

**LAPORAN PRAKTIKUM  
SISTEM OPERASI  
MODUL 7**



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**PROGRAM STUDI INFORMATIKA  
FAKULTAS KOMUNIKASI DAN INFORMATIKA  
UNIVERSITAS MUHAMMADIYAH SURAKARTA**

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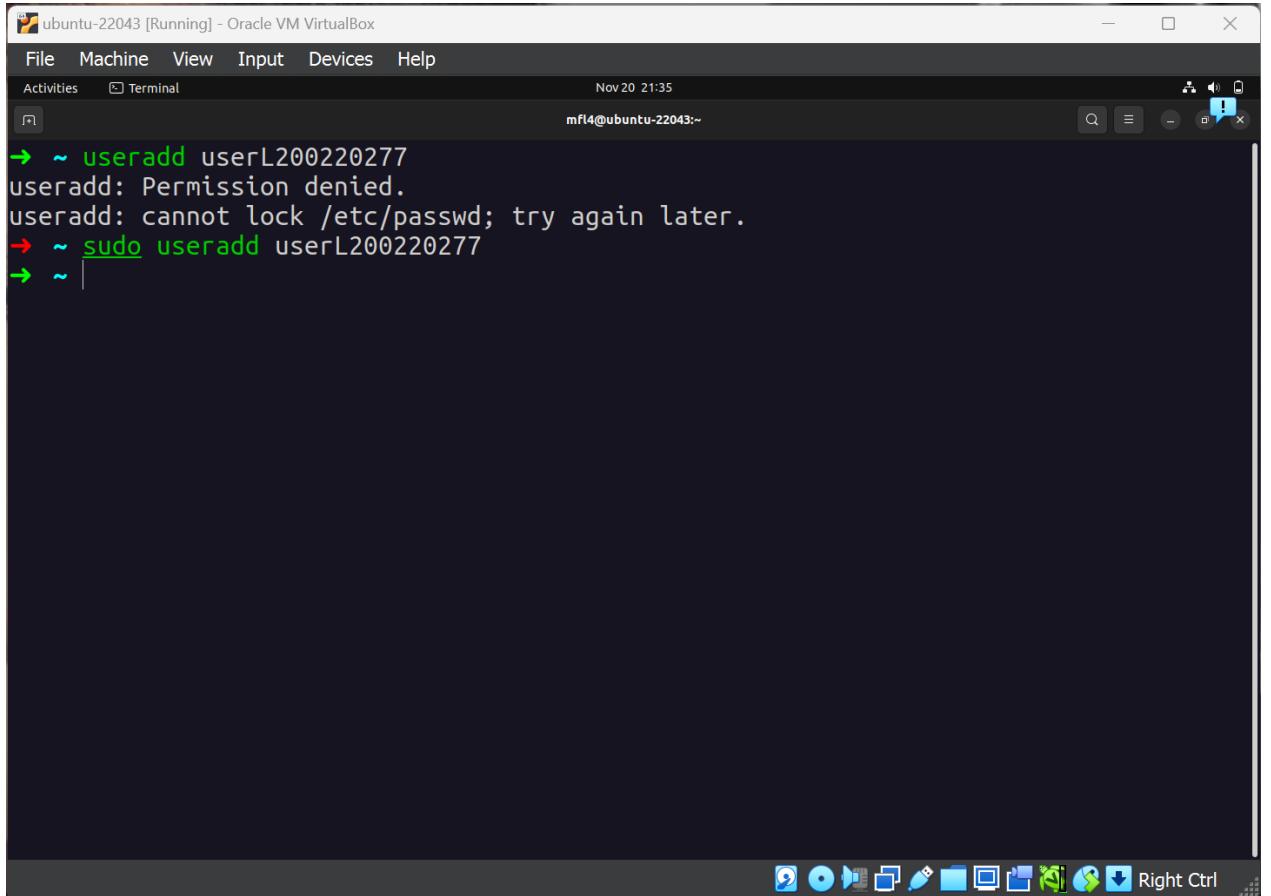
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## **PETUNJUK PRAKTIKUM**

1. Nyalakan komputer dan pilih system operasi Linux yang tersedia
2. Tunggu proses booting selesai yaitu pada saat keluar permintaan untuk memasukkan username dan password. Masukkan username kemudian tekan enter.
3. Buka Applications – Accessories – Terminal. Untuk menggunakan command line.
4. Jika menggunakan ubuntu login root dengan menggunakan “sudo su” kemudian ‘enter’, setelah itu masukkan password milik user admin.(tanyakan kepada asisten praktikum)
5. Setelah proses selesai dan berada dalam shell, tuliskan perintah-perintah berikut ini. Perintah harus dijalankan kemudian analisis atau maknai respon yang muncul pada layar monitor.

## Praktikum 1:

1. Buat user baru: # useradd user



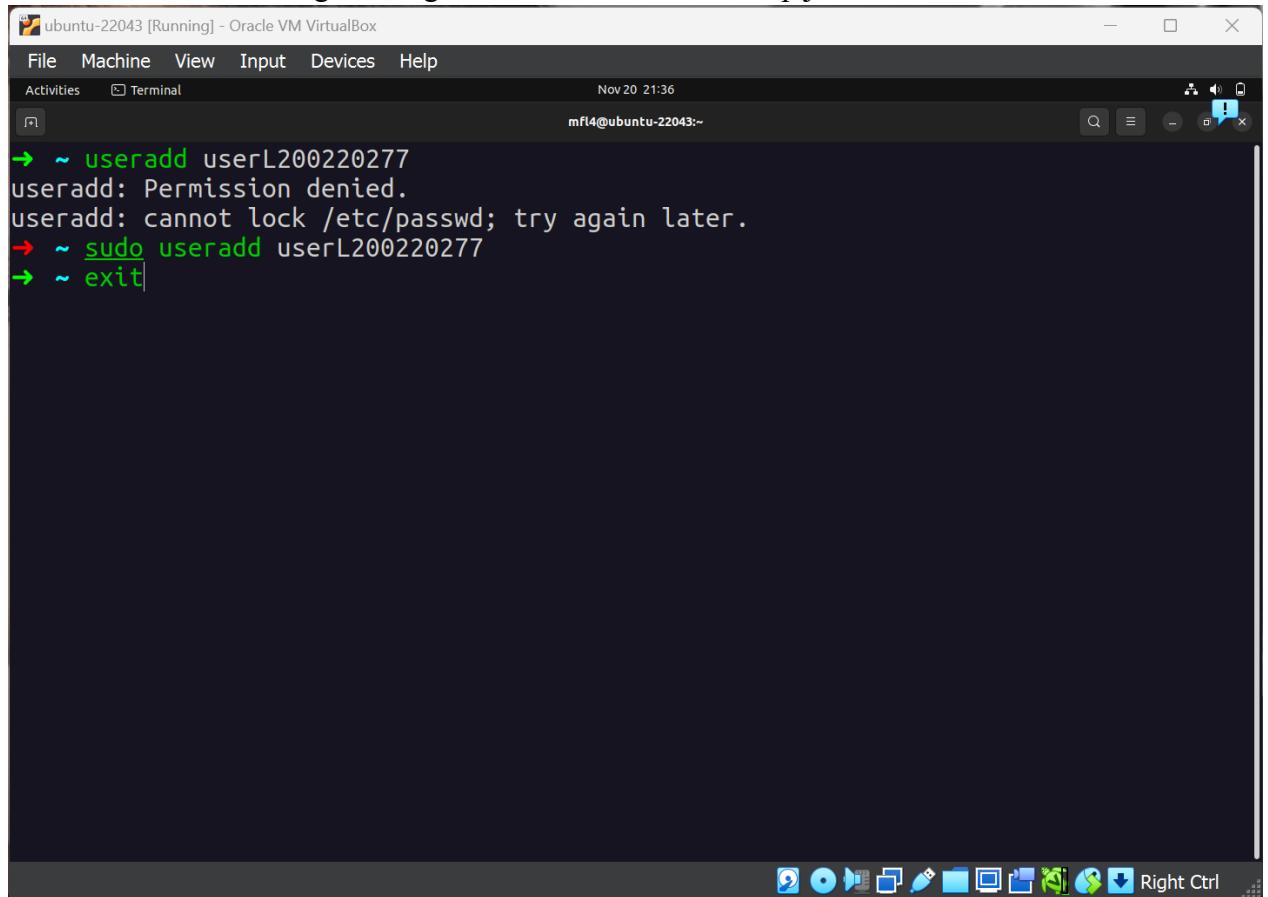
The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window has a dark theme with white text. At the top, there's a menu bar with File, Machine, View, Input, Devices, and Help. Below the menu is a toolbar with Activities and Terminal. The status bar at the bottom shows "Nov 20 21:35" and "mfl4@ubuntu-22043:~". The terminal itself has a black background with white text. It displays the following commands and output:  
→ ~ useradd userL200220277  
useradd: Permission denied.  
useradd: cannot lock /etc/passwd; try again later.  
→ ~ sudo useradd userL200220277  
→ ~ |  
The terminal window is surrounded by a dark border, and at the very bottom, there's a horizontal bar with various icons.

2. Masukkan pasword yang diminta sebanyak dua kali:
3. Jika sudah berhasil akan muncul pesan

Dilanjutkan dengan memasukkan user information untuk user yang anda buat, masukkanlah data-data yang diminta.

Masukkanlah data-data anda.

4. Keluarlah dari shell dengan mengetikkan exit kemudian tutup jendela shell

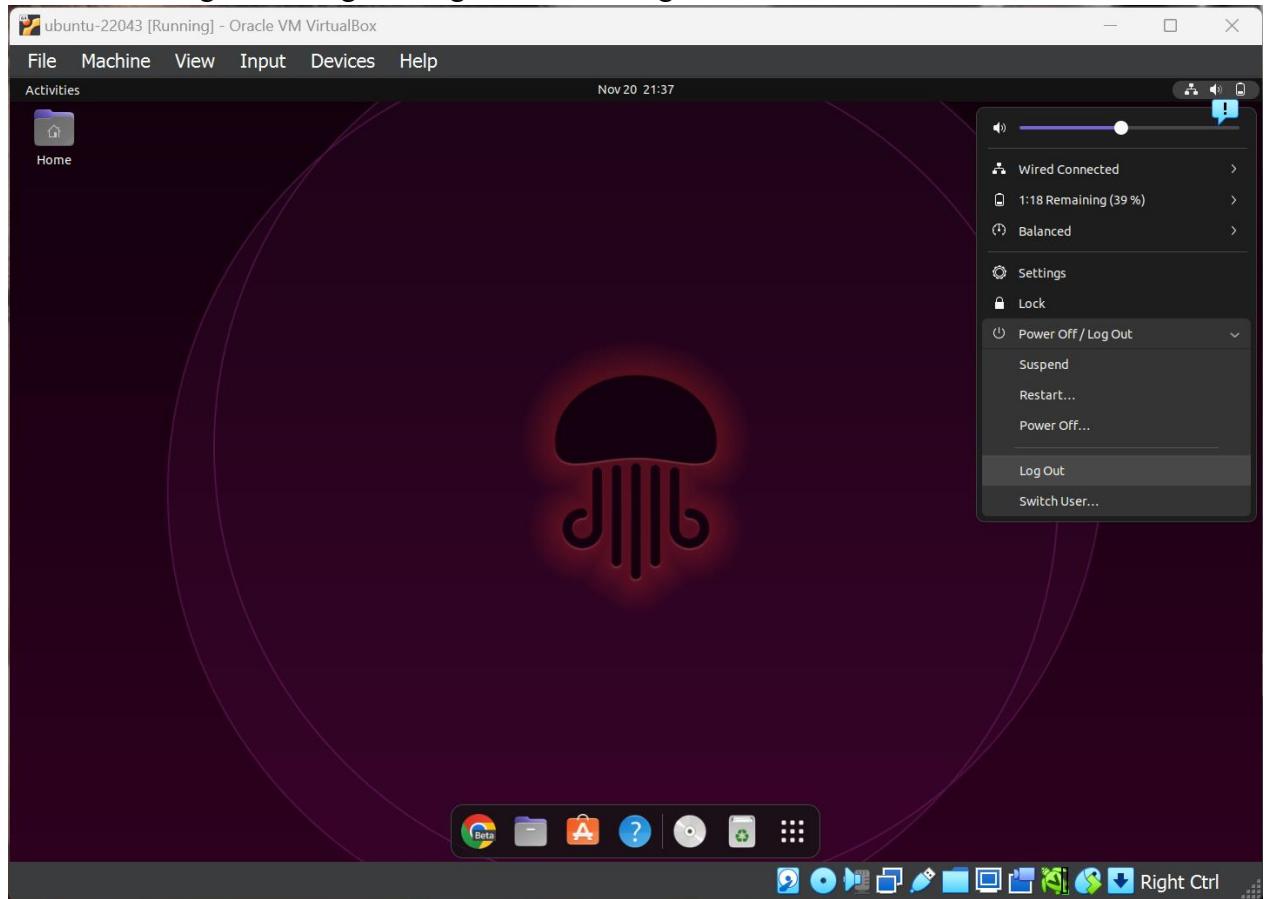


The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window has a dark theme with white text. At the top, there's a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu is a toolbar with "Activities" and "Terminal". The status bar at the top right shows the date and time: "Nov 20 21:36" and the user: "mfl4@ubuntu-22043:~". The terminal itself contains the following text:

