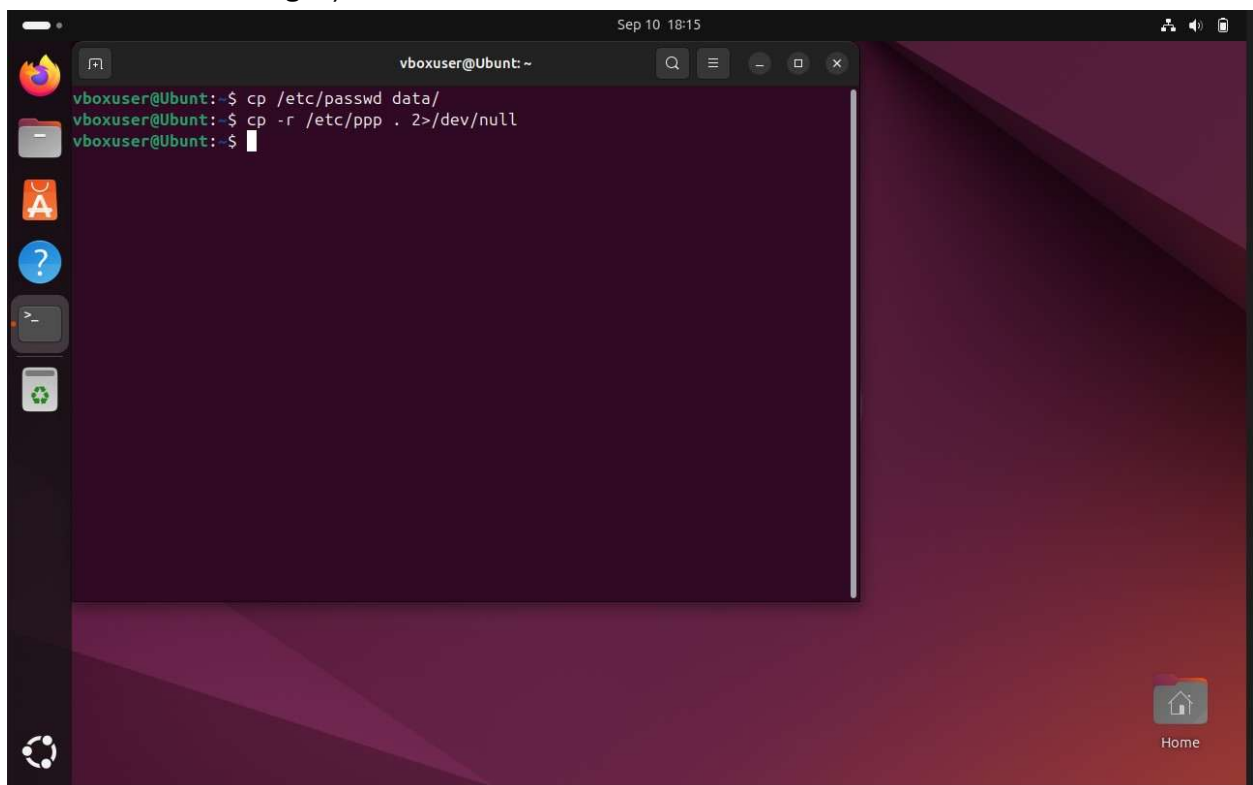
A terminal window titled 'vboxuser@Ubuntu: ~' showing the output of the 'ls' command. The output lists various configuration files in the /etc directory, including 10-kernel-hardening.conf, 10-pttrace.conf, sysstat, sysstat.ioconf, systemd, journald.conf, oomd.conf, system, timesyncd.conf.d, logind.conf, pstore.conf, system.conf, user, network, resolved.conf, system-generators, user.conf, networkd.conf, sleep.conf, timesyncd.conf. The user then runs 'file /etc/group' and 'tail -n 6 /etc/group', which outputs the contents of the /etc/group file. Finally, the user runs 'cd' to return to the home directory, and the prompt changes from '/etc\$' to '~\$'. The user then runs 'mkdir data' twice. The first command succeeds, and the second command fails with the message 'mkdir: cannot create directory 'data': File exists'.

