

Q1)a

```
Applications Places 12:13 PM
root@ubuntu: /etc
File Edit View Search Terminal Help
uuidd:x:111:
ssl-cert:x:112:
lpadmin:x:113:kill3rstabs
lightdm:x:114:
nopasswdlogin:x:115:
whoopsie:x:116:
mlocate:x:117:
ssh:x:118:
avahi-autoipd:x:119:
avahi:x:120:
bluetooth:x:121:
scanner:x:122:saned
colord:x:123:
pulse:x:124:
pulse-access:x:125:
rtkit:x:126:
saned:x:127:
kill3rstabs:x:1000:
sambashare:x:128:kill3rstabs
java:x:1001:
cpp:x:1002:kill3rstabs
oslab:x:1003:
root@ubuntu:/etc#
```

b)

```
Applications Places 12:33 PM
root@ubuntu: /home
File Edit View Search Terminal Help

-o, --non-unique          the user
                          allow to create users with duplicate
                          (non-unique) UID
-p, --password PASSWORD  encrypted password of the new account
-r, --system              create a system account
-R, --root CHROOT_DIR    directory to chroot into
-s, --shell SHELL        login shell of the new account
-u, --uid UID             user ID of the new account
-U, --user-group          create a group with the same name as the use
r
-Z, --selinux-user SEUSER use a specific SEUSER for the SELinux user m
adding
--extrausers              Use the extra users database

root@ubuntu:/home# os useradd OSUSER2 -m -s /bin/bash -g users
os: command not found
root@ubuntu:/home# sudo useradd OSUSER2 -m -s /bin/bash -g users
root@ubuntu:/home# passwd OSUSER2
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@ubuntu:/home#
```

c)

```
Applications Places
root@ubuntu: /home
File Edit View Search Terminal Help
man:x:12:
proxy:x:13:
kmem:x:15:
dialout:x:20:
fax:x:21:
voice:x:22:
cdrom:x:24:kill3rstabs
floppy:x:25:
tape:x:26:
sudo:x:27:kill3rstabs,OSUSER1
audio:x:29:pulse
dip:x:30:kill3rstabs
www-data:x:33:
backup:x:34:
operator:x:37:
list:x:38:
irc:x:39:
src:x:40:
gnats:x:41:
shadow:x:42:
utmp:x:43:
video:x:44:
```

d)

```
Applications Places
OSUSER1@ubuntu: /home
File Edit View Search Terminal Help
rtkit:x:126:
saned:x:127:
kill3rstabs:x:1000:
sambashare:x:128:kill3rstabs
java:x:1001:
cpp:x:1002:kill3rstabs
oslab:x:1003:
root@ubuntu:/home# cd ..
root@ubuntu:/# ls
bin    dev    initrd.img    lib64    mnt    root    snap    tmp    vmlinuz
boot  etc    initrd.img.old  lost+found  opt    run    srv    usr    vmlinuz.old
cdrom  home  lib          media    proc   sbin   sys    var
root@ubuntu:/# cd home
root@ubuntu:/home# ls
kill3rstabs  newuser  OSUSER1  OSUSER2
root@ubuntu:/home# su OSUSER1
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

OSUSER1@ubuntu:/home$ sudo su OSUSER1
[sudo] password for OSUSER1:
OSUSER1@ubuntu:/home$ OSUSER1@ubuntu:/home
```

Q2)

```
Applications Places 12:53 PM
root@ubuntu: //dirOSLAB
File Edit View Search Terminal Help
dev  initrd.img  lost+found  proc  snap  usr
root@ubuntu:/# cd /home/kill3rstabs
root@ubuntu:/home/kill3rstabs# cd //
root@ubuntu:///# cd //
root@ubuntu:///# cd..
cd..: command not found
root@ubuntu:///# cd ..
root@ubuntu:///# cd ..
root@ubuntu:///# cd..
cd..: command not found
root@ubuntu:///# cd ..
root@ubuntu:///# cd ..
root@ubuntu:///# cd ..
root@ubuntu:///# ls
bin  dirOSLAB  initrd.img.old  media  root  srv  var
boot  etc      lib            mnt    run   sys  vmlinuz
cdrom  home     lib64          opt    sbin  tmp  vmlinuz.old
dev  initrd.img  lost+found  proc  snap  usr
root@ubuntu:///# cd dirOSLAB
root@ubuntu:///dirOSLAB# ls
subdir
root@ubuntu:///dirOSLAB#
```