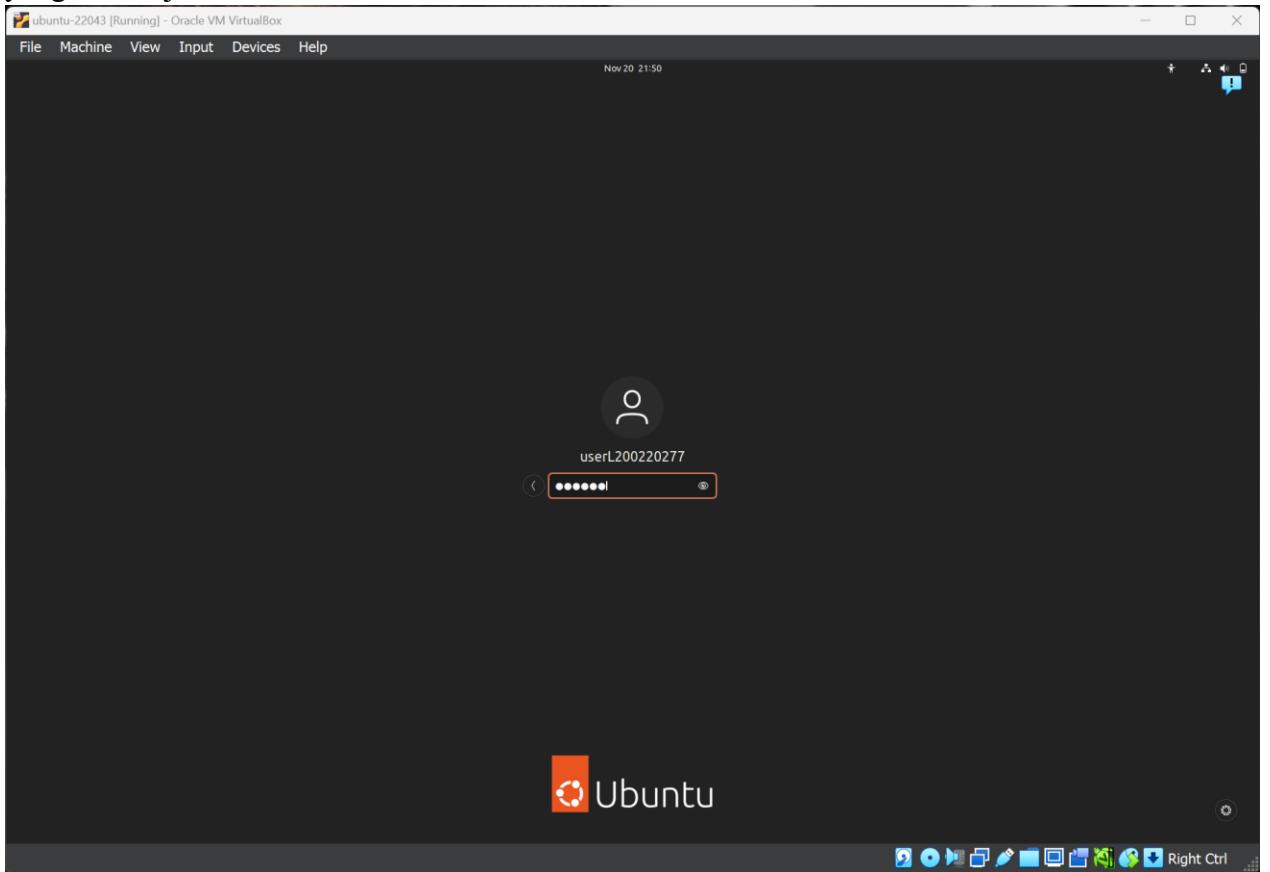
```
→ ~ useradd userL200220277
useradd: Permission denied.
useradd: cannot lock /etc/passwd; try again later.
→ ~ sudo useradd userL200220277
→ ~ exit|
```

The terminal window is set against a background of a desktop environment with various icons on the desktop.

5. Keluarlah dari gnome dengan mengklik tombol Log Out



6. Setelah masuk ke jendela login, cobalah untuk masuk menggunakan user dan password yang baru saja anda buat.



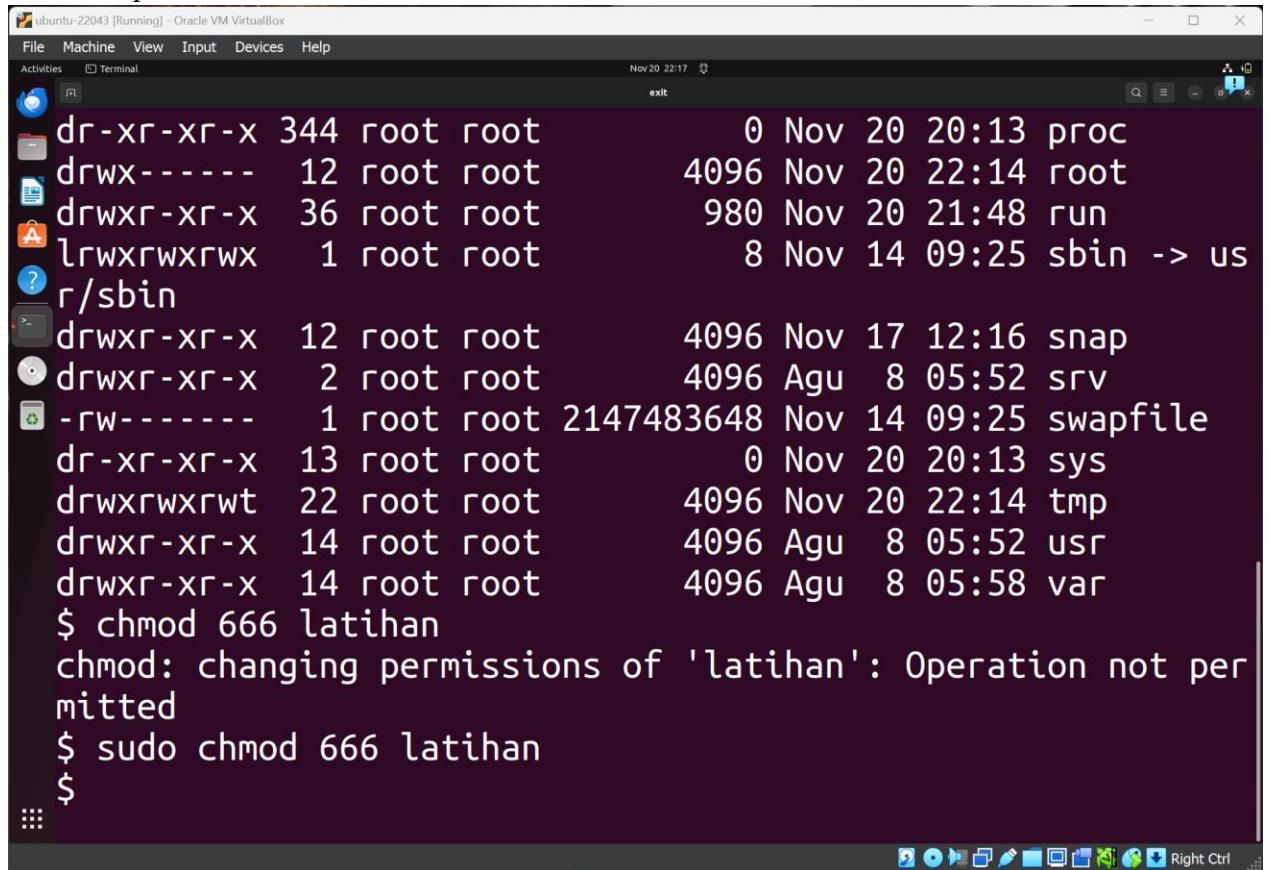
Setelah berhasil login, lanjutkan dengan langkah praktikum selanjutnya. Apa bila belum berhasil, anda harus mengulangi langkah paraktikum ini terlebih dahulu.

## Praktikum 2:

1. Buat file latihan : \$ touch latihan

```
$ whoami
userL200220277
$ touch latihan
touch: cannot touch 'latihan': Permission denied
$ sudo touch latihan
$ ls -l
total 2097232
drwxrwxrwx    1 root root      7 Nov 14 09:25 bin -> usr
/bin
drwxr-xr-x    4 root root    4096 Nov 17 23:37 boot
drwxrwxr-x    2 root root    4096 Nov 14 09:29 cdrom
drwxr-xr-x   19 root root   4180 Nov 20 20:13 dev
drwxr-xr-x  133 root root  12288 Nov 20 22:12 etc
drwxr-xr-x    4 root root    4096 Nov 18 00:07 home
-rw-r--r--    1 root root      0 Nov 20 22:15 latihan
drwxrwxrwx    1 root root      7 Nov 14 09:25 lib -> usr
/lib
drwxrwxrwx    1 root root      9 Nov 14 09:25 lib32 -> u
```

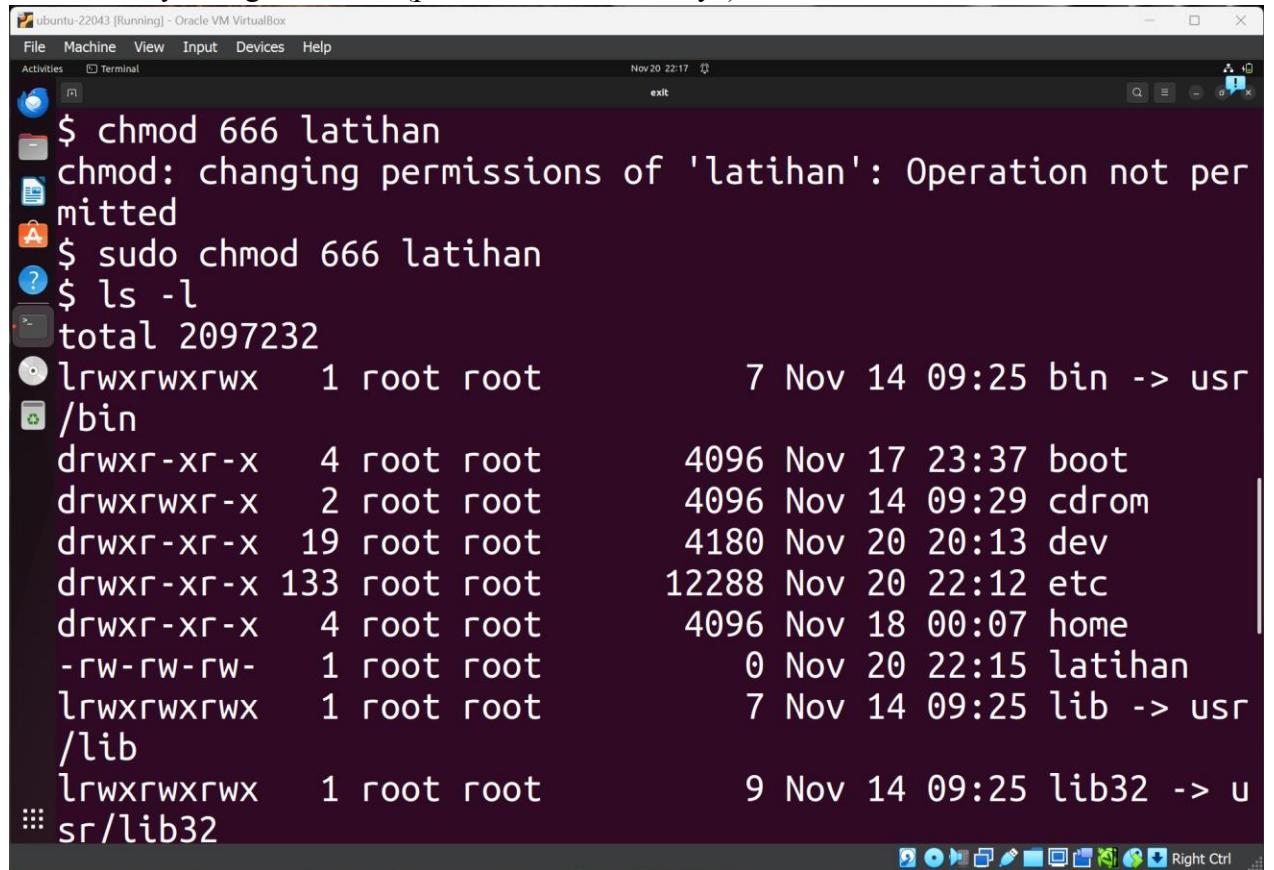
2. Ketikkan perintah : \$ chmod 666 latihan



The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window contains the following text:

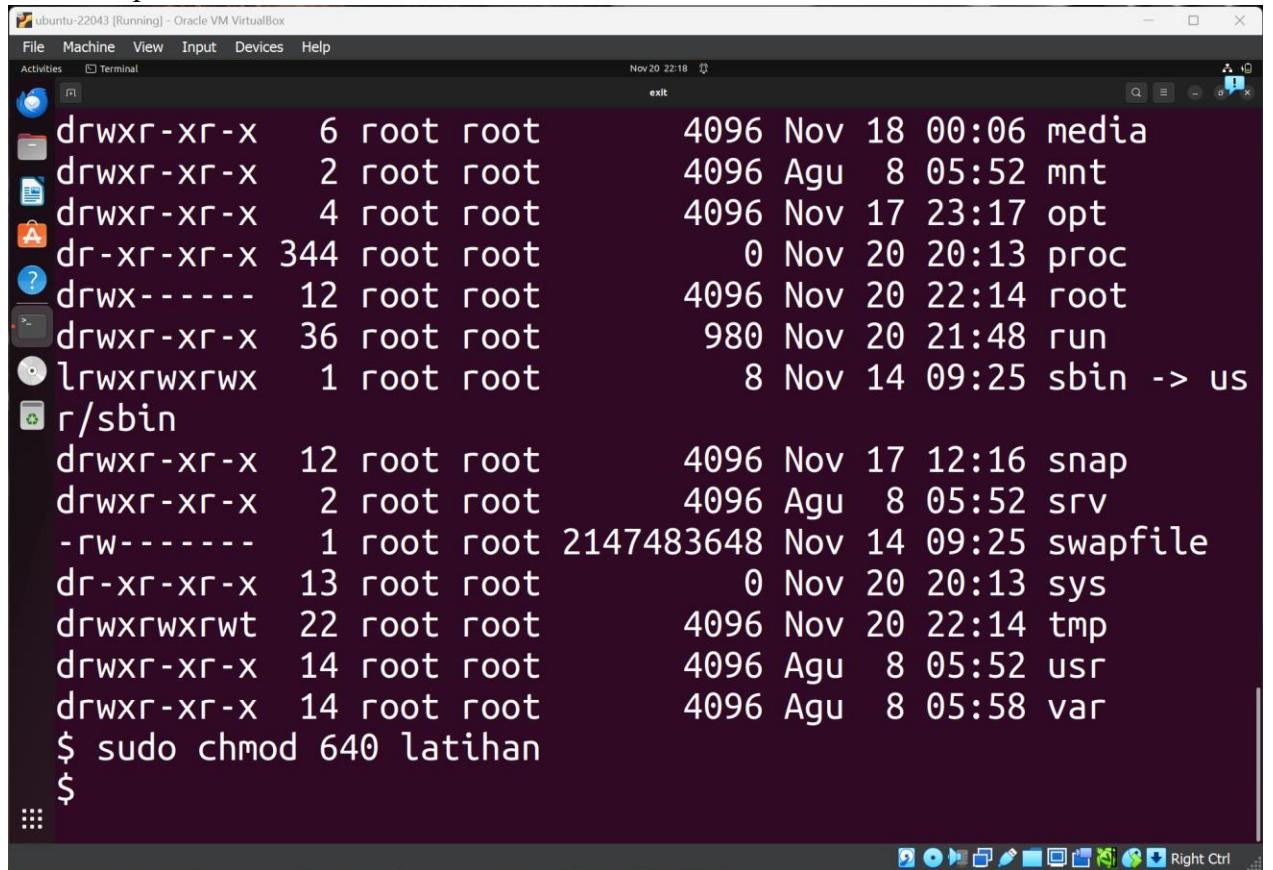
```
File Machine View Input Devices Help
Activities Terminal Nov 20 22:17 exit
dr-xr-xr-x 344 root root 0 Nov 20 20:13 proc
drwx----- 12 root root 4096 Nov 20 22:14 root
drwxr-xr-x 36 root root 980 Nov 20 21:48 run
lwxrwxrwx 1 root root 8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x 12 root root 4096 Nov 17 12:16 snap
drwxr-xr-x 2 root root 4096 Agu 8 05:52 srv
-rw----- 1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x 13 root root 0 Nov 20 20:13 sys
drwxrwxrwt 22 root root 4096 Nov 20 22:14 tmp
drwxr-xr-x 14 root root 4096 Agu 8 05:52 usr
drwxr-xr-x 14 root root 4096 Agu 8 05:58 var
$ chmod 666 latihan
chmod: changing permissions of 'latihan': Operation not permitted
$ sudo chmod 666 latihan
$
```

