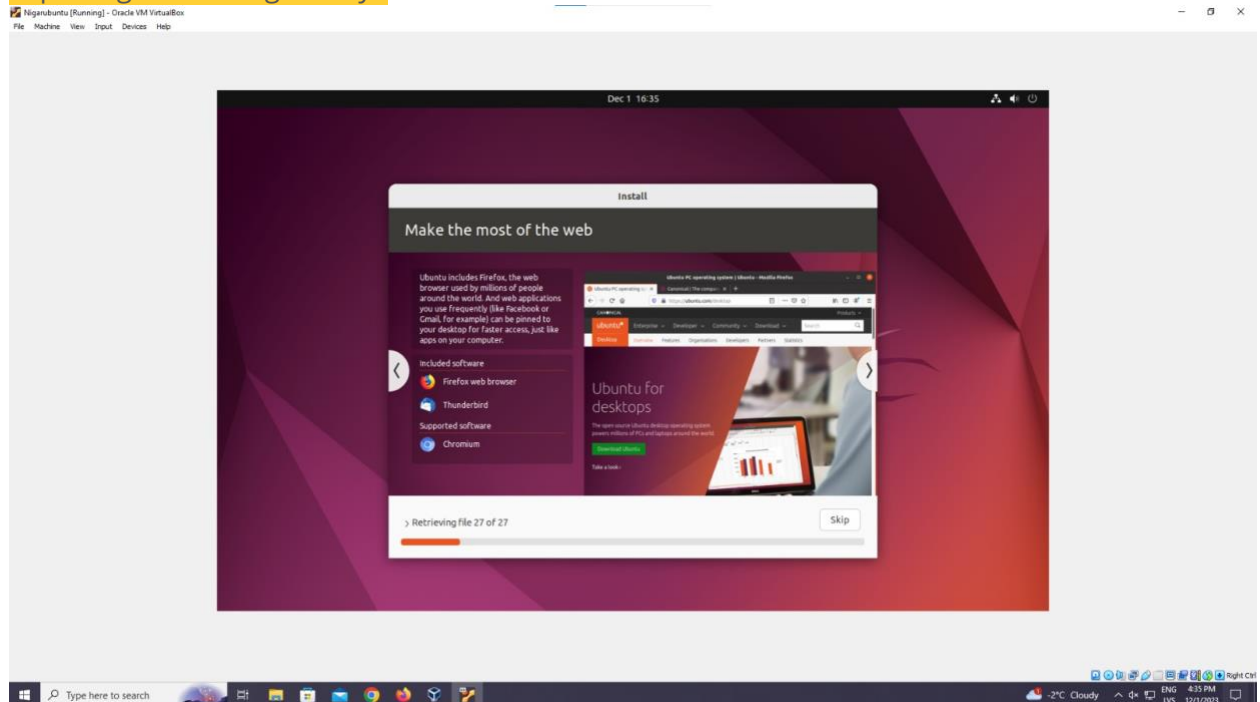
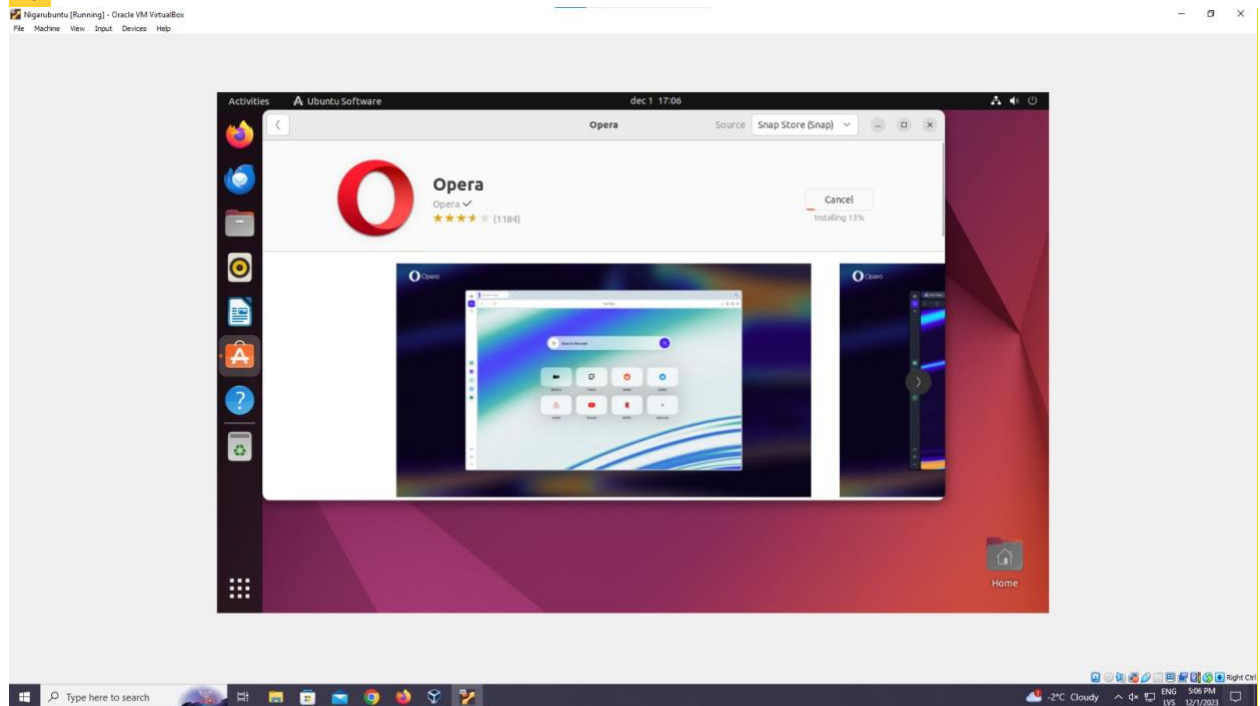


1) Installing **Ubuntu** (or Xubuntu on a low power PC) **22.04 LTS**, 20.04 LTS or similar, updating, exploring the Settings utility.