```
vboxuser@Ubuntu: ~  
10-kernel-hardening.conf 10-pttrace.conf  
  
sysstat:  
sysstat sysstat.ioconf  
  
systemd:  
journald.conf oomd.conf system timesyncd.conf.d  
logind.conf pstore.conf system.conf user  
network resolved.conf system-generators user.conf  
networkd.conf sleep.conf timesyncd.conf  
  
vboxuser@Ubuntu:/etc$ file /etc/group  
/etc/group: ASCII text  
vboxuser@Ubuntu:/etc$ tail -n 6 /etc/group  
gdm:x:121:  
nm-openvpn:x:122:  
lxd:x:123:  
gamemode:x:986:  
gnome-initial-setup:x:985:  
vboxuser:x:1000:  
vboxuser@Ubuntu:/etc$ cd  
vboxuser@Ubuntu:~$ mkdir data  
vboxuser@Ubuntu:~$ mkdir data  
mkdir: cannot create directory 'data': File exists  
vboxuser@Ubuntu:~$
```

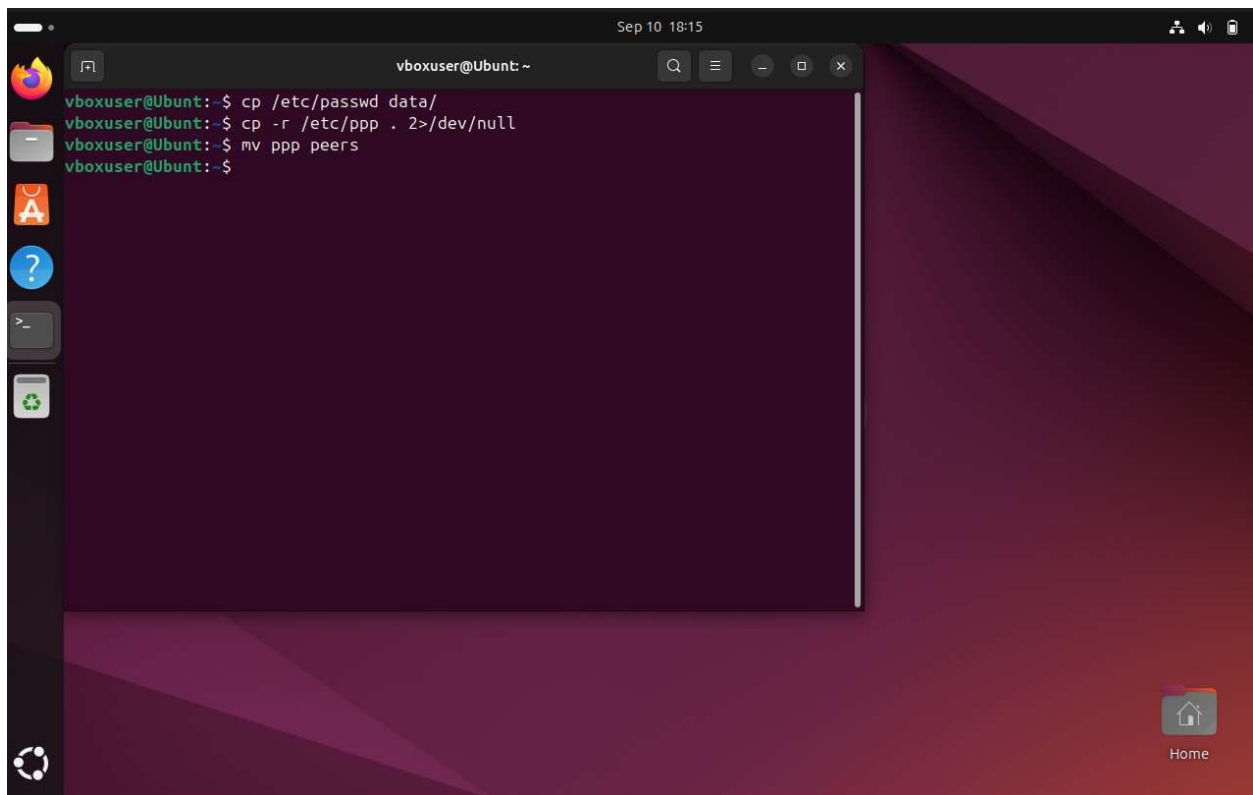
13. Copy the `/etc/passwd` file into the data directory.