3. Lihat hasilnya dengan : \$ ls -l (perhatikan izin aksesnya)



```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:17 exit
$ chmod 666 latihan
chmod: changing permissions of 'latihan': Operation not permitted
$ sudo chmod 666 latihan
$ ls -l
total 2097232
lrwxrwxrwx 1 root root      7 Nov 14 09:25 bin -> usr
/bin
drwxr-xr-x 4 root root    4096 Nov 17 23:37 boot
drwxrwxr-x 2 root root    4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root   4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root  12288 Nov 20 22:12 etc
drwxr-xr-x 4 root root    4096 Nov 18 00:07 home
-rw-rw-rw- 1 root root     0 Nov 20 22:15 latihan
lrwxrwxrwx 1 root root      7 Nov 14 09:25 lib -> usr
/lib
lrwxrwxrwx 1 root root     9 Nov 14 09:25 lib32 -> u
/// s/lib32
```

4. Ketikkan perintah : \$ chmod 640 latihan

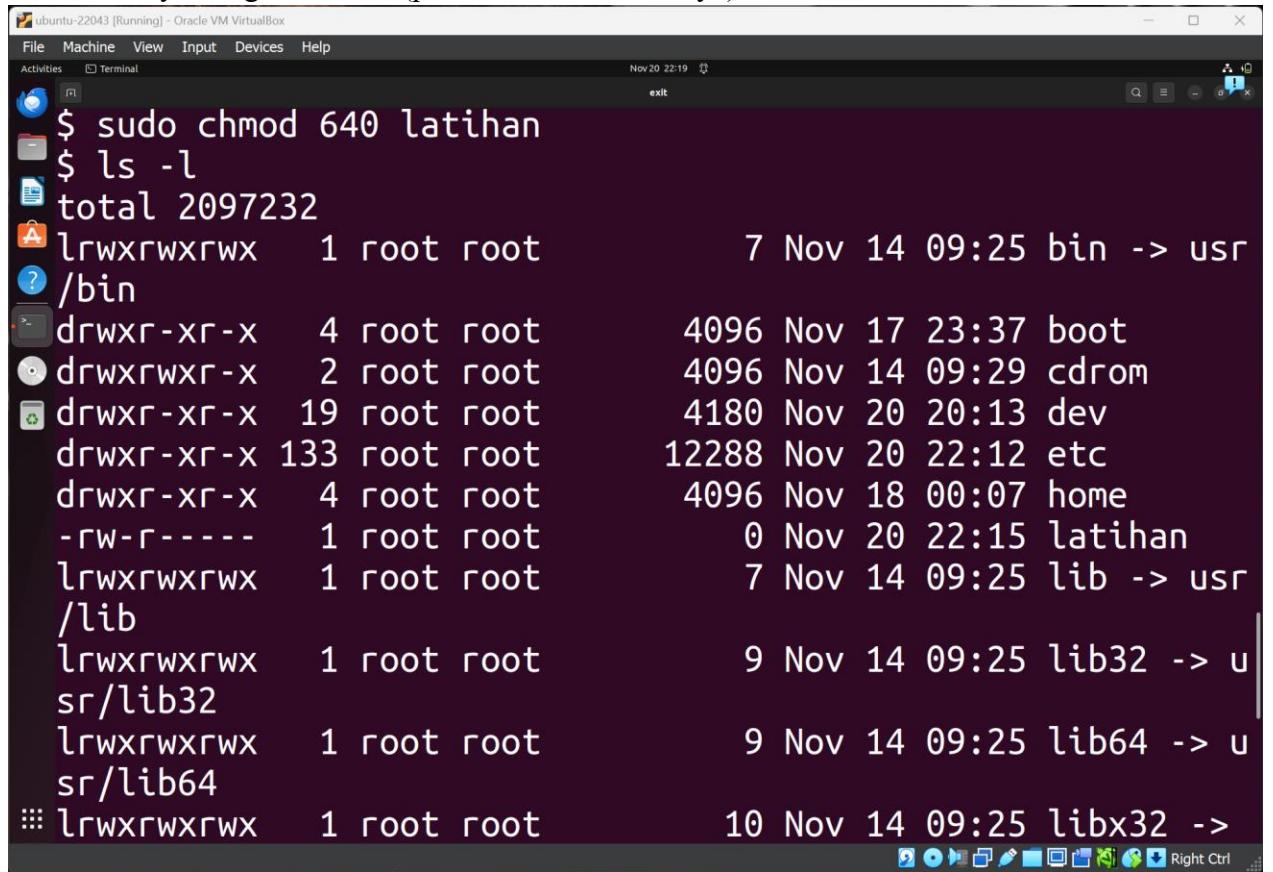


The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window displays a list of files and their permissions, modification times, and owners. The user has run the command "ls -l" to view this information. At the bottom of the terminal, the command "\$ sudo chmod 640 latihan" is entered, followed by a new line character.

File	Permissions	User	Group	Last Modified	File Type
media	drwxr-xr-x	root	root	4096 Nov 18 00:06	directory
mnt	drwxr-xr-x	root	root	4096 Agu 8 05:52	directory
opt	drwxr-xr-x	root	root	4096 Nov 17 23:17	directory
proc	dr-xr-xr-x	344	root	0 Nov 20 20:13	directory
root	drwx----	12	root	4096 Nov 20 22:14	directory
run	drwxr-xr-x	36	root	980 Nov 20 21:48	directory
sbin	lrwxrwxrwx	1	root	8 Nov 14 09:25	symbolic link pointing to /usr/sbin
snap	r/sbin			4096 Nov 17 12:16	directory
srv	drwxr-xr-x	12	root	4096 Agu 8 05:52	directory
swapfile	-rw-----	1	root	2147483648 Nov 14 09:25	regular file
sys	dr-xr-xr-x	13	root	0 Nov 20 20:13	directory
tmp	drwxrwxrwt	22	root	4096 Nov 20 22:14	directory
usr	drwxr-xr-x	14	root	4096 Agu 8 05:52	directory
var	drwxr-xr-x	14	root	4096 Agu 8 05:58	directory

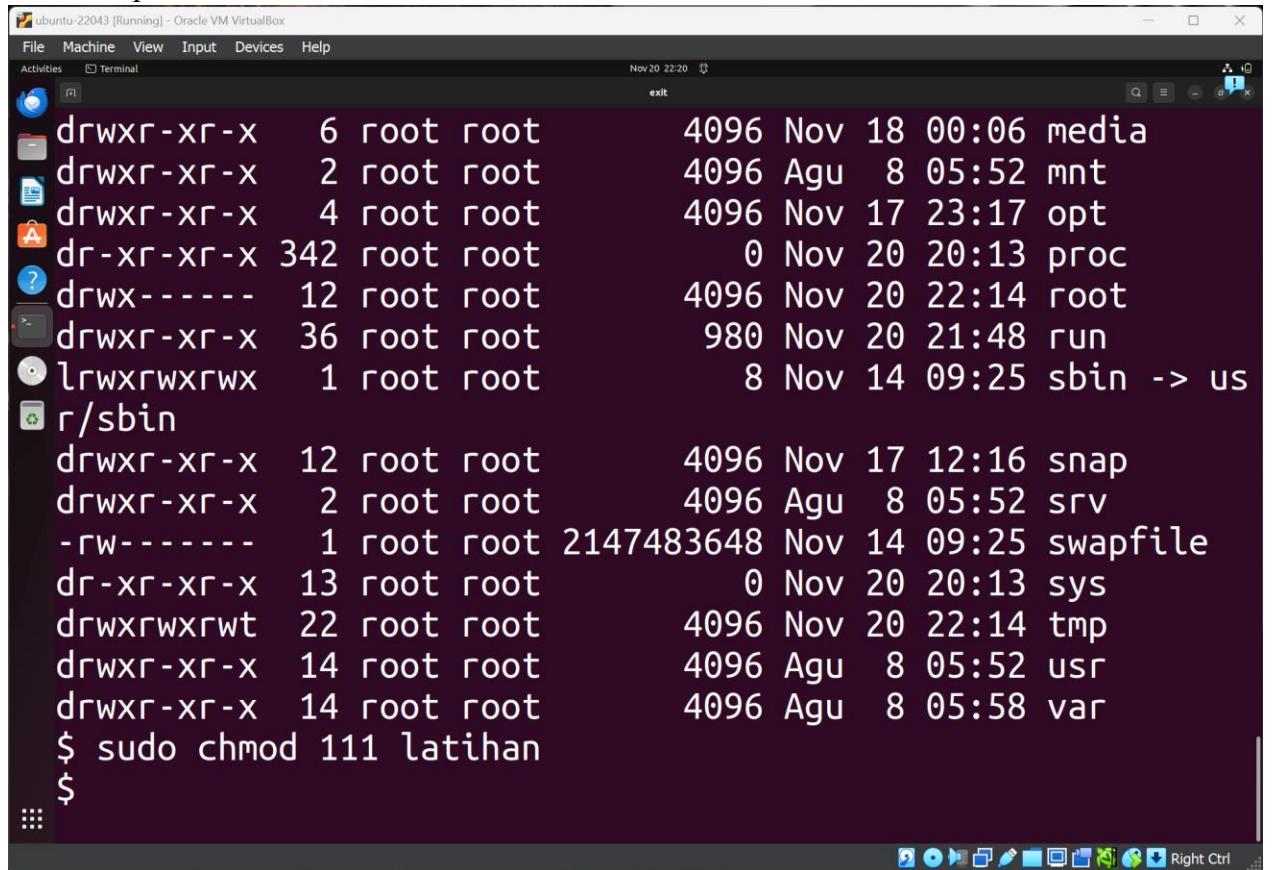
```
$ sudo chmod 640 latihan
$
```

5. Lihat hasilnya dengan : \$ ls -l (perhatikan izin aksesnya)



```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:19 exit
$ sudo chmod 640 latihan
$ ls -l
total 2097232
drwxr-xr-x  1 root root    4096 Nov 17 23:37 boot
drwxr-xr-x  2 root root    4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root   4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root  12288 Nov 20 22:12 etc
drwxr-xr-x  4 root root    4096 Nov 18 00:07 home
-rw-r-----  1 root root      0 Nov 20 22:15 latihan
drwxrwxrwx  1 root root    7 Nov 14 09:25 lib -> usr/lib
drwxrwxrwx  1 root root    9 Nov 14 09:25 lib32 -> usr/lib32
drwxrwxrwx  1 root root    9 Nov 14 09:25 lib64 -> usr/lib64
drwxrwxrwx  1 root root   10 Nov 14 09:25 libx32 -> usr/libx32
```

6. Ketikkan perintah : \$ chmod 111 latihan



The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window contains a list of file and directory permissions, followed by a command prompt and a dollar sign.

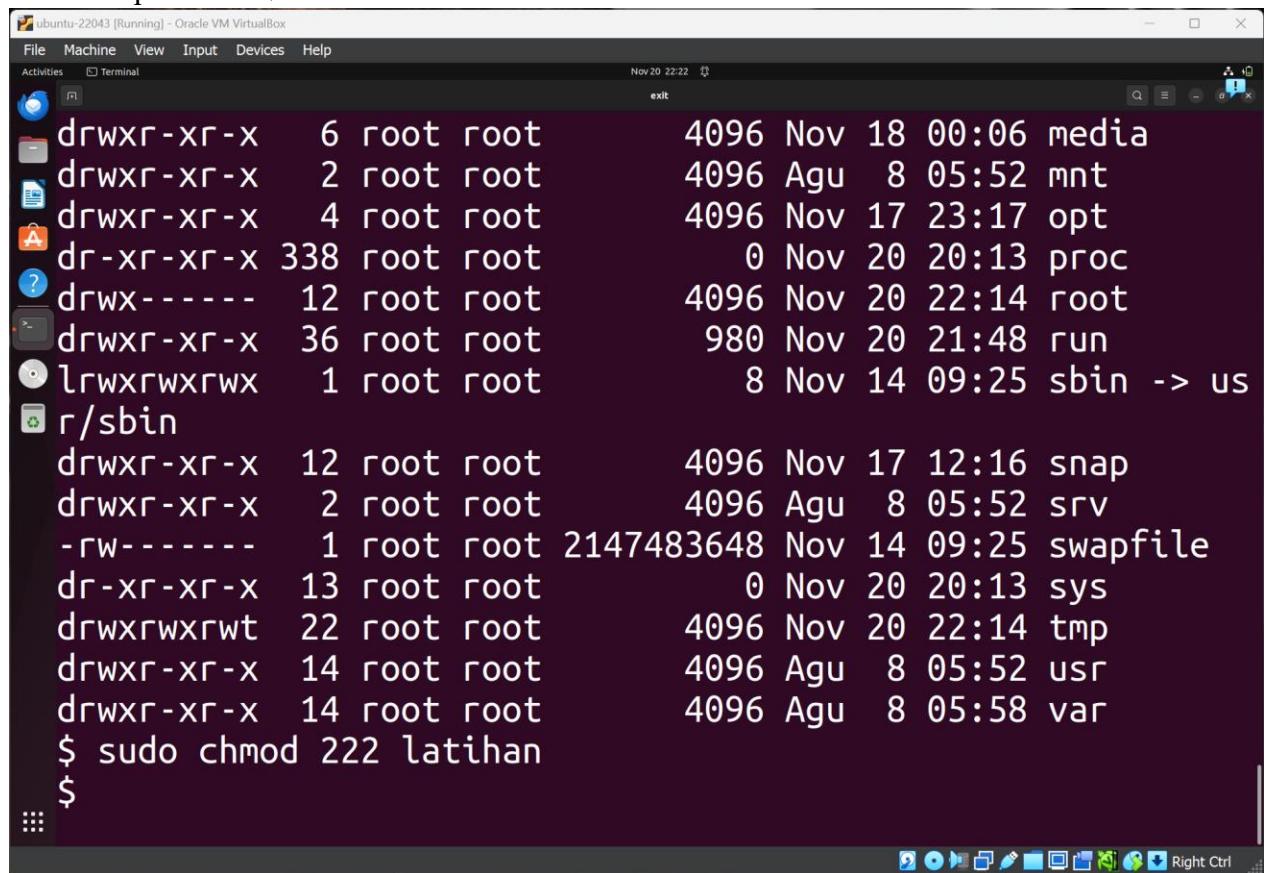
```
drwxr-xr-x    6 root root      4096 Nov 18 00:06 media
drwxr-xr-x    2 root root      4096 Agu  8 05:52 mnt
drwxr-xr-x    4 root root      4096 Nov 17 23:17 opt
dr-xr-xr-x  342 root root      0 Nov 20 20:13 proc
drwx-----   12 root root     4096 Nov 20 22:14 root
drwxr-xr-x   36 root root     980 Nov 20 21:48 run
lrwxrwxrwx   1 root root      8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x   12 root root     4096 Nov 17 12:16 snap
drwxr-xr-x    2 root root     4096 Agu  8 05:52 srv
-rw-----    1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x   13 root root      0 Nov 20 20:13 sys
drwxrwxrwt   22 root root     4096 Nov 20 22:14 tmp
drwxr-xr-x   14 root root     4096 Agu  8 05:52 usr
drwxr-xr-x   14 root root     4096 Agu  8 05:58 var
$ sudo chmod 111 latihan
$
```