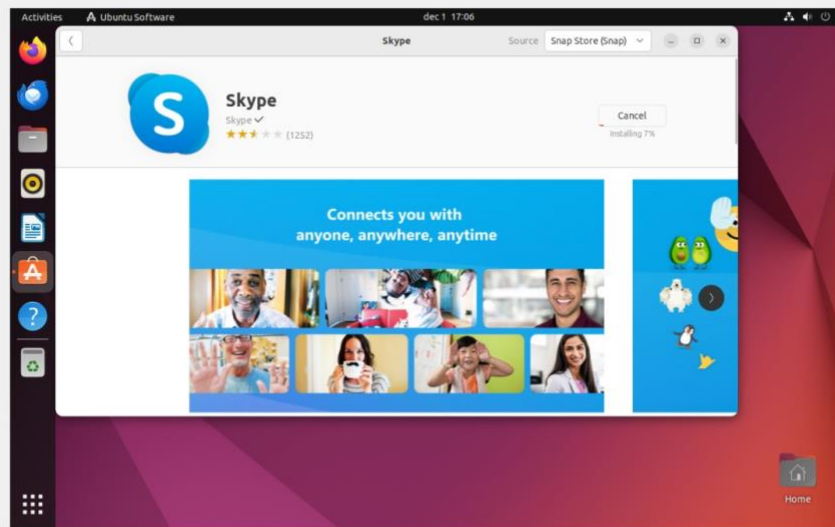


2) Installing the programs, at least half of the recommendations: a) Internet: **Chrome** or **Opera** and **Skype** or **Pidgin** and



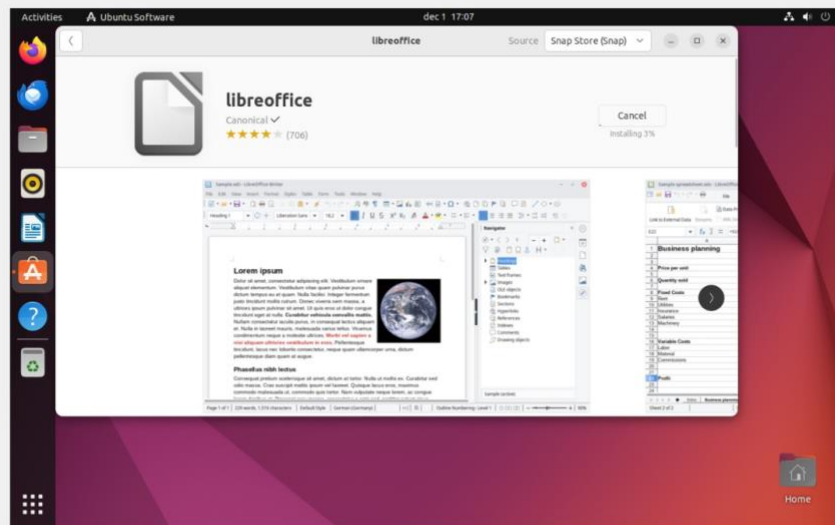
gFTP:

Nignubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

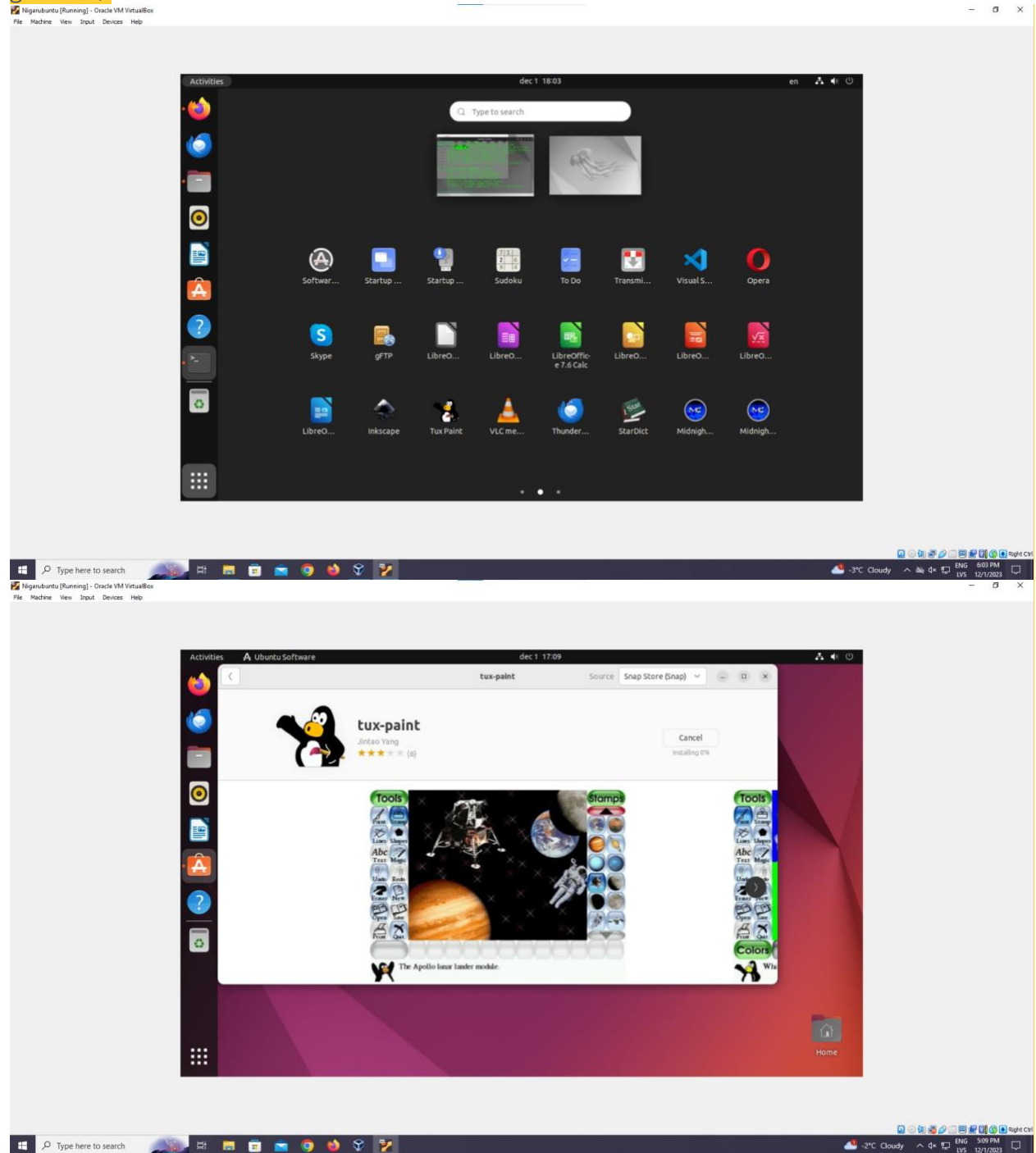


b) Full package **Libre Office** or OpenOffice with your and English language support;

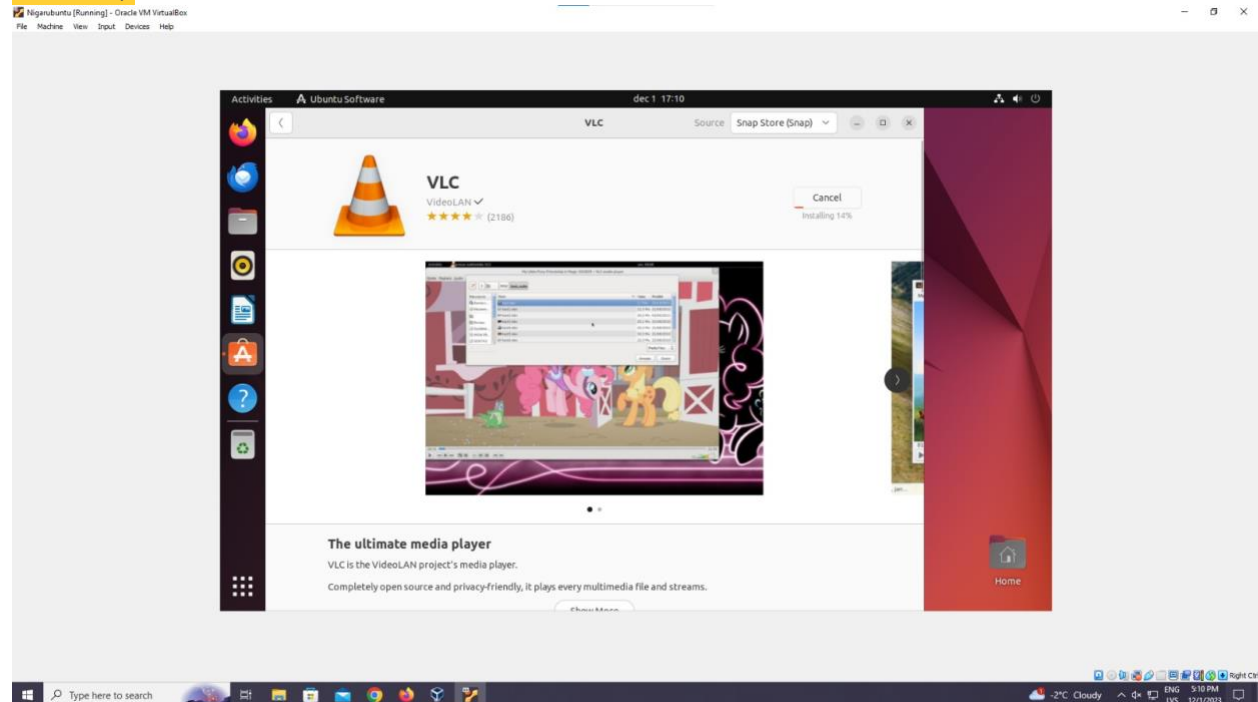
Nignubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help