Q3)

```
Applications Places 1:21 PM
root@ubuntu: //home/kill3rstabs
File Edit View Search Terminal Help
folder  helloworld.c  newprogram  powfu
root@ubuntu://home/kill3rstabs# clear

root@ubuntu://home/kill3rstabs# cat newprogram.c newprogram2.c > out.c
root@ubuntu://home/kill3rstabs# gcc out.c -o out
out.c:9:5: error: redefinition of 'main'
  int main(){
    ^
out.c:3:5: note: previous definition of 'main' was here
  int main(){
    ^
root@ubuntu://home/kill3rstabs# nano out.c
root@ubuntu://home/kill3rstabs# gcc out.c -o out
root@ubuntu://home/kill3rstabs# ./out

I love operating systems
I love linux
root@ubuntu://home/kill3rstabs#
```

Q4)a

```
Applications Places 1:26 PM
root@ubuntu: //home/kill3rstabs
File Edit View Search Terminal Help
root@ubuntu://home/kill3rstabs# useradd abc -m -s /bin/bash -g users
root@ubuntu://home/kill3rstabs# sudo gpasswd abc
gpasswd: group 'abc' does not exist in /etc/group
root@ubuntu://home/kill3rstabs# sudo passwd abc
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@ubuntu://home/kill3rstabs#
```

b)

```
Applications Places 1:29 PM
root@ubuntu: //home/kill3rstabs
File Edit View Search Terminal Help
I love linux
root@ubuntu://home/kill3rstabs# clear

root@ubuntu://home/kill3rstabs# useradd abc -m -s /bin/bash -g users
root@ubuntu://home/kill3rstabs# sudo gpasswd abc
gpasswd: group 'abc' does not exist in /etc/group
root@ubuntu://home/kill3rstabs# sudo passwd abc
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
root@ubuntu://home/kill3rstabs# sudo touch file.txt
root@ubuntu://home/kill3rstabs# df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev             948088         0   948088    0% /dev
tmpfs            194024         8588   185436    5% /run
/dev/sda1       19478204
```

c)

```
Applications Places 1:38 PM
abc@ubuntu: /home/kill3rstabs
File Edit View Search Terminal Help
root@ubuntu:~# cd ..
root@ubuntu:/# cd /home/kill3rstabs
root@ubuntu:/home/kill3rstabs# ls
Desktop      hello.c      Music        out          test100.txt
Documents    hello.cpp    nashit       out.c        test.txt
Downloads    hello.txt    nashit123    out.txt      Videos
examples.desktop helloworld newprogram  Pictures
file.txt     helloworld.c newprogram2  powfu
folder       hellowrold newprogram2.c Public
hello        helloworld  newprogram.c Templates
root@ubuntu:/home/kill3rstabs# chown abc file.txt
root@ubuntu:/home/kill3rstabs# su abc
abc@ubuntu:/home/kill3rstabs$ ls
Desktop      hello.c      Music        out          test100.txt
Documents    hello.cpp    nashit       out.c        test.txt
Downloads    hello.txt    nashit123    out.txt      Videos
examples.desktop helloworld newprogram  Pictures
file.txt     helloworld.c newprogram2  powfu
folder       hellowrold newprogram2.c Public
hello        helloworld  newprogram.c Templates
abc@ubuntu:/home/kill3rstabs$ nano file.txt
abc@ubuntu:/home/kill3rstabs
```