7. Lihat hasilnya dengan : \$ ls -l (perhatikan izin aksesnya)

The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window contains the following command and its output:

```
$ sudo chmod 111 latihan
$ ls -l
total 2097232
drwxr-xrwx  1 root root    7 Nov 14 09:25 bin -> usr
drwxr-xr-x  4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x  2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x  4 root root 4096 Nov 18 00:07 home
---x---x--x  1 root root      0 Nov 20 22:15 latihan
drwxrwxrwx  1 root root    7 Nov 14 09:25 lib -> usr
drwxrwxrwx  1 root root    9 Nov 14 09:25 lib32 -> u
drwxrwxrwx  1 root root    9 Nov 14 09:25 lib64 -> u
drwxrwxrwx  1 root root   10 Nov 14 09:25 libx32 ->
```

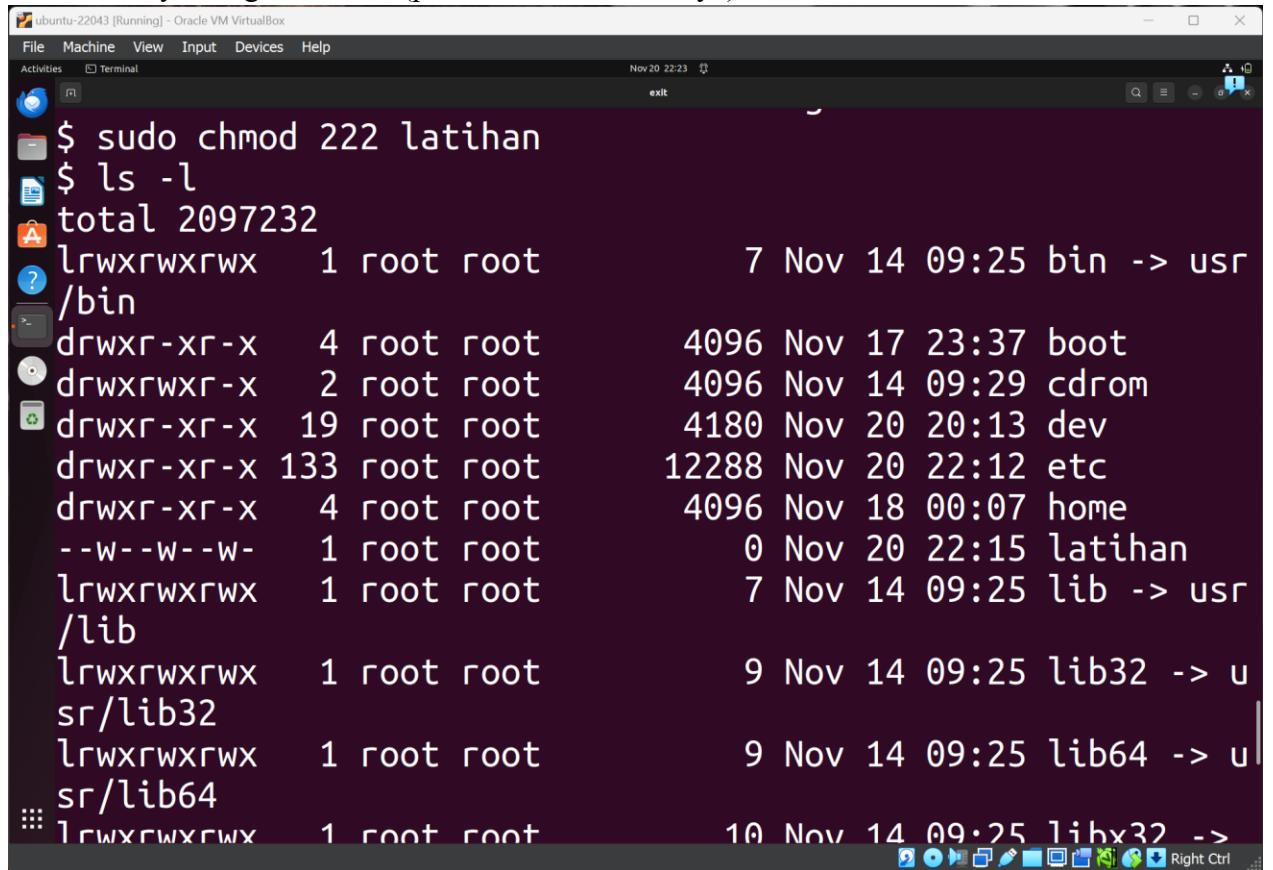
8. Ketikkan perintah : \$ chmod 222 latihan



The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window contains a list of file and directory permissions, followed by a command entered by the user.

```
drwxr-xr-x    6 root root      4096 Nov 18 00:06 media
drwxr-xr-x    2 root root      4096 Agu  8 05:52 mnt
drwxr-xr-x    4 root root      4096 Nov 17 23:17 opt
dr-xr-xr-x  338 root root      0 Nov 20 20:13 proc
drwx----- 12 root root     4096 Nov 20 22:14 root
drwxr-xr-x   36 root root     980 Nov 20 21:48 run
lrwxrwxrwx   1 root root      8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x  12 root root     4096 Nov 17 12:16 snap
drwxr-xr-x   2 root root     4096 Agu  8 05:52 srv
-rw-----   1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x   13 root root      0 Nov 20 20:13 sys
drwxrwxrwt  22 root root     4096 Nov 20 22:14 tmp
drwxr-xr-x   14 root root     4096 Agu  8 05:52 usr
drwxr-xr-x   14 root root     4096 Agu  8 05:58 var
$ sudo chmod 222 latihan
$
```

9. Lihat hasilnya dengan : \$ ls -l (perhatikan izin aksesnya)



```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:23 exit
$ sudo chmod 222 latihan
$ ls -l
total 2097232
drwxr-xrwx 1 root root 7 Nov 14 09:25 bin -> usr
drwxr-xr-x 4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x 2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x 4 root root 4096 Nov 18 00:07 home
--w--w--w- 1 root root 0 Nov 20 22:15 latihan
drwxrwxrwx 1 root root 7 Nov 14 09:25 lib -> usr
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib32 -> u
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib64 -> u
drwxrwxrwx 1 root root 10 Nov 14 09:25 libx32 ->
```

10. Ketikkan perintah : \$ chmod 333 latihan

The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The terminal displays the following command and its output:

```
$ sudo chmod 333 latihan
$ ls -l
total 2097232
lrwxrwxrwx  1 root root    7 Nov 14 09:25 bin -> usr
/bin
drwxr-xr-x  4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x  2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x  4 root root 4096 Nov 18 00:07 home
--wx-wx-wx  1 root root      0 Nov 20 22:15 latihan
lrwxrwxrwx  1 root root    7 Nov 14 09:25 lib -> usr
/lib
lrwxrwxrwx  1 root root    9 Nov 14 09:25 lib32 -> u
sr/lib32
lrwxrwxrwx  1 root root    9 Nov 14 09:25 lib64 -> u
sr/lib64
lrwxrwxrwx  1 root root 10 Nov 14 09:25 libx32 ->
```

### Praktikum 3:

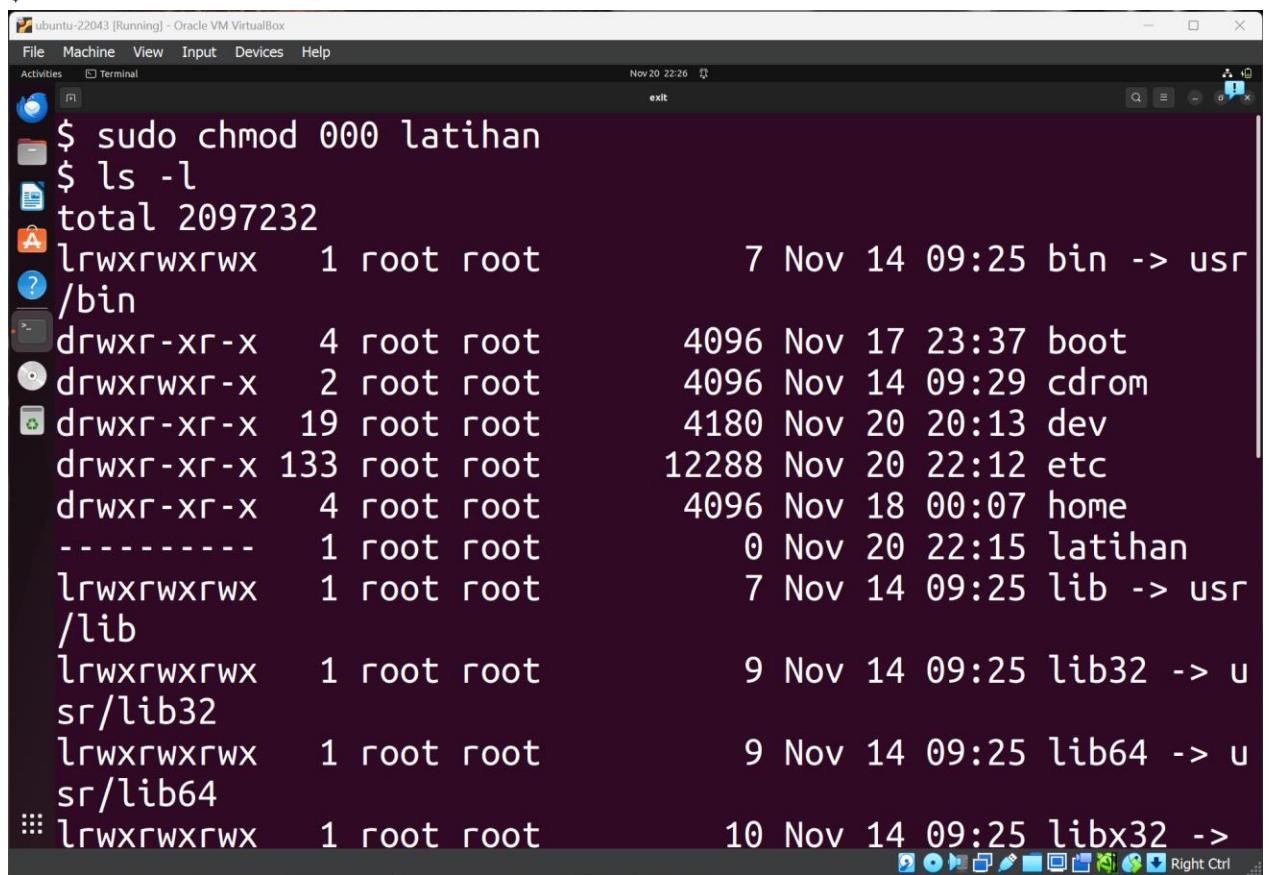
Hak akses juga dapat ditambahkan, selain diubah seperti cara di atas. Untuk melakukan perubahan hak akses, kita menggunakan operand +x, +r, +w, -r, - w, dan -x.

1. \$ chmod 000 latihan (tidak memberikan hak akses)

The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window has a dark theme. At the top, there's a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu is a toolbar with icons for Activities, Terminal, and other system functions. The main area of the window is a terminal session. The user has typed the command "\$ sudo chmod 000 latihan" and is awaiting a response. The desktop environment visible behind the terminal window includes a dock with various application icons like a browser, file manager, and terminal.

```
$ sudo chmod 000 latihan
```