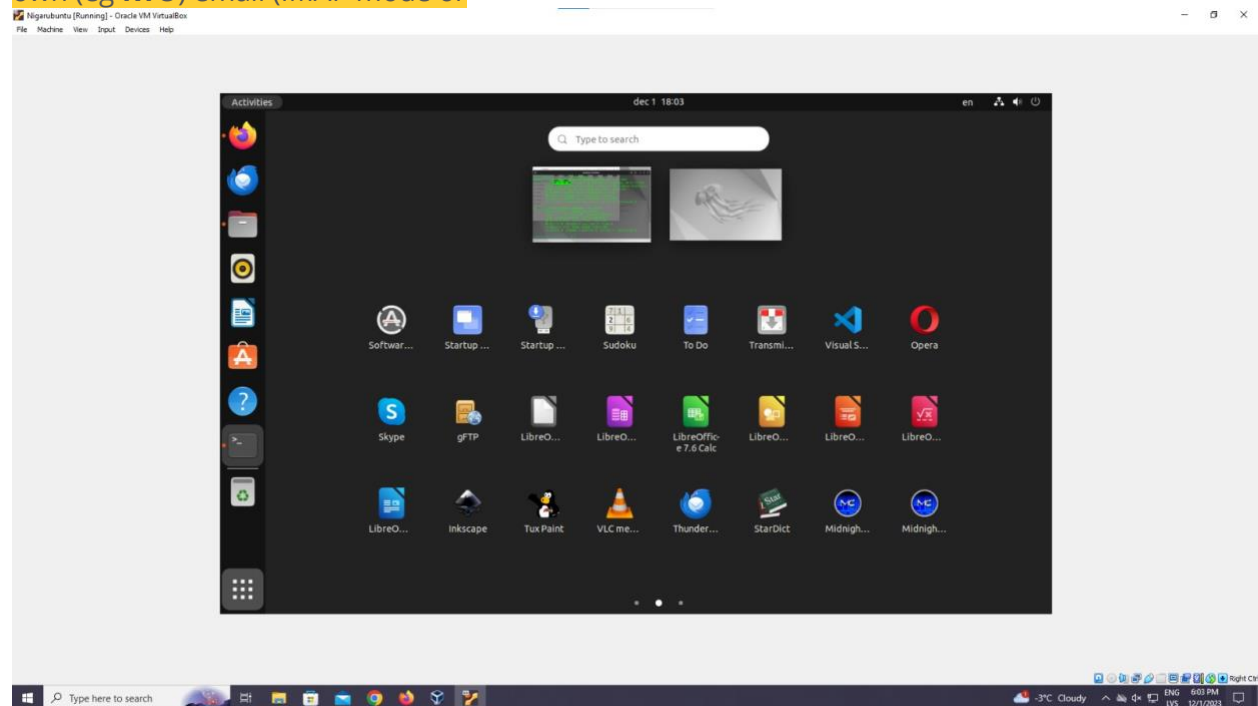
c) Graphics: **Gimp** and **Inkscape**, and **Tux Paint**, and **gThumb**;

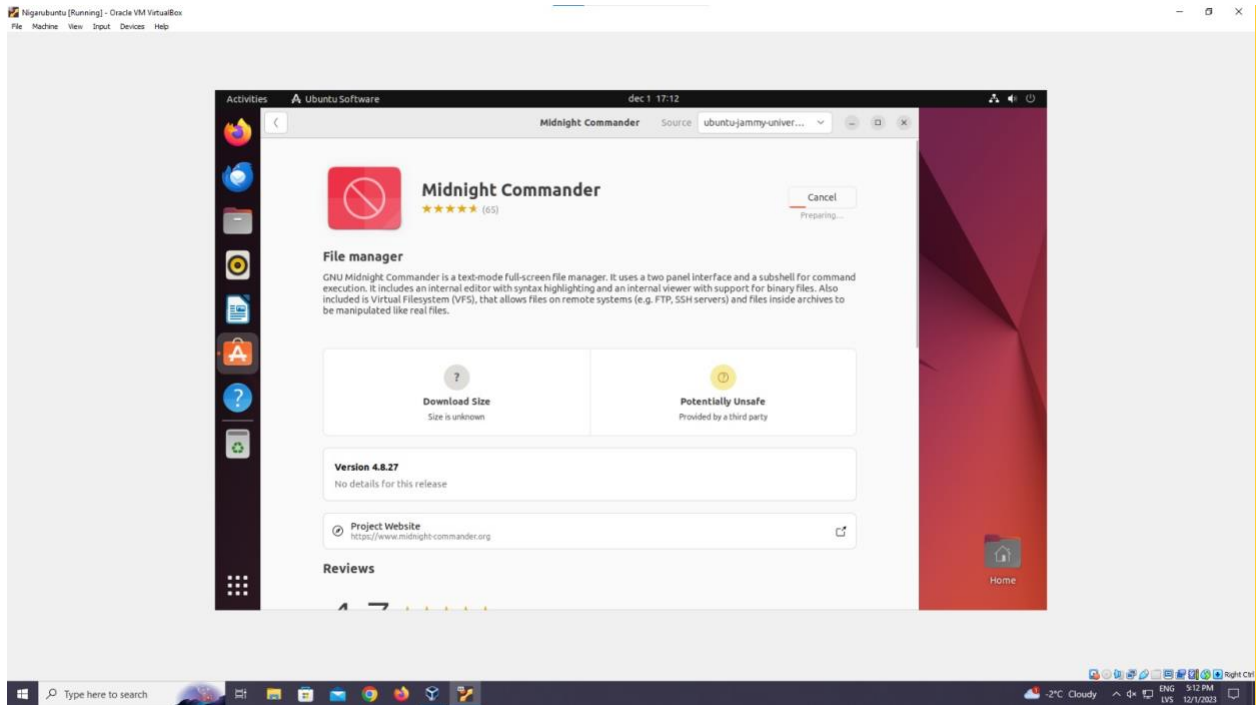


d) Multimedia: **VLC** player (and Flash plugin) for browser;