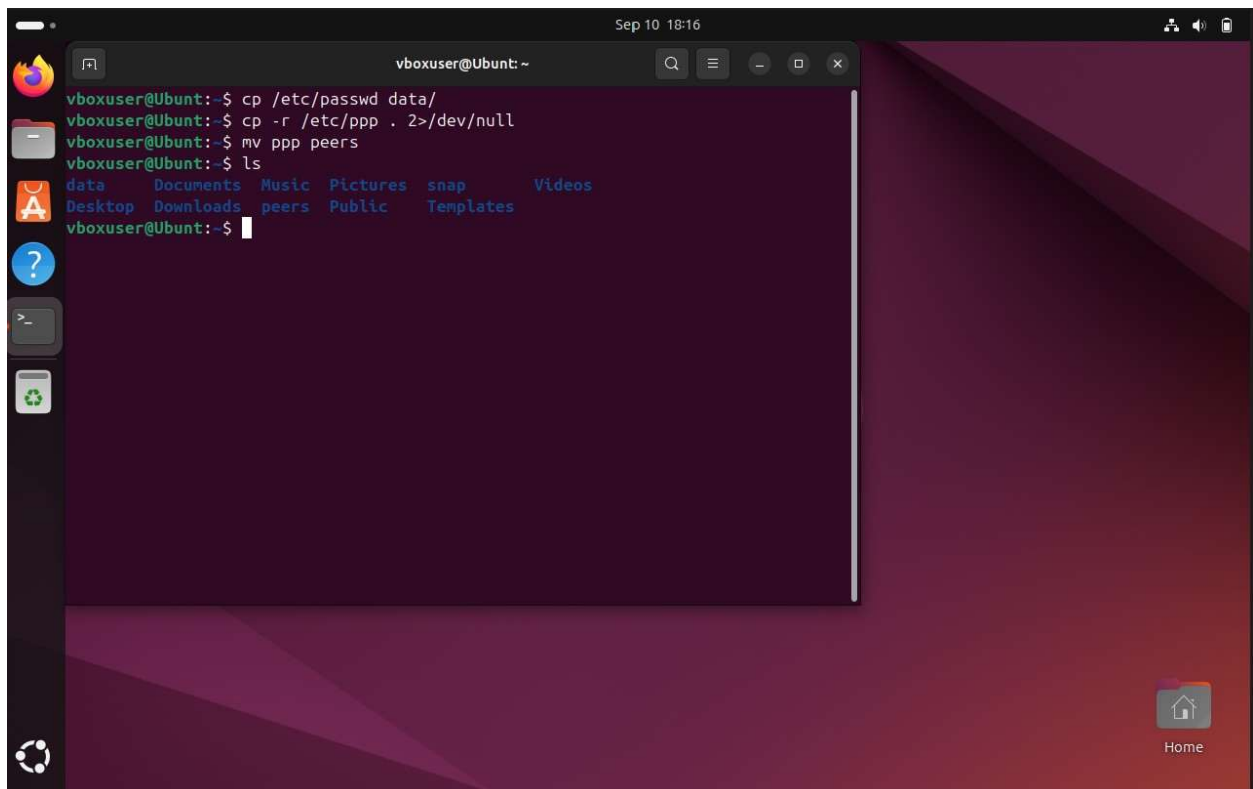
14. Copy the `/etc/ppp` directory into the current directory (and ignore any "Permission denied" error messages).