2. \$ ls -l latihan

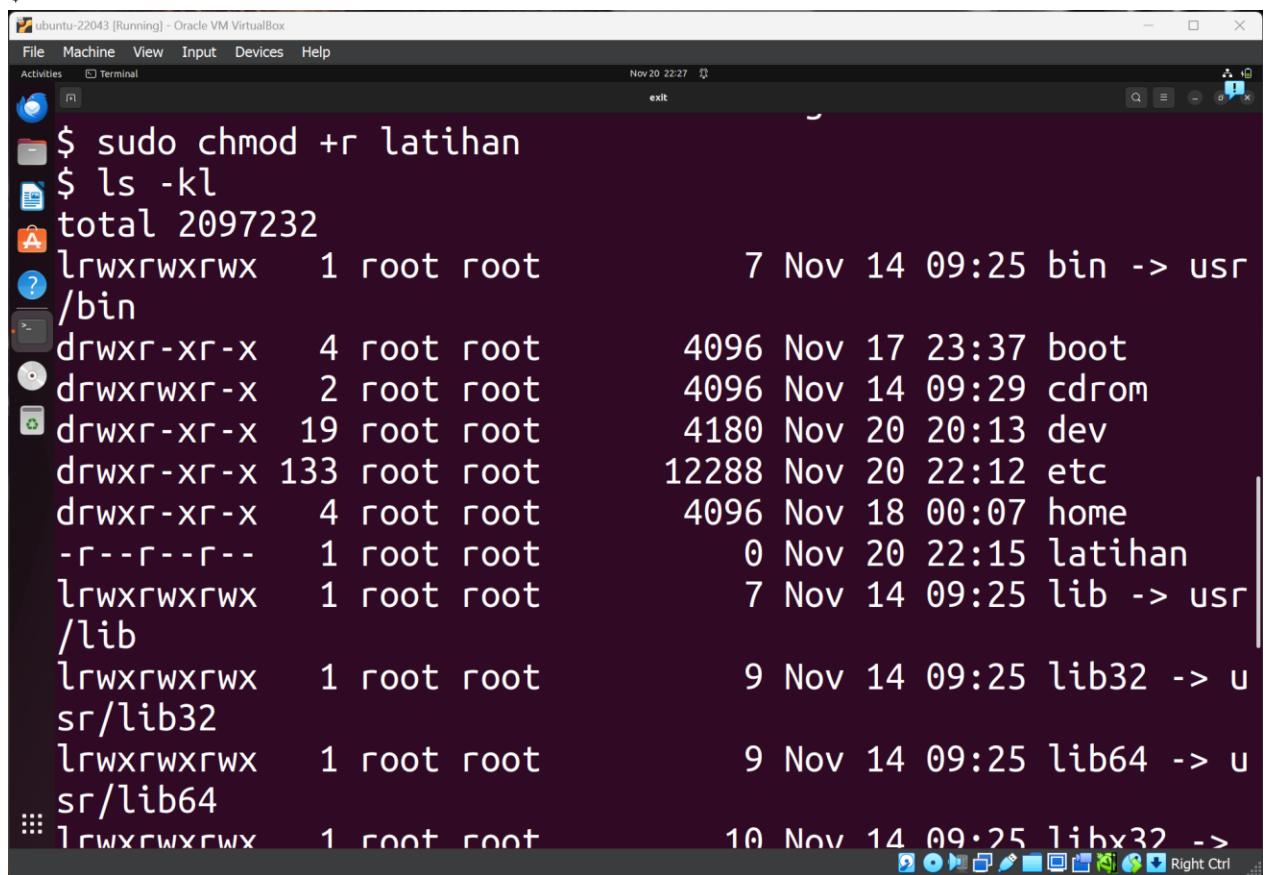


```
$ sudo chmod 000 latihan
$ ls -l
total 2097232
lrwxrwxrwx  1 root root    7 Nov 14 09:25 bin -> usr
?/bin
drwxr-xr-x  4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x  2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x  4 root root 4096 Nov 18 00:07 home
-----  1 root root   0 Nov 20 22:15 latihan
lrwxrwxrwx  1 root root    7 Nov 14 09:25 lib -> usr
/lib
lrwxrwxrwx  1 root root   9 Nov 14 09:25 lib32 -> u
sr/lib32
lrwxrwxrwx  1 root root   9 Nov 14 09:25 lib64 -> u
sr/lib64
l[ lrwxrwxrwx  1 root root 10 Nov 14 09:25 libx32 ->
```

3. \$ chmod +r latihan (menambahkan hak akses read)

```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:27 exit
drwxr-xr-x    6 root root      4096 Nov 18 00:06 media
drwxr-xr-x    2 root root      4096 Agu  8 05:52 mnt
drwxr-xr-x    4 root root      4096 Nov 17 23:17 opt
dr-xr-xr-x  337 root root      0 Nov 20 20:13 proc
drwx----- 12 root root     4096 Nov 20 22:14 root
drwxr-xr-x   36 root root     980 Nov 20 21:48 run
lrwxrwxrwx   1 root root      8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x  12 root root     4096 Nov 17 12:16 snap
drwxr-xr-x   2 root root     4096 Agu  8 05:52 srv
-rw-----   1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x   13 root root      0 Nov 20 20:13 sys
drwxrwxrwt  22 root root     4096 Nov 20 22:14 tmp
drwxr-xr-x   14 root root     4096 Agu  8 05:52 usr
drwxr-xr-x   14 root root     4096 Agu  8 05:58 var
$ sudo chmod +r latihan
$ █
```

4. \$ ls -l latihan

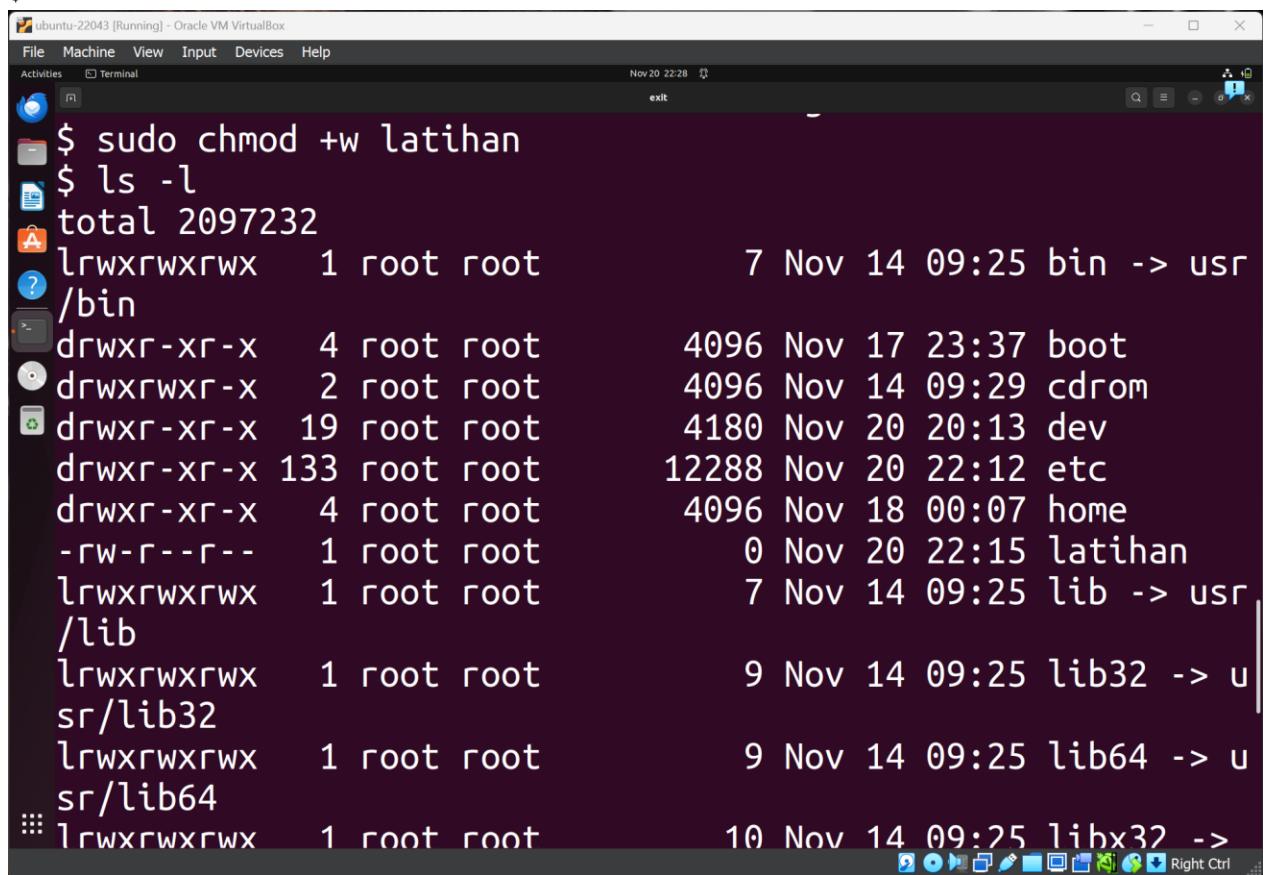


```
$ sudo chmod +r latihan
$ ls -kl
total 2097232
lrwxrwxrwx  1 root root      7 Nov 14 09:25 bin -> usr
drwxr-xr-x  4 root root    4096 Nov 17 23:37 boot
drwxrwxr-x  2 root root    4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root   4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root  12288 Nov 20 22:12 etc
drwxr-xr-x  4 root root    4096 Nov 18 00:07 home
-r--r--r--  1 root root      0 Nov 20 22:15 latihan
lrwxrwxrwx  1 root root      7 Nov 14 09:25 lib -> usr
drwxrwxrwx  1 root root      9 Nov 14 09:25 lib32 -> u
drwxrwxrwx  1 root root      9 Nov 14 09:25 lib64 -> u
lrwxrwxrwx  1 root root    10 Nov 14 09:25 libx32 ->
```

5. \$ chmod +w latihan (menambahkan hak akses write)

```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:28 exit
drwxr-xr-x    6 root root      4096 Nov 18 00:06 media
drwxr-xr-x    2 root root      4096 Agu  8 05:52 mnt
drwxr-xr-x    4 root root      4096 Nov 17 23:17 opt
dr-xr-xr-x  337 root root      0 Nov 20 20:13 proc
drwx----- 12 root root     4096 Nov 20 22:14 root
drwxr-xr-x   36 root root     980 Nov 20 21:48 run
lrwxrwxrwx   1 root root      8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x  12 root root     4096 Nov 17 12:16 snap
drwxr-xr-x   2 root root     4096 Agu  8 05:52 srv
-rw-----   1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x   13 root root      0 Nov 20 20:13 sys
drwxrwxrwt  22 root root     4096 Nov 20 22:14 tmp
drwxr-xr-x   14 root root     4096 Agu  8 05:52 usr
drwxr-xr-x   14 root root     4096 Agu  8 05:58 var
$ sudo chmod +w latihan
$ █
```

6. \$ ls -l latihan

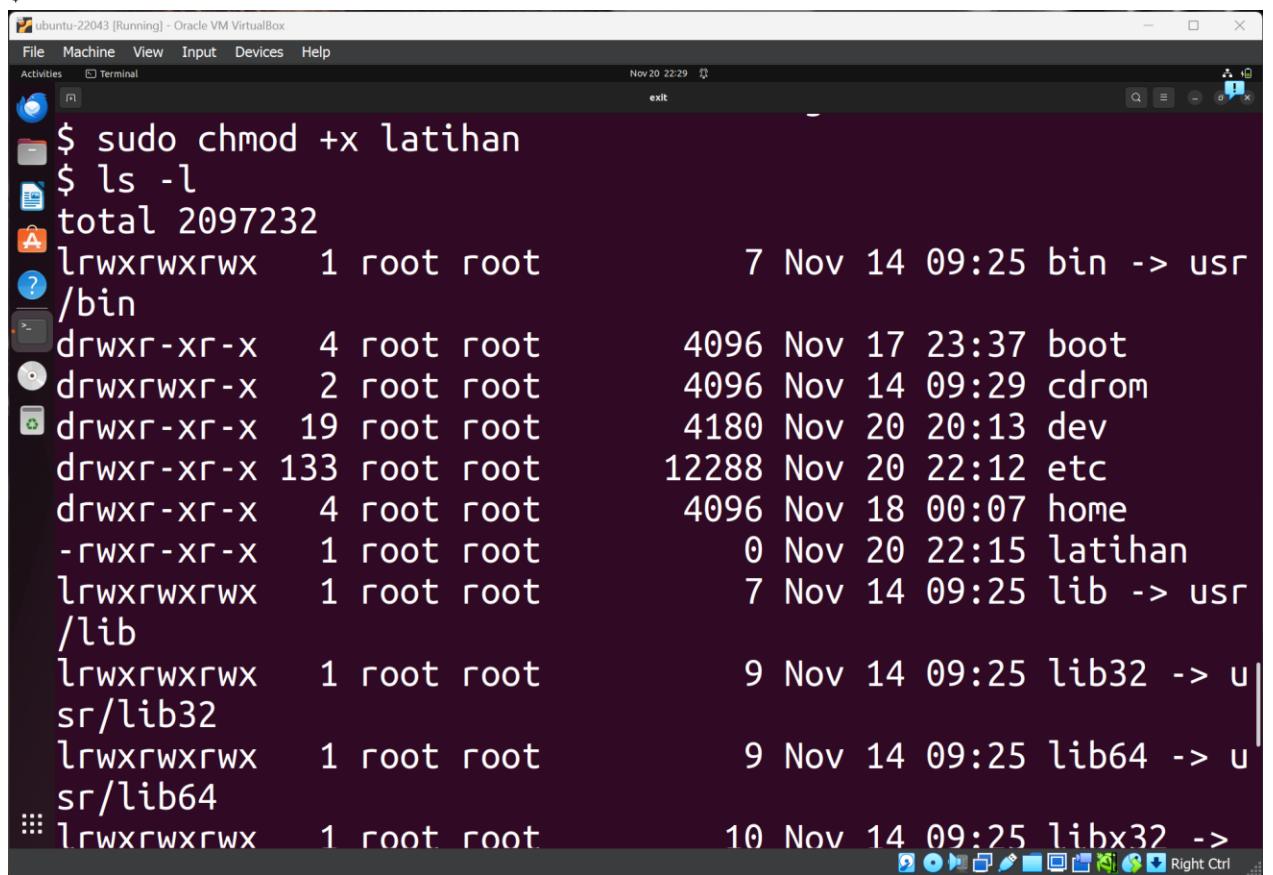


```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:28 exit
$ sudo chmod +w latihan
$ ls -l
total 2097232
lrwxrwxrwx 1 root root 7 Nov 14 09:25 bin -> usr
/bin
drwxr-xr-x 4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x 2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x 4 root root 4096 Nov 18 00:07 home
-rw-r--r-- 1 root root 0 Nov 20 22:15 latihan
lrwxrwxrwx 1 root root 7 Nov 14 09:25 lib -> usr
/lib
lrwxrwxrwx 1 root root 9 Nov 14 09:25 lib32 -> u
sr/lib32
lrwxrwxrwx 1 root root 9 Nov 14 09:25 lib64 -> u
sr/lib64
::: lrwxrwxrwx 1 root root 10 Nov 14 09:25 libx32 ->
```

7. \$ chmod +x latihan (menambahkan hak akses execute)

```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:29 exit
drwxr-xr-x    6 root root      4096 Nov 18 00:06 media
drwxr-xr-x    2 root root      4096 Agu  8 05:52 mnt
drwxr-xr-x    4 root root      4096 Nov 17 23:17 opt
dr-xr-xr-x  337 root root      0 Nov 20 20:13 proc
drwx----- 12 root root     4096 Nov 20 22:14 root
drwxr-xr-x   36 root root     980 Nov 20 21:48 run
lrwxrwxrwx   1 root root      8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x  12 root root     4096 Nov 17 12:16 snap
drwxr-xr-x   2 root root     4096 Agu  8 05:52 srv
-rw-----   1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x   13 root root      0 Nov 20 20:13 sys
drwxrwxrwt  22 root root     4096 Nov 20 22:14 tmp
drwxr-xr-x   14 root root     4096 Agu  8 05:52 usr
drwxr-xr-x   14 root root     4096 Agu  8 05:58 var
$ sudo chmod +x latihan
$ █
```