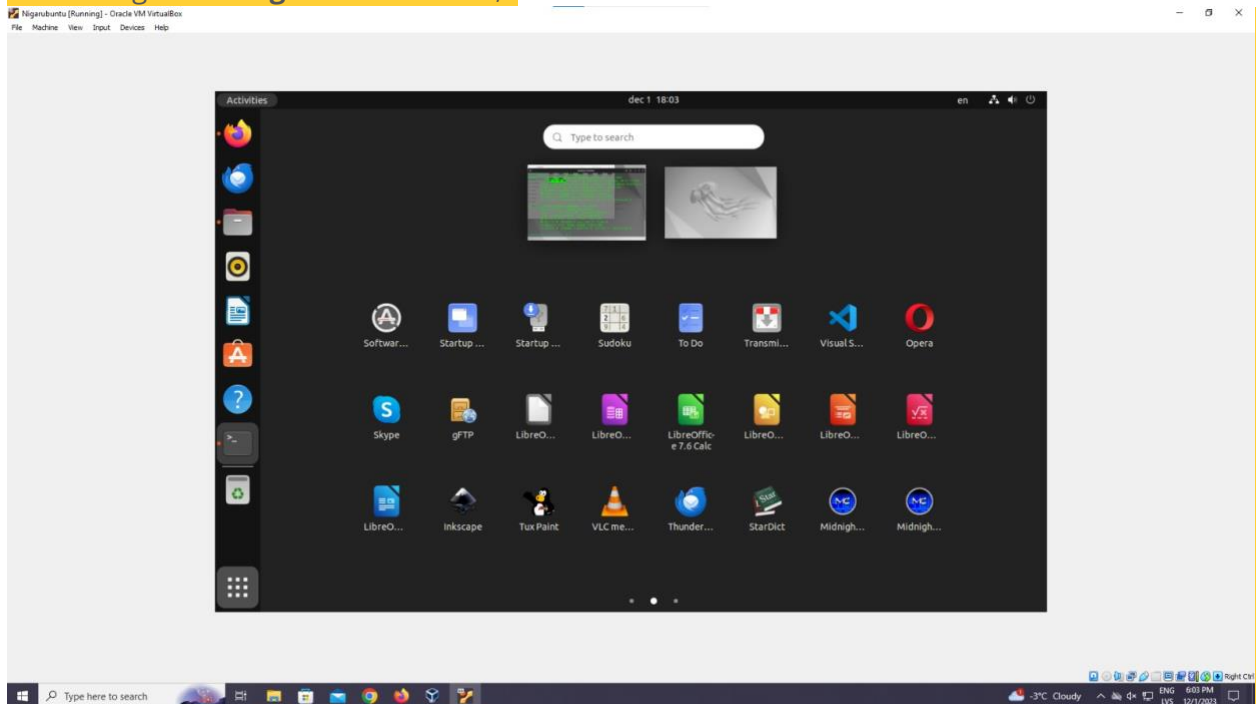


e) Email client: Evolution or **Thunderbird** or Sunbird email client configured for some of your own (eg **RTU**) email (IMAP mode or