d)

```
Applications Places 3:34 PM
root@ubuntu: /home/kill3rstabs
File Edit View Search Terminal Help
[sudo] password for abc:
abc is not in the sudoers file. This incident will be reported.
abc@ubuntu:/home/kill3rstabs$ exit
exit
root@ubuntu:/home/kill3rstabs# ls
Desktop      hello.c      Music        out          test100.txt
Documents    hello.cpp    nashit       out.c        test.txt
Downloads    hello.txt    nashit123    out.txt      Videos
examples.desktop helloworld newprogram  Pictures
file.txt     helloworld.c newprogram2  powfu
folder       hellowrold newprogram2.c Public
hello        helloworld  newprogram.c Templates
root@ubuntu:/home/kill3rstabs# mv file.txt file2.txt
root@ubuntu:/home/kill3rstabs# ls
Desktop      hello.c      Music        out          test100.txt
Documents    hello.cpp    nashit       out.c        test.txt
Downloads    hello.txt    nashit123    out.txt      Videos
examples.desktop helloworld newprogram  Pictures
file2.txt     helloworld.c newprogram2  powfu
folder       hellowrold newprogram2.c Public
hello        helloworld  newprogram.c Templates
root@ubuntu:/home/kill3rstabs#
```

e)

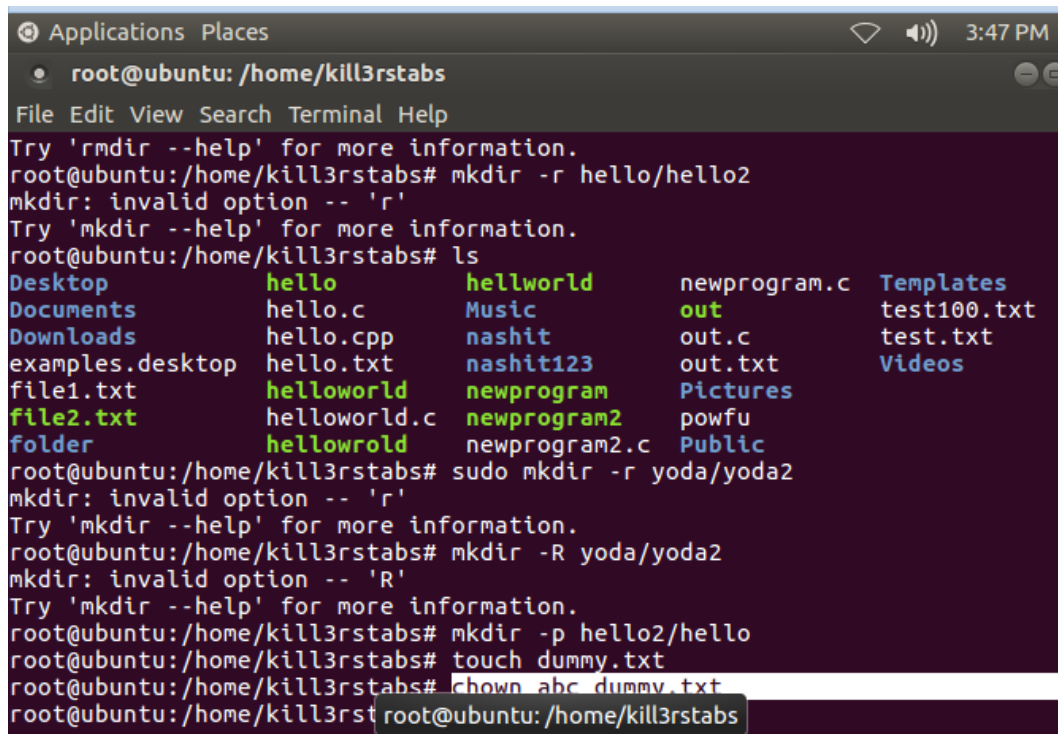
```
Applications Places 3:38 PM
root@ubuntu: /home/kill3rstabs
File Edit View Search Terminal Help
abc is not in the sudoers file. This incident will be reported.
abc@ubuntu:/home/kill3rstabs$ exit
exit
root@ubuntu:/home/kill3rstabs# ls
Desktop      hello.c      Music        out          test100.txt
Documents    hello.cpp    nashit       out.c        test.txt
Downloads    hello.txt    nashit123    out.txt      Videos
examples.desktop  helloworld  newprogram   Pictures
file.txt     helloworld.c newprogram2   powfu
folder       hellowrold  newprogram2.c Public
hello        hellworld   newprogram.c Templates
root@ubuntu:/home/kill3rstabs# mv file.txt file2.txt
root@ubuntu:/home/kill3rstabs# ls
Desktop      hello.c      Music        out          test100.txt
Documents    hello.cpp    nashit       out.c        test.txt
Downloads    hello.txt    nashit123    out.txt      Videos
examples.desktop  helloworld  newprogram   Pictures
file2.txt     helloworld.c newprogram2   powfu
folder       hellowrold  newprogram2.c Public
hello        hellworld   newprogram.c Templates
root@ubuntu:/home/kill3rstabs# touch -d '1 June 2018 11:02' file1.txt
root@ubuntu:/home/kill3rstabs#
```