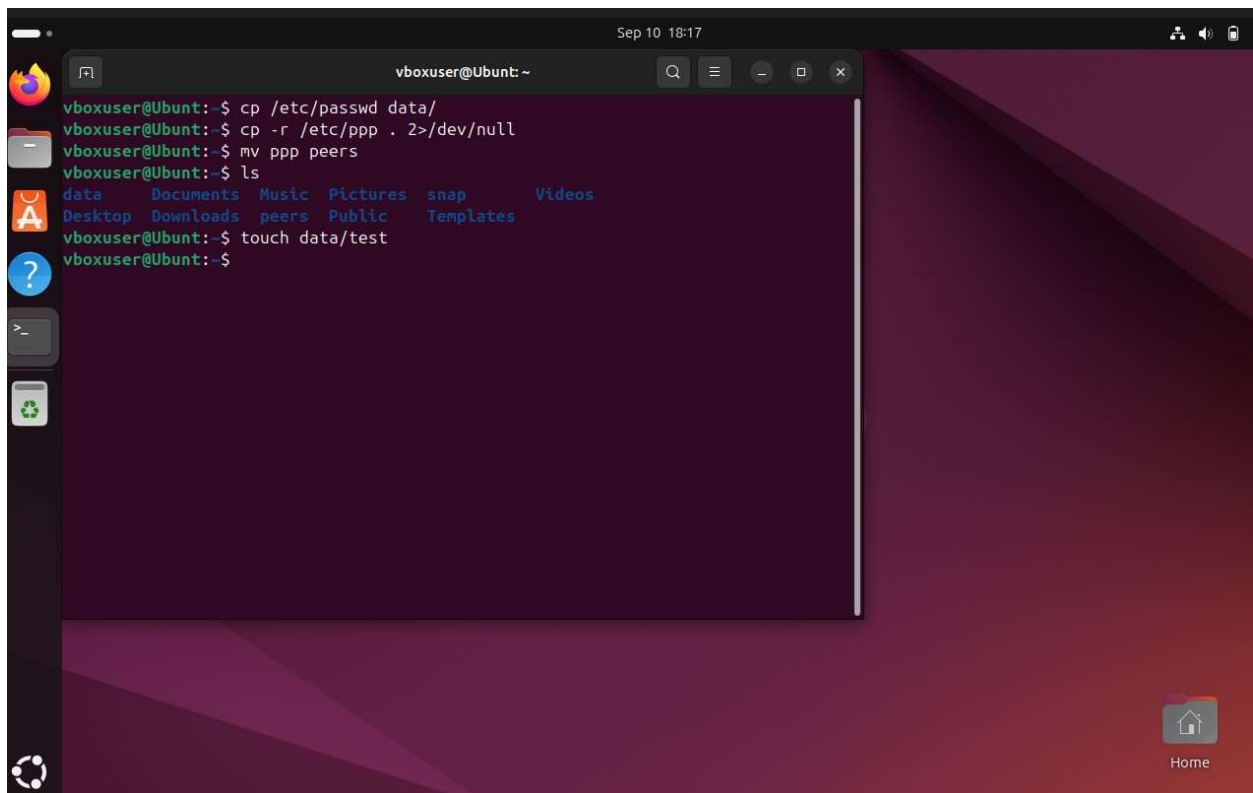
15. Rename the ppp directory that is located in the current directory to peers.