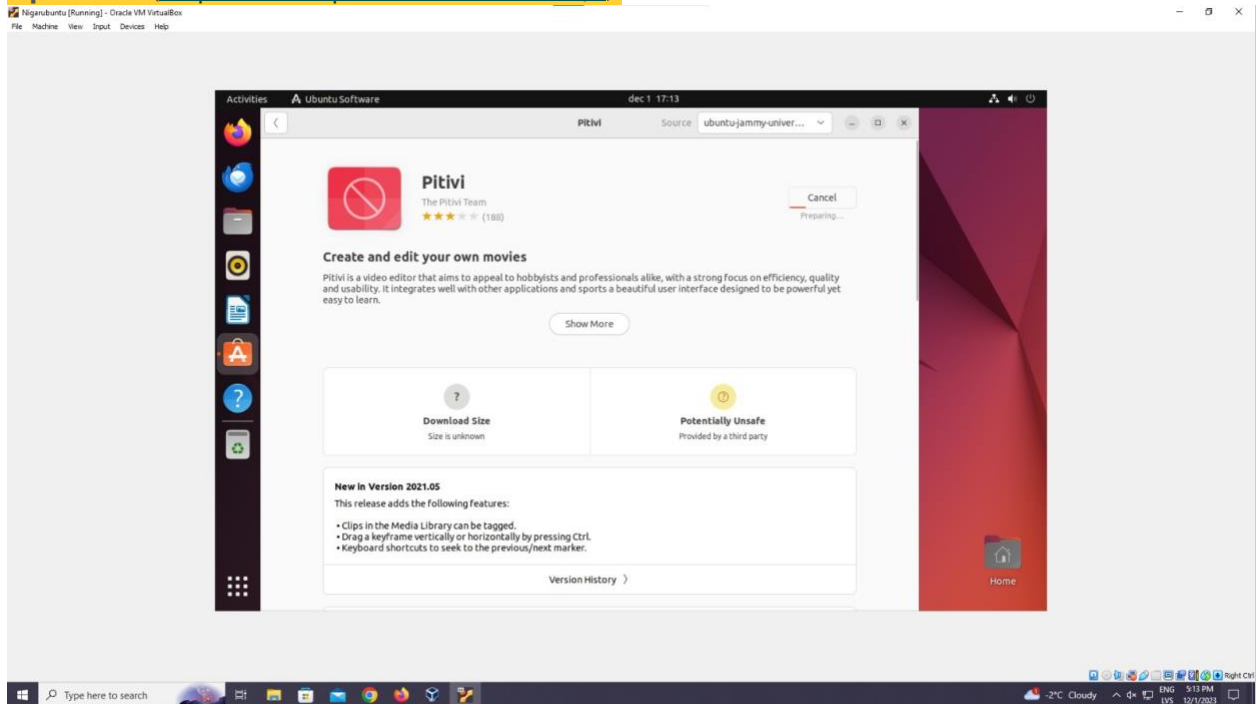




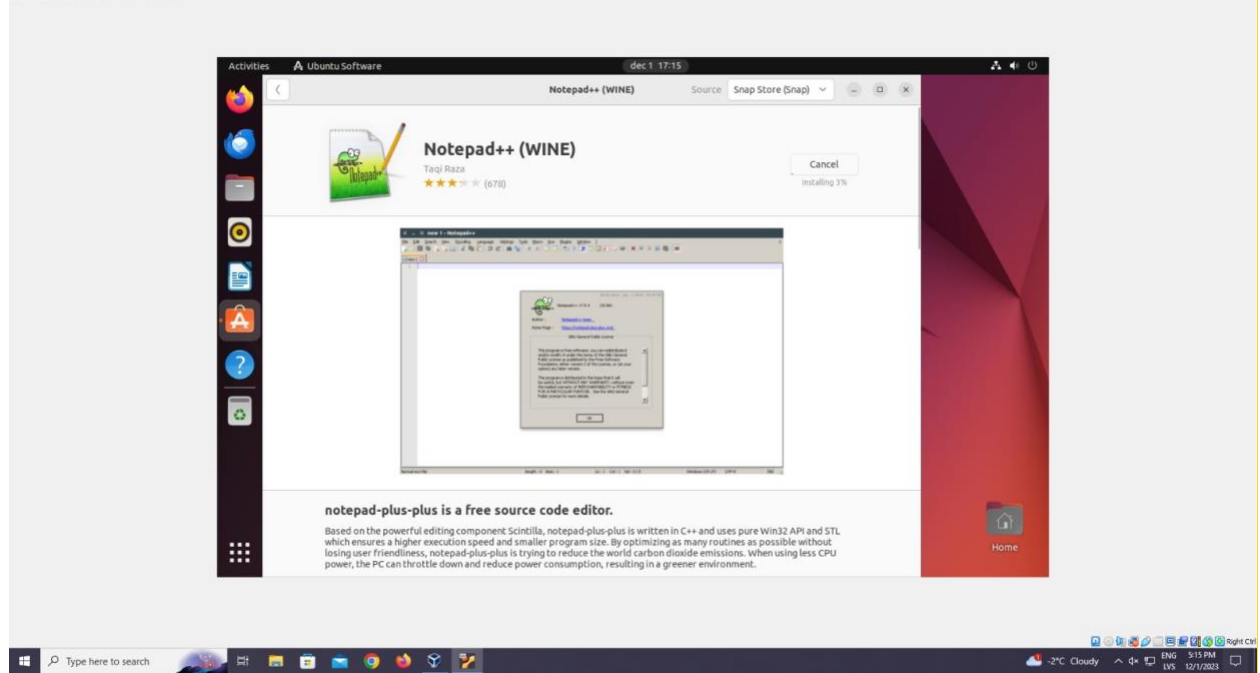
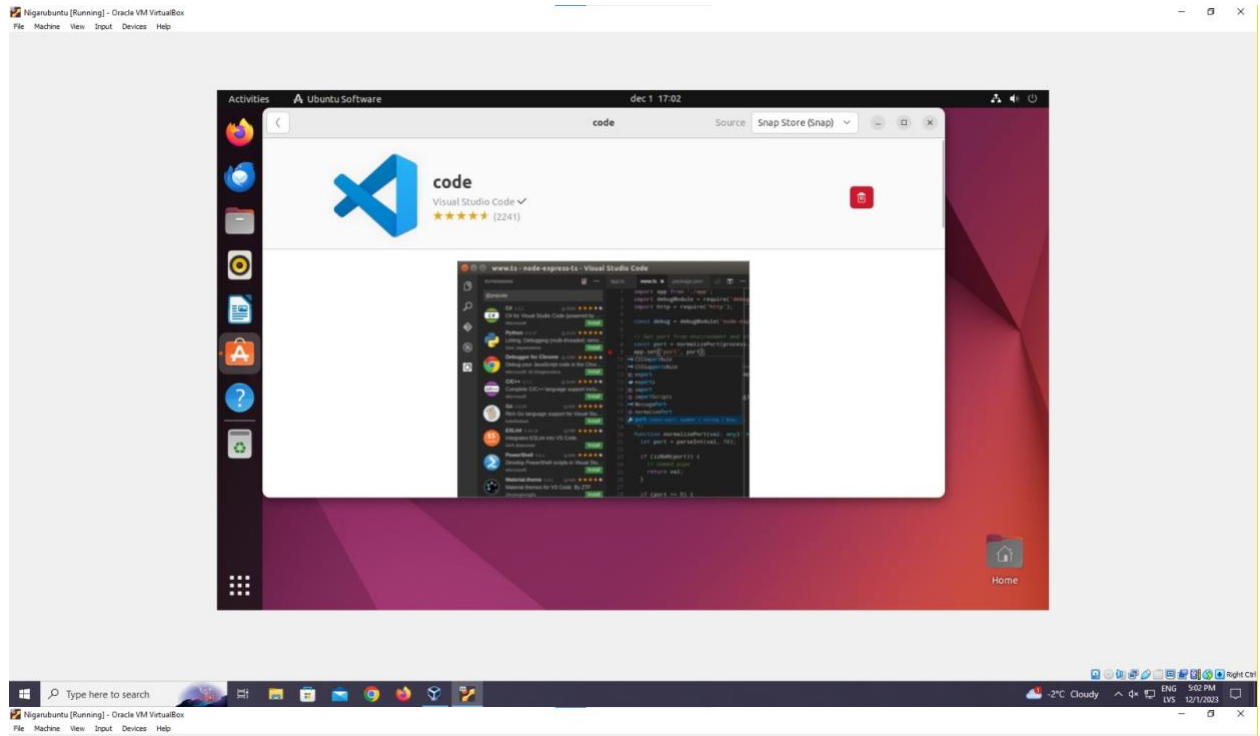
other keeping mails on server too);
 f) Vocabulary: Stardict or Goldendict with Latvian or other/ yours language module; g) Console File Manager: **Midnight Commander**;



h) Video Processing: Pitivi or
Openshot (<http://www.openshotvideo.com/>); ;