8. \$ ls -l latihan



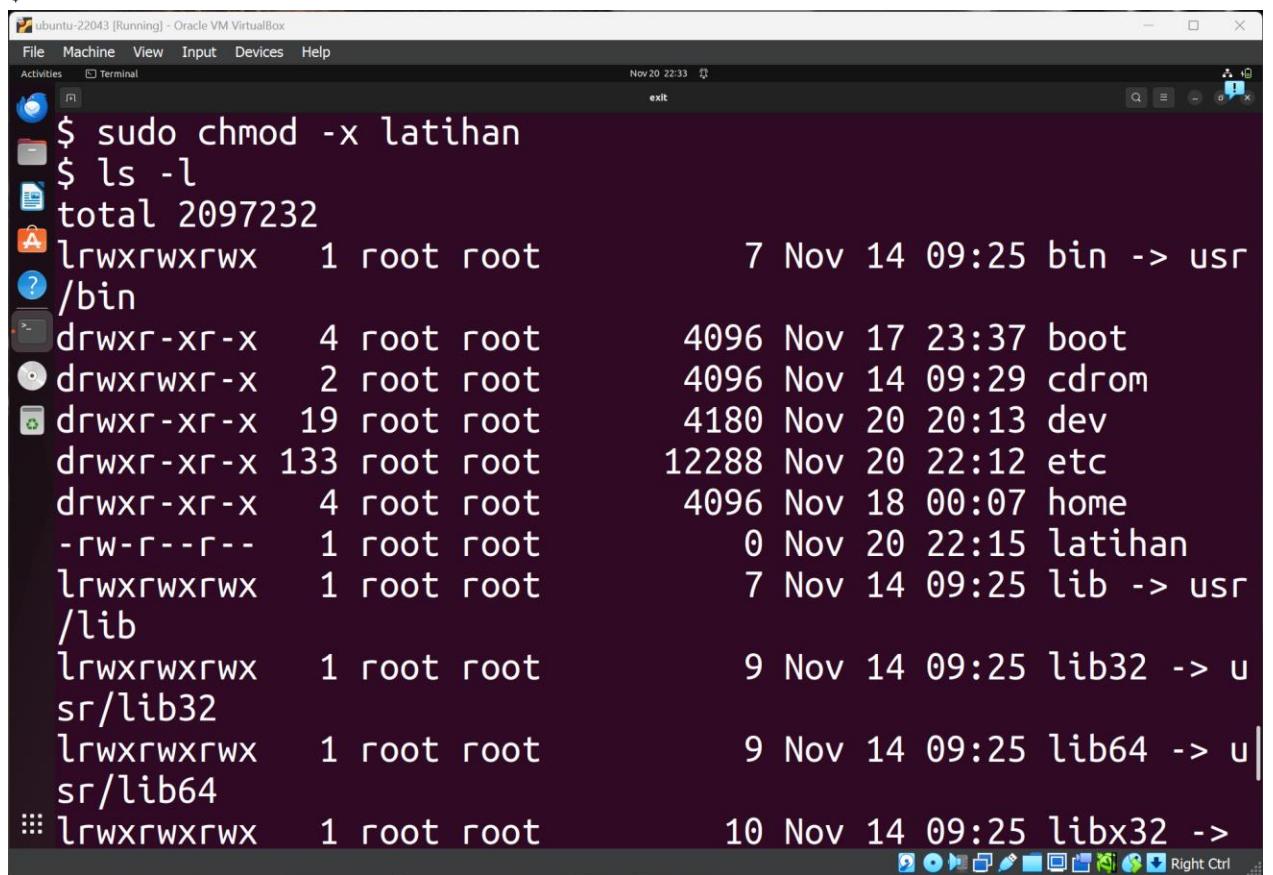
```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:29 exit
$ sudo chmod +x latihan
$ ls -l
total 2097232
drwxrwxrwx 1 root root 7 Nov 14 09:25 bin -> usr
drwxr-xr-x 4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x 2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x 4 root root 4096 Nov 18 00:07 home
-rwxr-xr-x 1 root root 0 Nov 20 22:15 latihan
drwxrwxrwx 1 root root 7 Nov 14 09:25 lib -> usr
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib32 -> u
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib64 -> u
drwxrwxrwx 1 root root 10 Nov 14 09:25 libx32 ->
```

9. \$ chmod -x latihan (menghilangkan hak akses execute)

The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window displays a list of files and their permissions, modification times, and owners. The terminal command "\$ chmod -x latihan" is shown at the bottom.

File	Permissions	Owner	Last Modified	Type
media	drwxr-xr-x	root root	4096 Nov 18 00:06	directory
mnt	drwxr-xr-x	root root	4096 Agu 8 05:52	directory
opt	drwxr-xr-x	root root	4096 Nov 17 23:17	directory
proc	dr-xr-xr-x	340 root root	0 Nov 20 20:13	directory
root	drwx----	12 root root	4096 Nov 20 22:14	directory
run	drwxr-xr-x	36 root root	980 Nov 20 21:48	directory
sbin	lrwxrwxrwx	1 root root	8 Nov 14 09:25	symbolic link
	/sbin			
snap	drwxr-xr-x	12 root root	4096 Nov 17 12:16	directory
srv	drwxr-xr-x	2 root root	4096 Agu 8 05:52	directory
swapfile	-rw----	1 root root	2147483648 Nov 14 09:25	regular file
sys	dr-xr-xr-x	13 root root	0 Nov 20 20:13	directory
tmp	drwxrwxrwt	22 root root	4096 Nov 20 22:14	directory
usr	drwxr-xr-x	14 root root	4096 Agu 8 05:52	directory
var	drwxr-xr-x	14 root root	4096 Agu 8 05:58	directory
\$ sudo chmod -x latihan				
\$				

## 10. \$ ls -l latihan

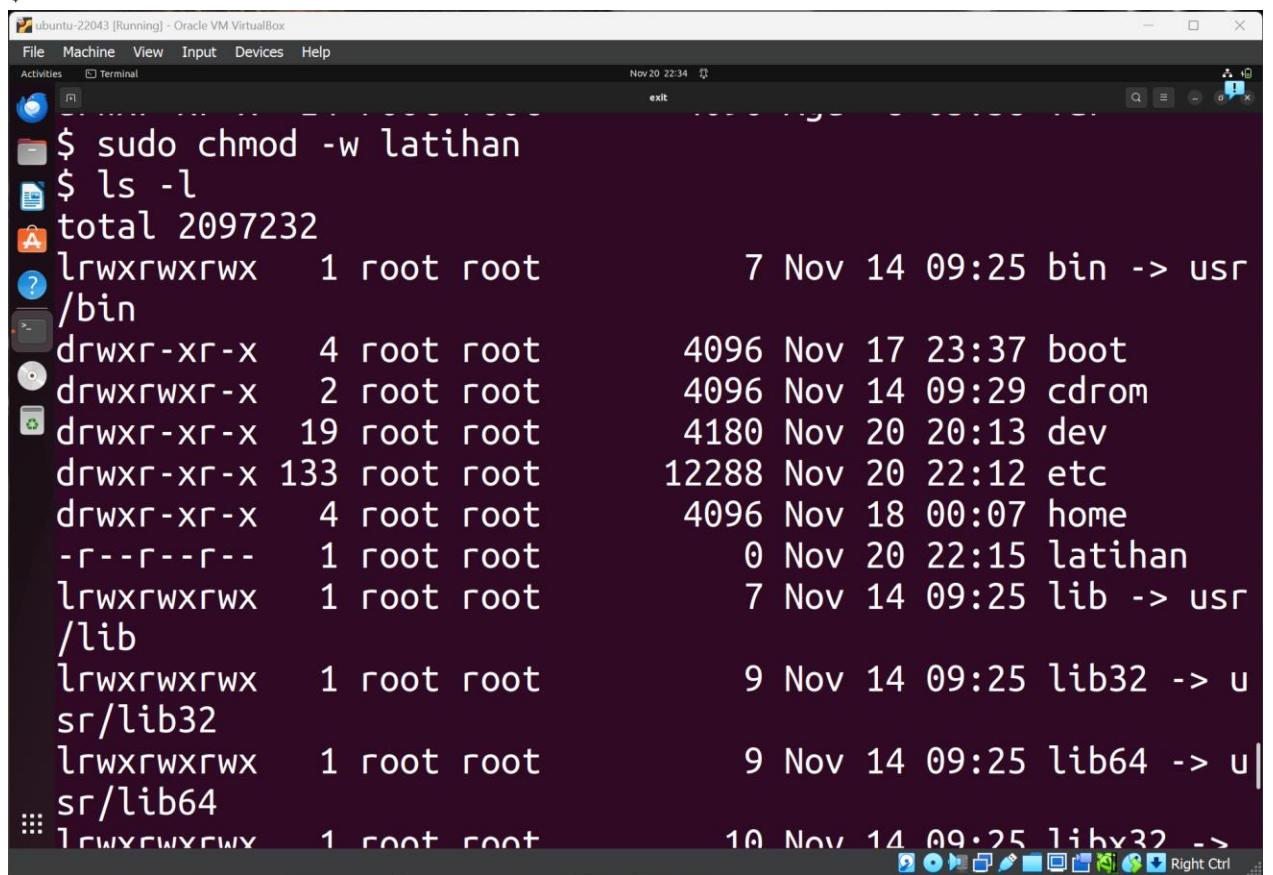


```
$ sudo chmod -x latihan
$ ls -l
total 2097232
drwxr-xrwx 1 root root    7 Nov 14 09:25 bin -> usr
?/bin
drwxr-xr-x 4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x 2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x 4 root root 4096 Nov 18 00:07 home
-rw-r--r-- 1 root root 0 Nov 20 22:15 latihan
drwxrwxrwx 1 root root 7 Nov 14 09:25 lib -> usr
/lib
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib32 -> u
sr/lib32
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib64 -> u
sr/lib64
drwxrwxrwx 1 root root 10 Nov 14 09:25 libx32 ->
```

11. \$ chmod -w latihan (menghilangkan hak akses write)

```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:34 exit
drwxr-xr-x    6 root root      4096 Nov 18 00:06 media
drwxr-xr-x    2 root root      4096 Agu  8 05:52 mnt
drwxr-xr-x    4 root root      4096 Nov 17 23:17 opt
dr-xr-xr-x  340 root root      0 Nov 20 20:13 proc
drwx----- 12 root root     4096 Nov 20 22:14 root
drwxr-xr-x   36 root root     980 Nov 20 21:48 run
lrwxrwxrwx   1 root root      8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x  12 root root     4096 Nov 17 12:16 snap
drwxr-xr-x   2 root root     4096 Agu  8 05:52 srv
-rw-----   1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x   13 root root      0 Nov 20 20:13 sys
drwxrwxrwt  22 root root     4096 Nov 20 22:14 tmp
drwxr-xr-x   14 root root     4096 Agu  8 05:52 usr
drwxr-xr-x   14 root root     4096 Agu  8 05:58 var
$ sudo chmod -w latihan
$
```

## 12. \$ ls -l Latihan

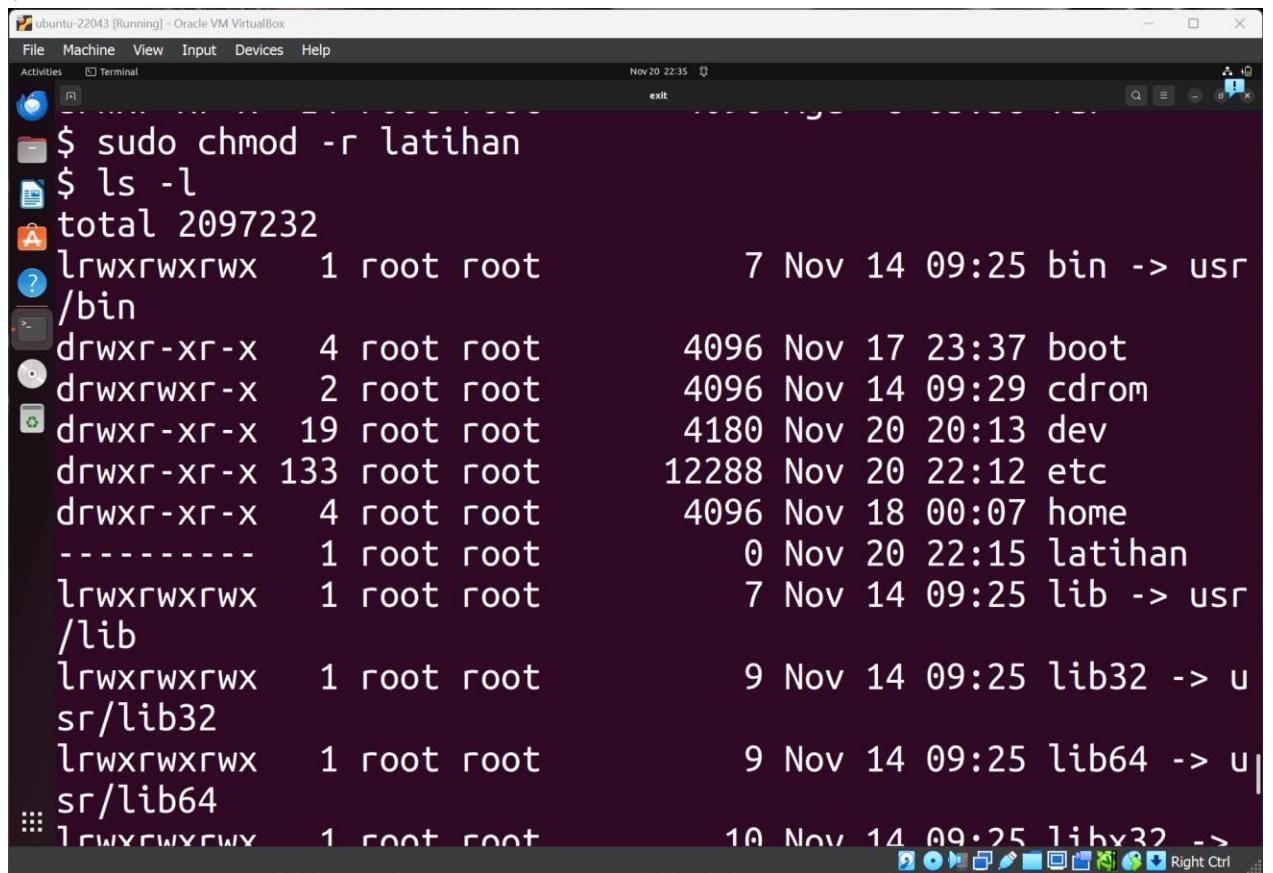


```
$ sudo chmod -w latihan
$ ls -l
total 2097232
lrwxrwxrwx  1 root root      7 Nov 14 09:25 bin -> usr
?/bin
drwxr-xr-x  4 root root    4096 Nov 17 23:37 boot
drwxrwxr-x  2 root root    4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root   4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root  12288 Nov 20 22:12 etc
drwxr-xr-x  4 root root    4096 Nov 18 00:07 home
-r--r--r--  1 root root      0 Nov 20 22:15 latihan
lrwxrwxrwx  1 root root      7 Nov 14 09:25 lib -> usr
/lib
lrwxrwxrwx  1 root root      9 Nov 14 09:25 lib32 -> u
sr/lib32
lrwxrwxrwx  1 root root      9 Nov 14 09:25 lib64 -> u
sr/lib64
::: lrwxrwxrwx  1 root root     10 Nov 14 09:25 libx32 ->
```