f)

g)

```
Applications Places 3:43 PM
root@ubuntu: /home/kill3rstabs
File Edit View Search Terminal Help
root@ubuntu:/home/kill3rstabs# rmdir -r hello/hello2
rmdir: invalid option -- 'r'
Try 'rmdir --help' for more information.
root@ubuntu:/home/kill3rstabs# mkdir -r hello/hello2
mkdir: invalid option -- 'r'
Try 'mkdir --help' for more information.
root@ubuntu:/home/kill3rstabs# ls
Desktop      hello        hellworld    newprogram.c  Templates
Documents    hello.c      Music        out          test100.txt
Downloads    hello.cpp    nashit       out.c        test.txt
examples.desktop  hello.txt    nashit123    out.txt      Videos
file1.txt     helloworld  newprogram   Pictures
file2.txt     helloworld.c newprogram2   powfu
folder       hellowrold  newprogram2.c Public
root@ubuntu:/home/kill3rstabs# sudo mkdir -r yoda/yoda2
mkdir: invalid option -- 'r'
Try 'mkdir --help' for more information.
root@ubuntu:/home/kill3rstabs# mkdir -R yoda/yoda2
mkdir: invalid option -- 'R'
Try 'mkdir --help' for more information.
root@ubuntu:/home/kill3rstabs# mkdir -p hello2/hello
root@ubuntu:/home/kill3rstabs#
```

h)