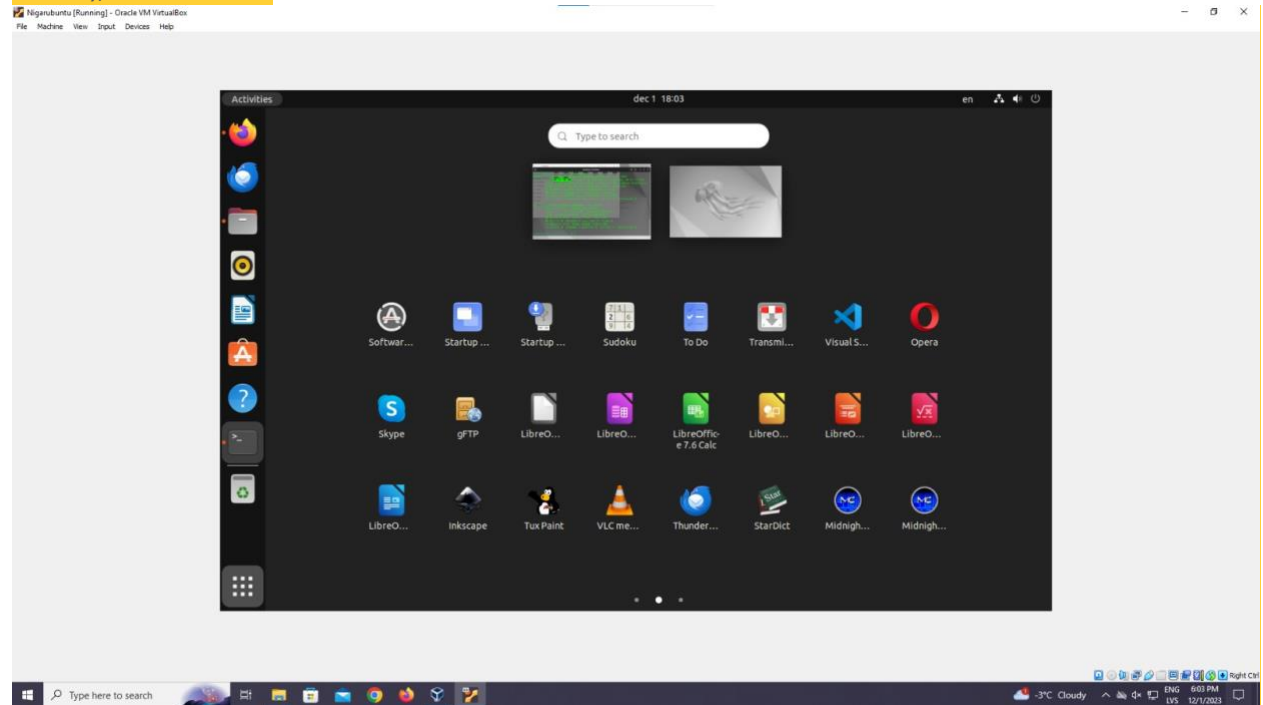


i) Programming: **Visual Studio Code**, Atom, Bluefish or NVU or KompoZer or **Notepad++**;

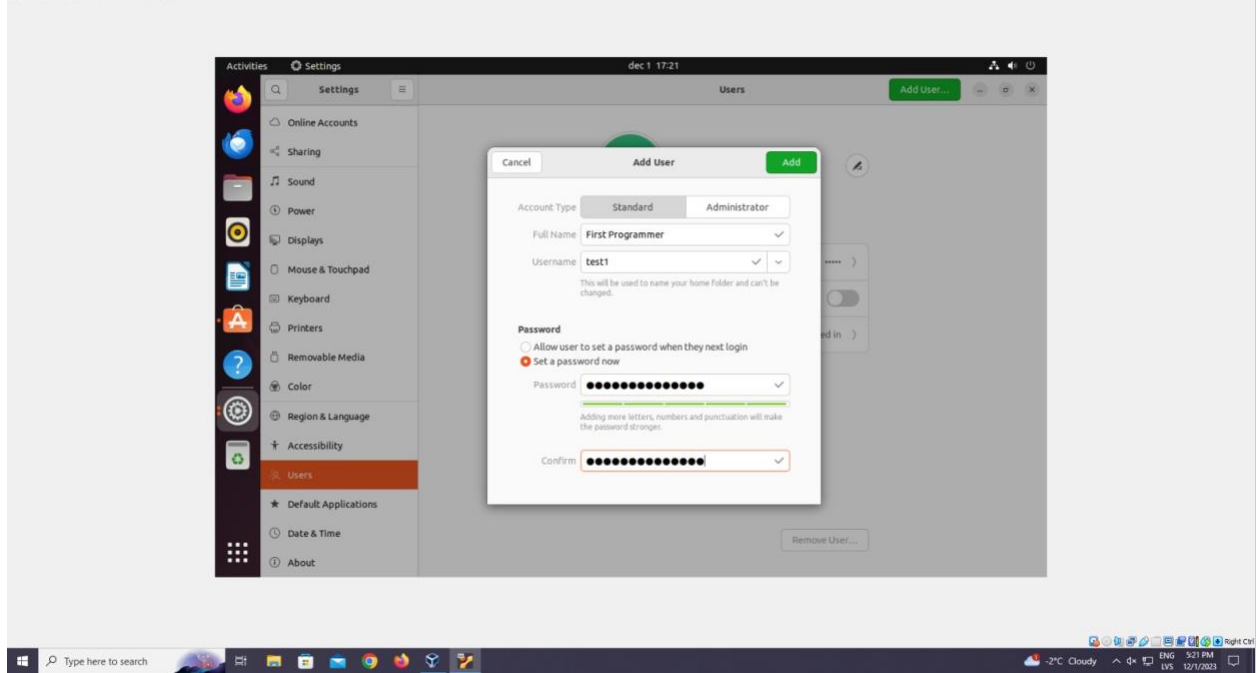
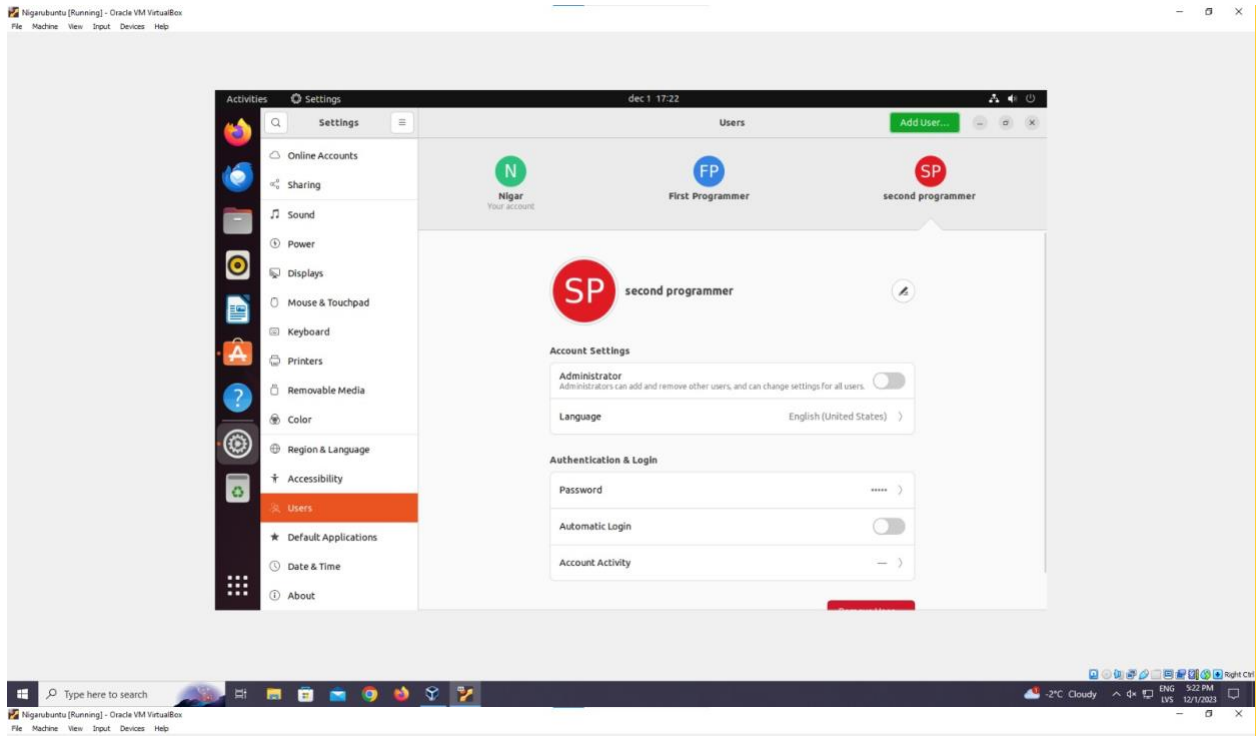