13. \$ chmod -r latihan (menghilangkan hak akses read)

```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:35 exit
drwxr-xr-x    6 root root      4096 Nov 18 00:06 media
drwxr-xr-x    2 root root      4096 Agu  8 05:52 mnt
drwxr-xr-x    4 root root      4096 Nov 17 23:17 opt
dr-xr-xr-x  340 root root      0 Nov 20 20:13 proc
drwx----- 12 root root     4096 Nov 20 22:14 root
drwxr-xr-x   36 root root     980 Nov 20 21:48 run
lrwxrwxrwx   1 root root      8 Nov 14 09:25 sbin -> us
r/sbin
drwxr-xr-x  12 root root     4096 Nov 17 12:16 snap
drwxr-xr-x   2 root root     4096 Agu  8 05:52 srv
-rw-----   1 root root 2147483648 Nov 14 09:25 swapfile
dr-xr-xr-x   13 root root      0 Nov 20 20:13 sys
drwxrwxrwt  22 root root     4096 Nov 20 22:14 tmp
drwxr-xr-x   14 root root     4096 Agu  8 05:52 usr
drwxr-xr-x   14 root root     4096 Agu  8 05:58 var
$ sudo chmod -r latihan
$
```

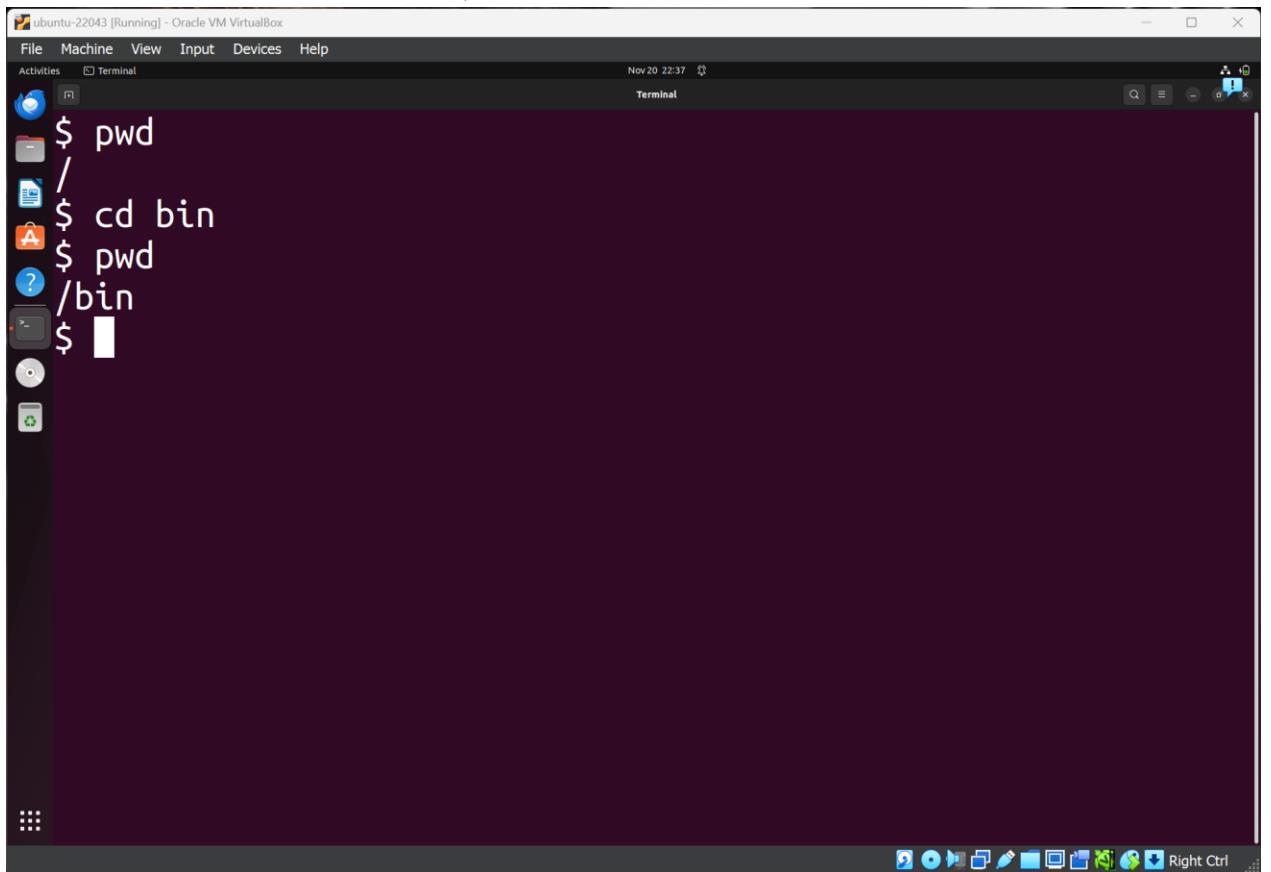
#### 14. \$ ls -l latihan



```
$ sudo chmod -r latihan
$ ls -l
total 2097232
drwxr-xrwx 1 root root    7 Nov 14 09:25 bin -> usr
drwxr-xr-x 4 root root 4096 Nov 17 23:37 boot
drwxrwxr-x 2 root root 4096 Nov 14 09:29 cdrom
drwxr-xr-x 19 root root 4180 Nov 20 20:13 dev
drwxr-xr-x 133 root root 12288 Nov 20 22:12 etc
drwxr-xr-x 4 root root 4096 Nov 18 00:07 home
----- 1 root root 0 Nov 20 22:15 latihan
drwxrwxrwx 1 root root 7 Nov 14 09:25 lib -> usr
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib32 -> u
drwxrwxrwx 1 root root 9 Nov 14 09:25 lib64 -> u
drwxrwxrwx 1 root root 10 Nov 14 09:25 libx32 ->
```

## Praktikum 4:

1. Masuklah ke dalam direktori /bin : \$ cd /bin

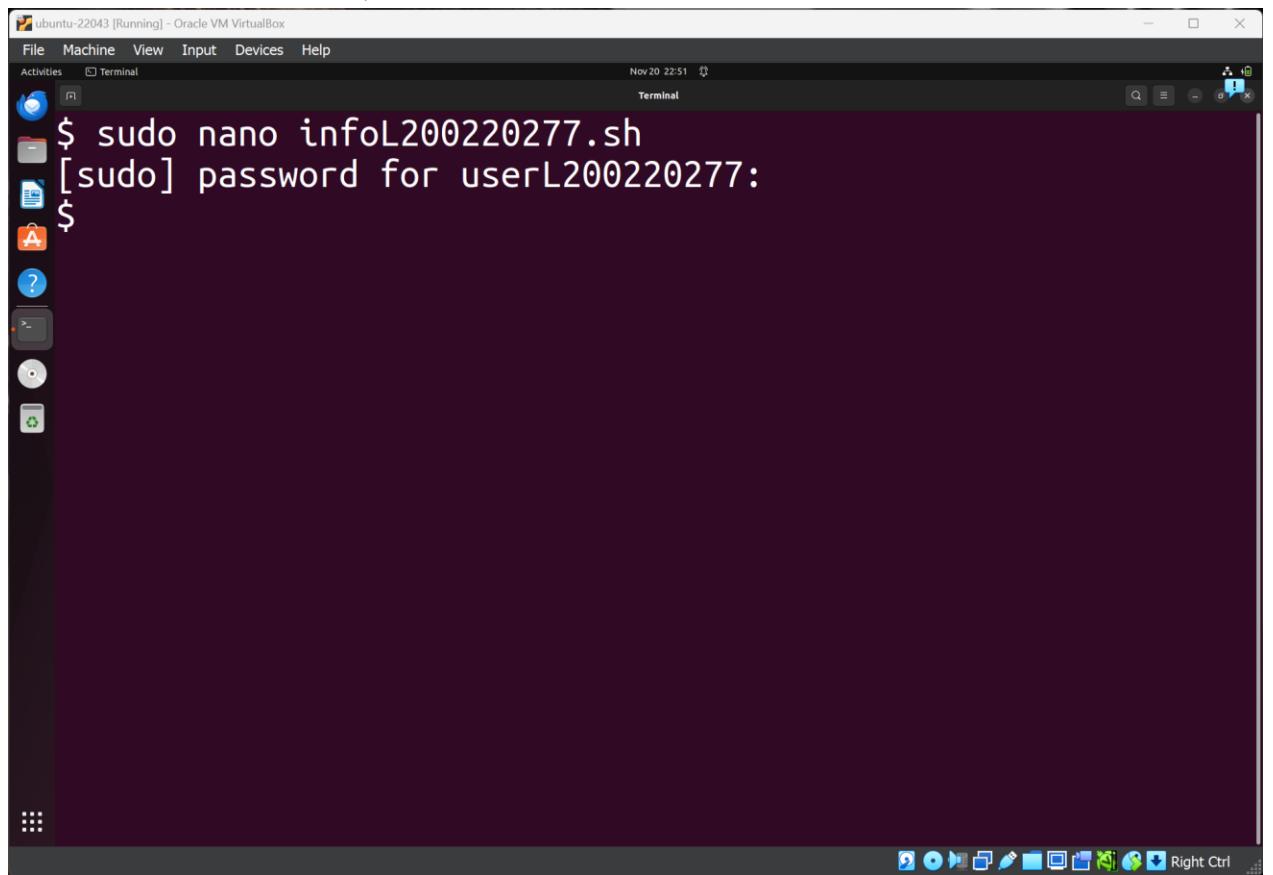


```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:37
Terminal

$ pwd
/
$ cd bin
$ pwd
/bin
$ 
```

The screenshot shows a terminal window titled "Terminal" running on an Ubuntu 22.04 LTS desktop environment. The window title bar includes the name of the session ("ubuntu-22043 [Running] - Oracle VM VirtualBox"), the application name ("Terminal"), and the date and time ("Nov 20 22:37"). The terminal itself displays a command-line session. The user first types "\$ pwd" which outputs the current path, which is just a single slash (/). Then, the user types "\$ cd bin" to change the directory to "/bin". Finally, the user types "\$ pwd" again, which now outputs "/bin", indicating the successful navigation to the directory. The terminal window has a dark purple background and white text. The desktop environment features a dock at the bottom with various icons.

2. Buat file bernama info.sh : \$ nano infoL200220277.sh



The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window has a dark theme. At the top, there's a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu is a dock with various icons: Home, Dash, Activities, Terminal, and others. The main area of the terminal shows the command:

```
$ sudo nano infoL200220277.sh
[sudo] password for userL200220277:
```

The cursor is positioned at the end of the command line.

3. Ketik isinya sebagai berikut (perhatikan besar/kecil hurufnya) :

The screenshot shows a terminal window titled "Terminal" running on an Ubuntu 22.04 LTS system. The window title bar includes "ubuntu-22043 [Running] - Oracle VM VirtualBox". The terminal menu bar has "File", "Machine", "View", "Input", "Devices", and "Help". The status bar at the bottom right shows "Nov 20 22:52". The main area of the terminal displays the content of a file named "infoL200220277.sh" which contains the following script:

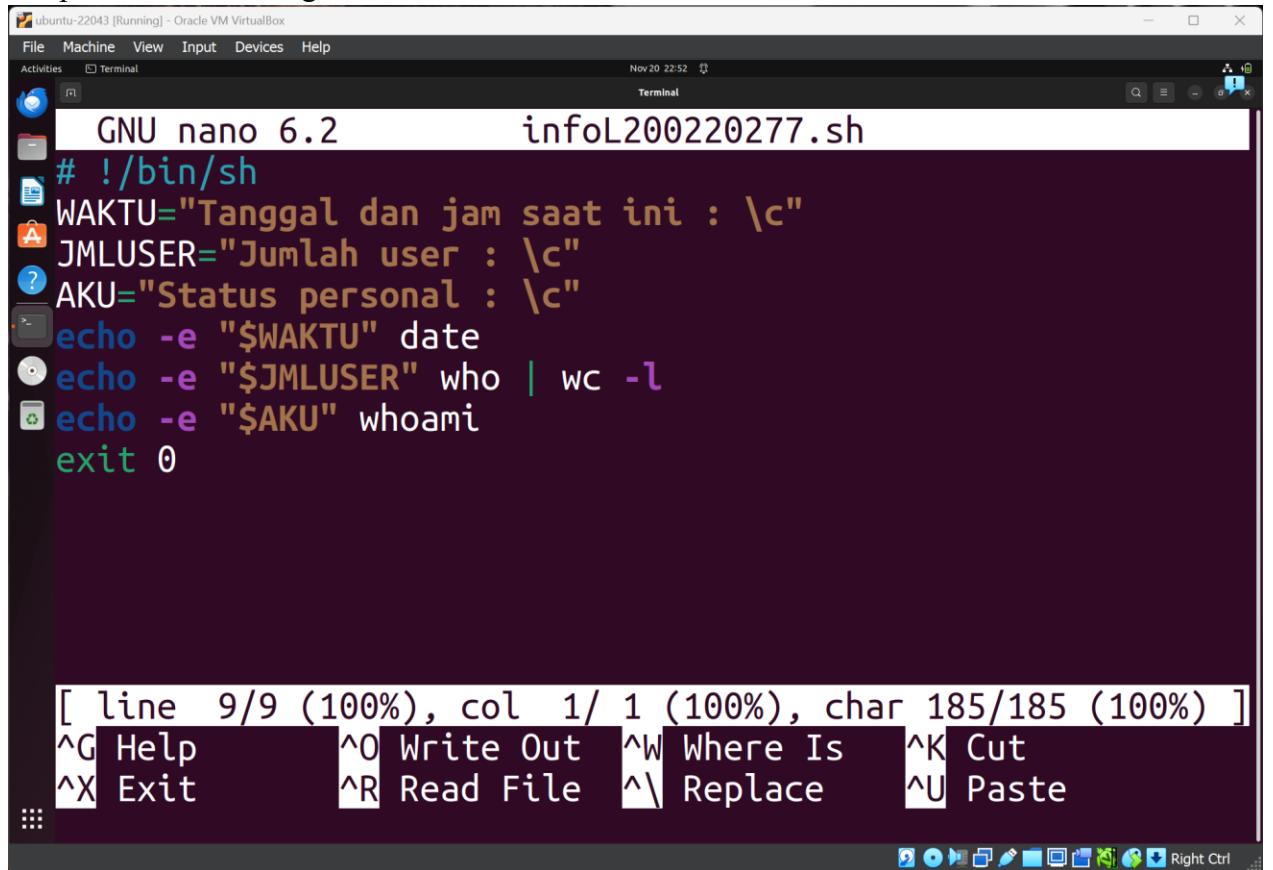
```
GNU nano 6.2          infoL200220277.sh
# !/bin/sh
WAKTU="Tanggal dan jam saat ini : \c"
JMLUSER="Jumlah user : \c"
AKU="Status personal : \c"
echo -e "$WAKTU" date
echo -e "$JMLUSER" who | wc -l
echo -e "$AKU" whoami
exit 0
```

At the bottom of the terminal window, there is a command-line interface with various keyboard shortcuts:

- [ Read 8 lines ]
- ^G Help
- ^O Write Out
- ^W Where Is
- ^K Cut
- ^X Exit
- ^R Read File
- ^V Replace
- ^U Paste

The desktop icons visible at the bottom of the screen include Home, Dash, Applications, Files, Network, and others.