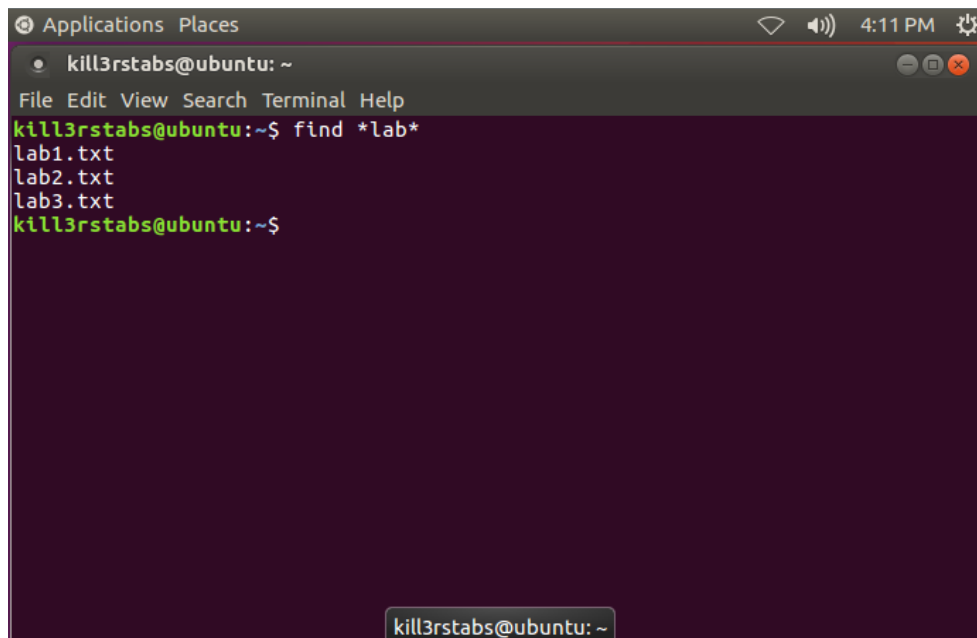


A terminal window titled 'Applications Places' with a status bar showing 'root@ubuntu: /home/kill3rstabs' and the time '3:47 PM'. The terminal shows the following commands and output:

```
root@ubuntu:/home/kill3rstabs# mkdir -r hello/hello2
mkdir: invalid option -- 'r'
Try 'mkdir --help' for more information.
root@ubuntu:/home/kill3rstabs# ls
Desktop      hello        hellworld    newprogram.c  Templates
Documents    hello.c      Music        out           test100.txt
Downloads    hello.cpp    nashit       out.c         test.txt
examples.desktop hello.txt    nashit123    out.txt       Videos
file1.txt    helloworld  newprogram   Pictures
file2.txt    helloworld.c newprogram2  powfu
folder       hellowrold newprogram2.c Public
root@ubuntu:/home/kill3rstabs# sudo mkdir -r yoda/yoda2
mkdir: invalid option -- 'r'
Try 'mkdir --help' for more information.
root@ubuntu:/home/kill3rstabs# mkdir -R yoda/yoda2
mkdir: invalid option -- 'R'
Try 'mkdir --help' for more information.
root@ubuntu:/home/kill3rstabs# mkdir -p hello2/hello
root@ubuntu:/home/kill3rstabs# touch dummy.txt
root@ubuntu:/home/kill3rstabs# chown abc dummy.txt
root@ubuntu:/home/kill3rstabs#
```

i)

j)



A terminal window titled 'Applications Places' with a status bar showing 'kill3rstabs@ubuntu: ~' and the time '4:11 PM'. The terminal shows the following command and output:

```
kill3rstabs@ubuntu:~$ find *lab*
lab1.txt
lab2.txt
lab3.txt
kill3rstabs@ubuntu:~$
```


k)

```
Applications Places 3:51 PM
root@ubuntu: /home/kill3rstabs
File Edit View Search Terminal Help
with --color=never. With --color=auto, ls emits color codes only when
standard output is connected to a terminal. The LS_COLORS environment
variable can change the settings. Use the dircolors command to set it.

Exit status:
 0 if OK,
 1 if minor problems (e.g., cannot access subdirectory),
 2 if serious trouble (e.g., cannot access command-line argument).

GNU coreutils online help: <http://www.gnu.org/software/coreutils/>
Full documentation at: <http://www.gnu.org/software/coreutils/ls>
or available locally via: info '(coreutils) ls invocation'
root@ubuntu: /home/kill3rstabs# df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev             948088         0   948088    0% /dev
tmpfs            194024     8592   185432    5% /run
/dev/sda1       19478204 5499236 12966488   30% /
tmpfs            970116       460   969656    1% /dev/shm
tmpfs            5120          4     5116    1% /run/lock
tmpfs            970116         0   970116    0% /sys/fs/cgroup
tmpfs            194024         64   193960    1% /run/user/1000
root@ubuntu: /home/kill3rstabs
```

Q5)a

```
Applications Places 4:16 PM
kill3rstabs@ubuntu: /bin
File Edit View Search Terminal Help
false          ntfsckmp       uncompress
fgconsole      ntfsfallocate unicode_start
fgrep          ntfsfix        vdir
findmnt        ntfsinfo       vmouse_detect
fuser          ntfsls         wdctl
fusermount     ntfsmove       which
getfacl        ntfstruncate   whiptail
grep           ntfswipe       ypdomainname
gunzip         open           zcat
gzexe         openvt         zcmp
gzip           pidof          zdiff
hciconfig     ping           zegrep
hostname      ping6          zfgrep
ip            plymouth       zforce
journalctl    ps             zgrep
kbd_mode      pwd            zless
kill           rbash          zmore
kmod          readlink       znew
less          red
kill3rstabs@ubuntu: /bin$ ls *.sh
ls: cannot access '*.sh': No such file or directory
kill3rstabs@Home: /bin$
```


b)