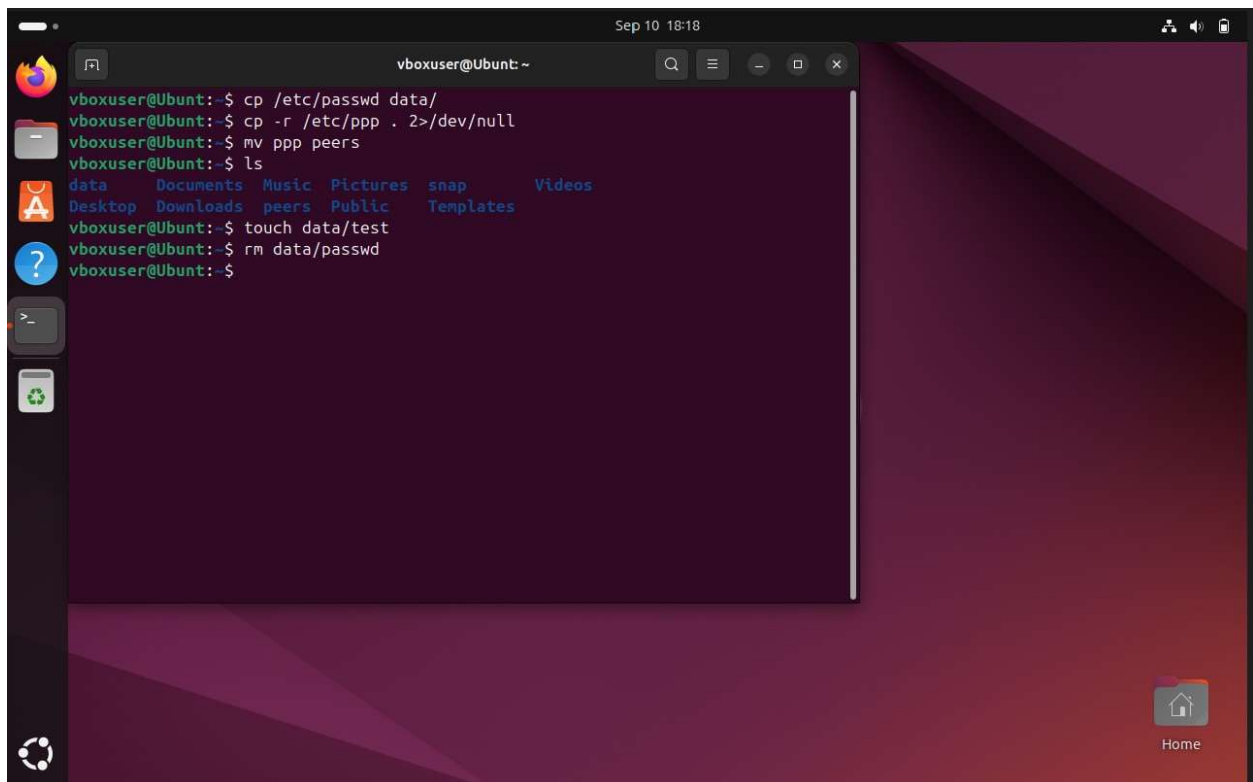
16. Execute the command (ls) to verify the change in the name of the directory.



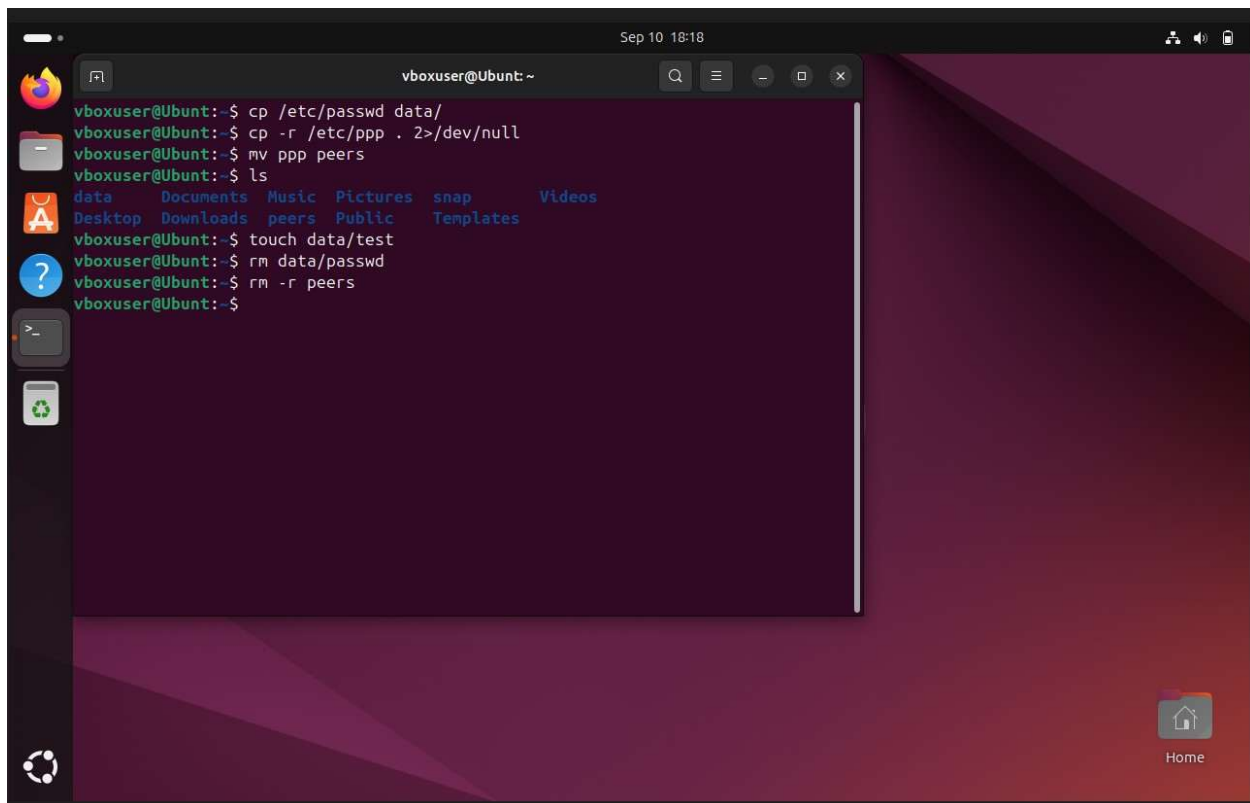
17. Create a new empty file named test in the data directory.



18. Delete the data/passwd file.



19. Delete the peers directory.



20. Re-execute the ls command.