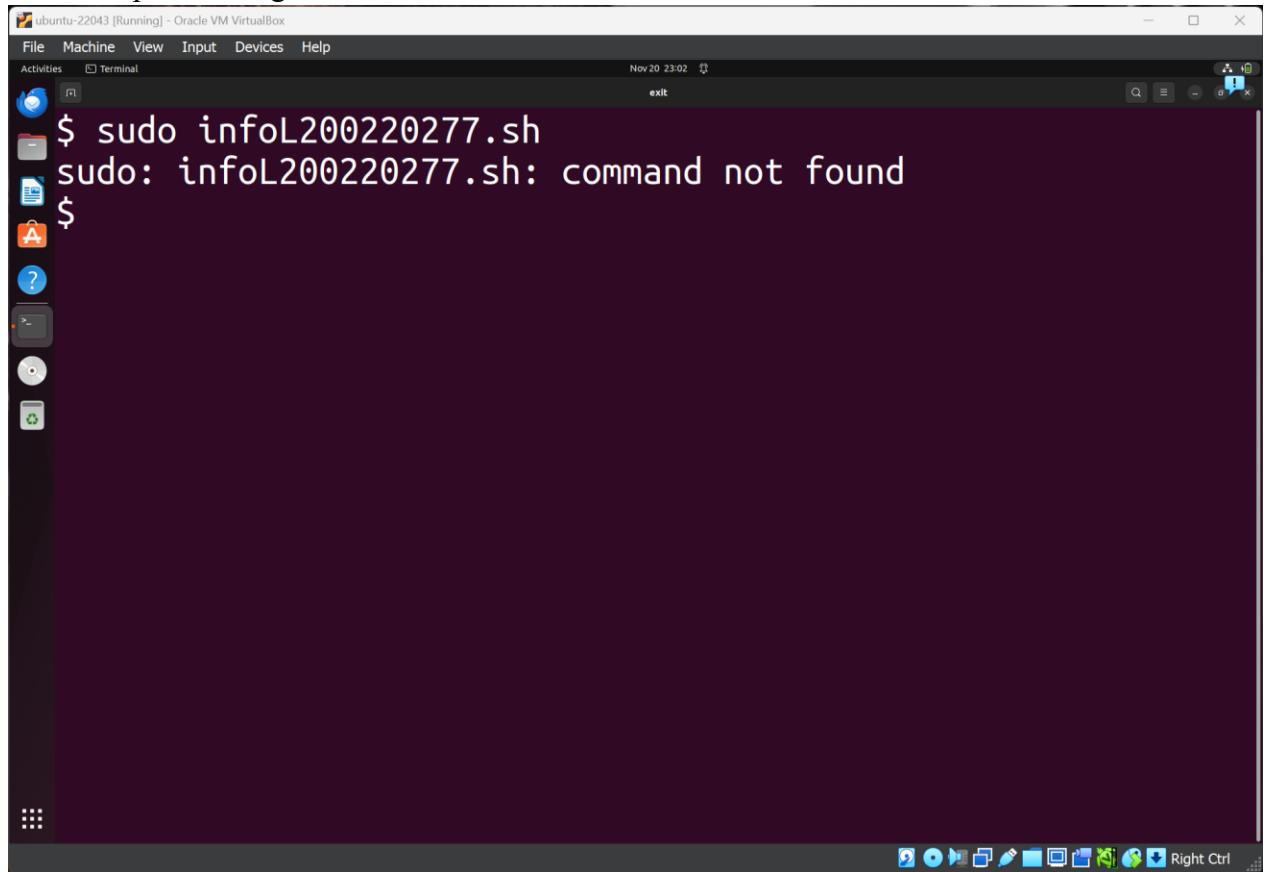
4. Simpan dan keluar dengan menekan **ctrl + c**, dan **ctrl + x**



```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 22:52 Terminal
GNU nano 6.2 infoL200220277.sh
# !/bin/sh
WAKTU="Tanggal dan jam saat ini : \c"
JMLUSER="Jumlah user : \c"
AKU="Status personal : \c"
echo -e "$WAKTU" date
echo -e "$JMLUSER" who | wc -l
echo -e "$AKU" whoami
exit 0

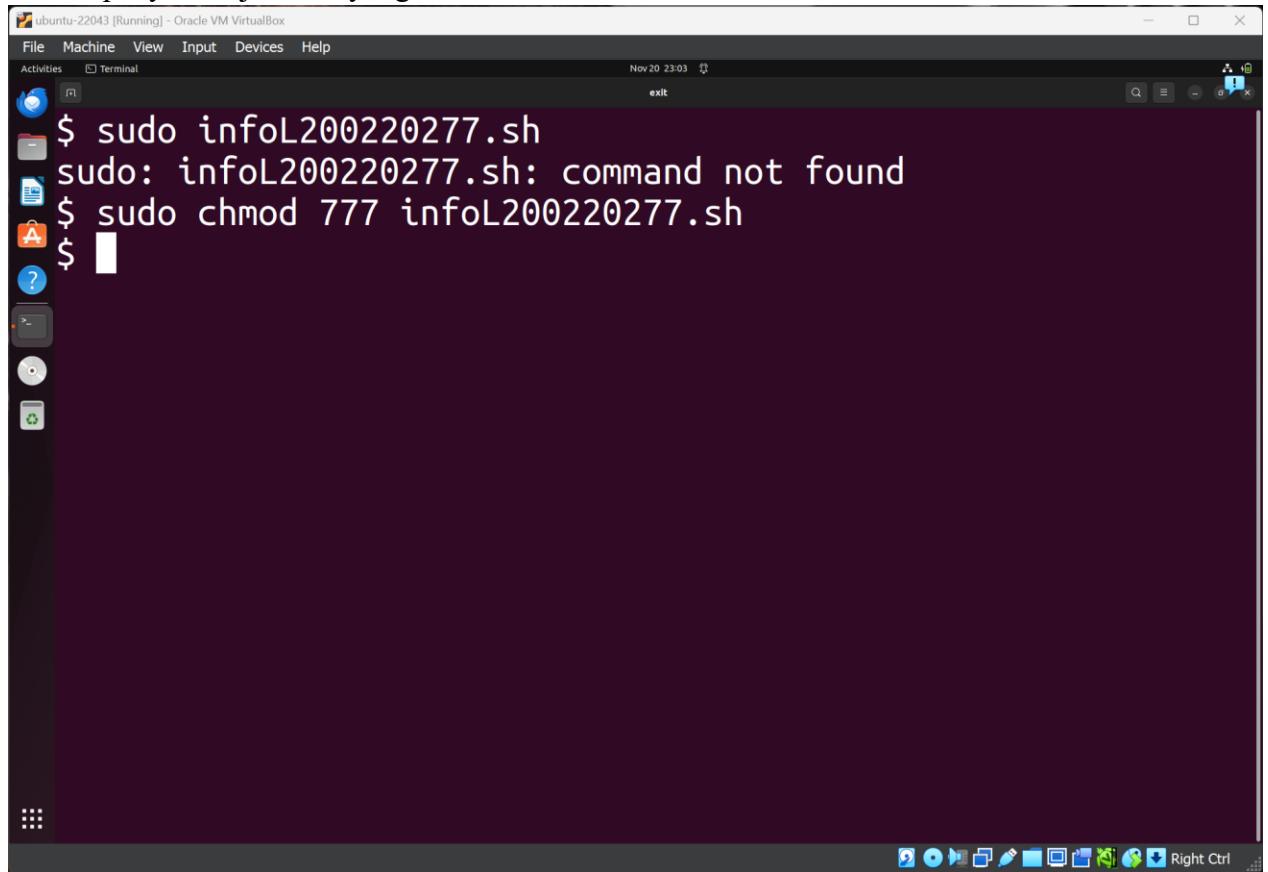
[ line 9/9 (100%), col 1/ 1 (100%), char 185/185 (100%) ]
^G Help      ^O Write Out  ^W Where Is  ^K Cut
^X Exit      ^R Read File  ^\ Replace   ^U Paste
Right Ctrl
```

5. Ketikkan perintah loginfo.sh : \$ infoL200220277.sh



```
ubuntu-22043 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 20 23:02 exit
$ sudo infoL200220277.sh
sudo: infoL200220277.sh: command not found
$
```

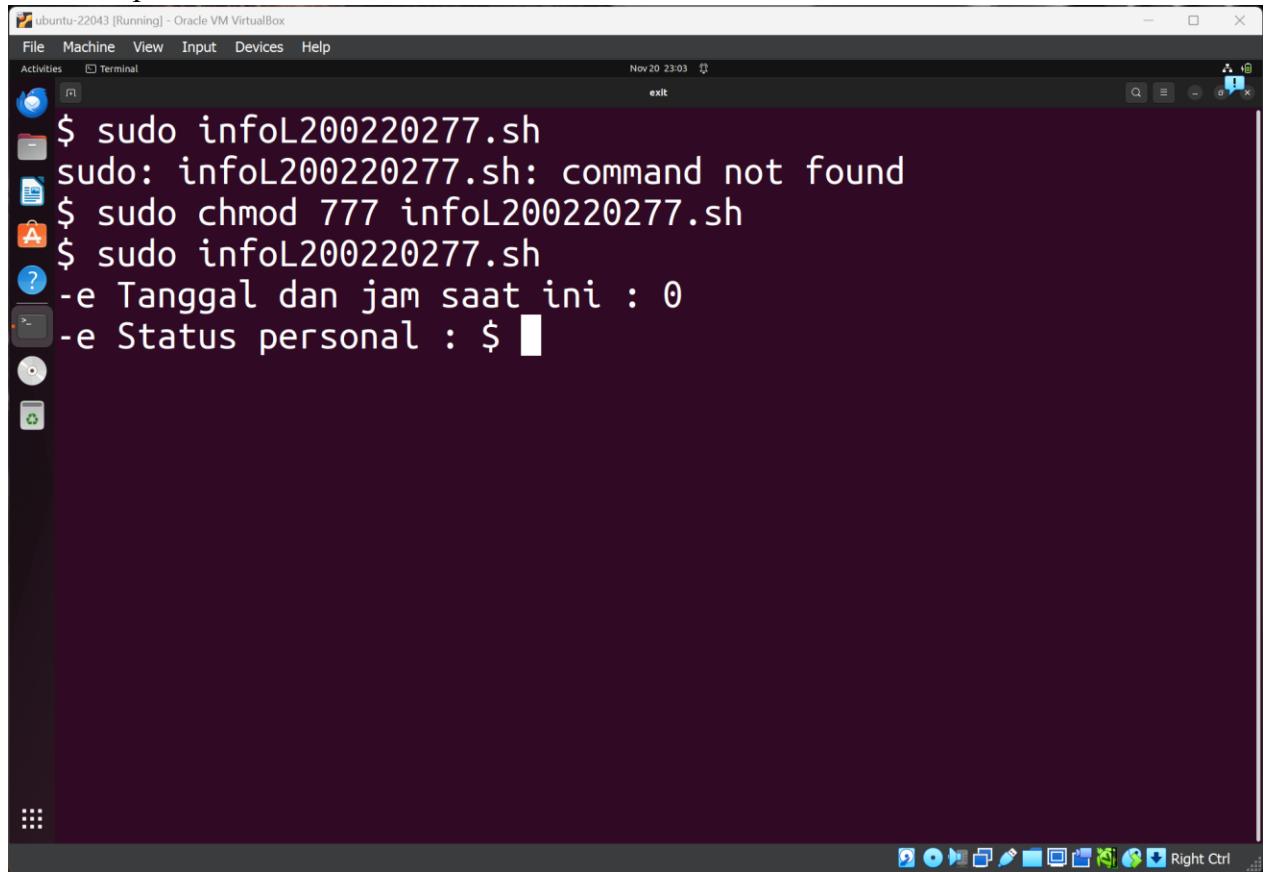
6. Ubah tipenya menjadi file yang bisa dieksekusi : \$ chmod 777 infoL200220277.sh



The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window has a dark purple background. At the top, there's a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu is a toolbar with icons for Activities, Terminal, and other system functions. The main area of the window contains a terminal session. The user has run the command "\$ sudo infoL200220277.sh", which results in the error "sudo: infoL200220277.sh: command not found". The user then runs the command "\$ sudo chmod 777 infoL200220277.sh", which succeeds. The terminal prompt ends with a dollar sign and a blank line. The bottom of the window shows a dock with various application icons.

```
$ sudo infoL200220277.sh
sudo: infoL200220277.sh: command not found
$ sudo chmod 777 infoL200220277.sh
$ 
```

7. Ketikkan perintah info.sh : \$ infoL200220277.sh



The screenshot shows a terminal window titled "ubuntu-22043 [Running] - Oracle VM VirtualBox". The window has a dark theme. At the top, there's a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu is a toolbar with icons for "Activities", "Terminal", and "exit". The main area of the window is a terminal session. The user has typed the command "\$ sudo infoL200220277.sh" and received the output "sudo: infoL200220277.sh: command not found". They then typed "\$ sudo chmod 777 infoL200220277.sh" and received the output "-e Tanggal dan jam saat ini : 0". Finally, they typed "-e Status personal : \$" and received the output "\$". The terminal window is set against a dark desktop background with various icons visible in the dock at the bottom.

8. Apa hasilnya?