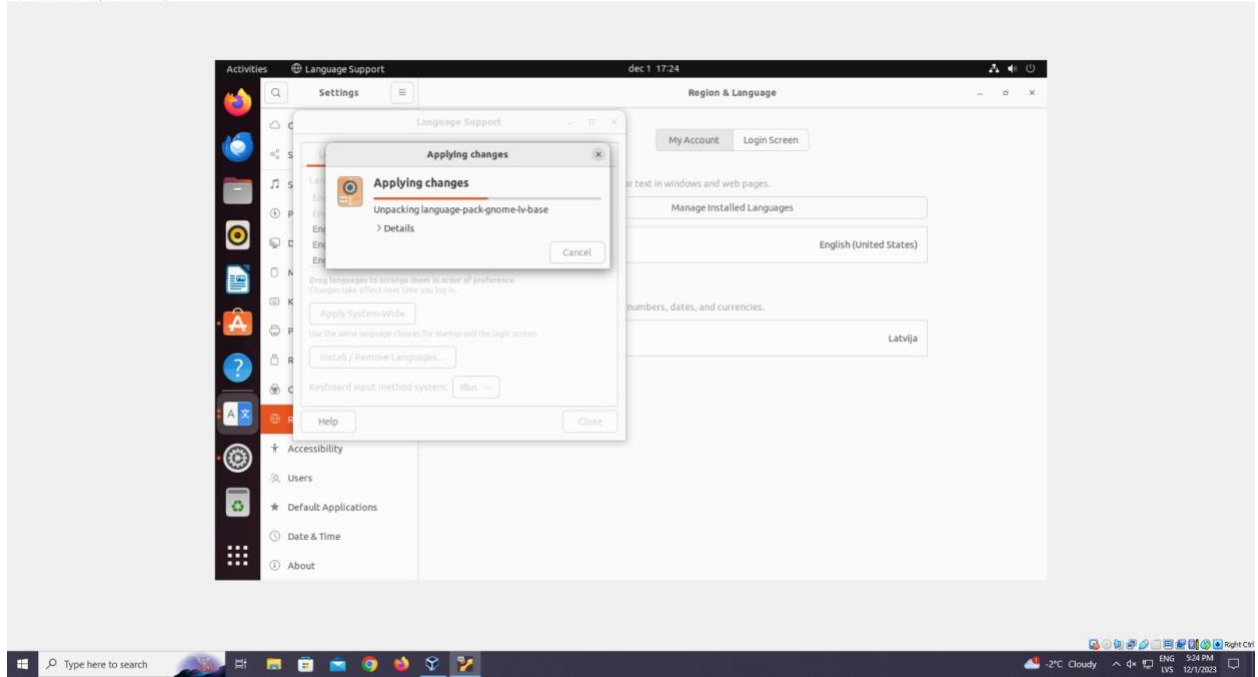
j) Other good ones, including your own, like **Planner** or **Google Earth** or **AVG** for Linux or **ClamAV**, **Wine** (with 3Com

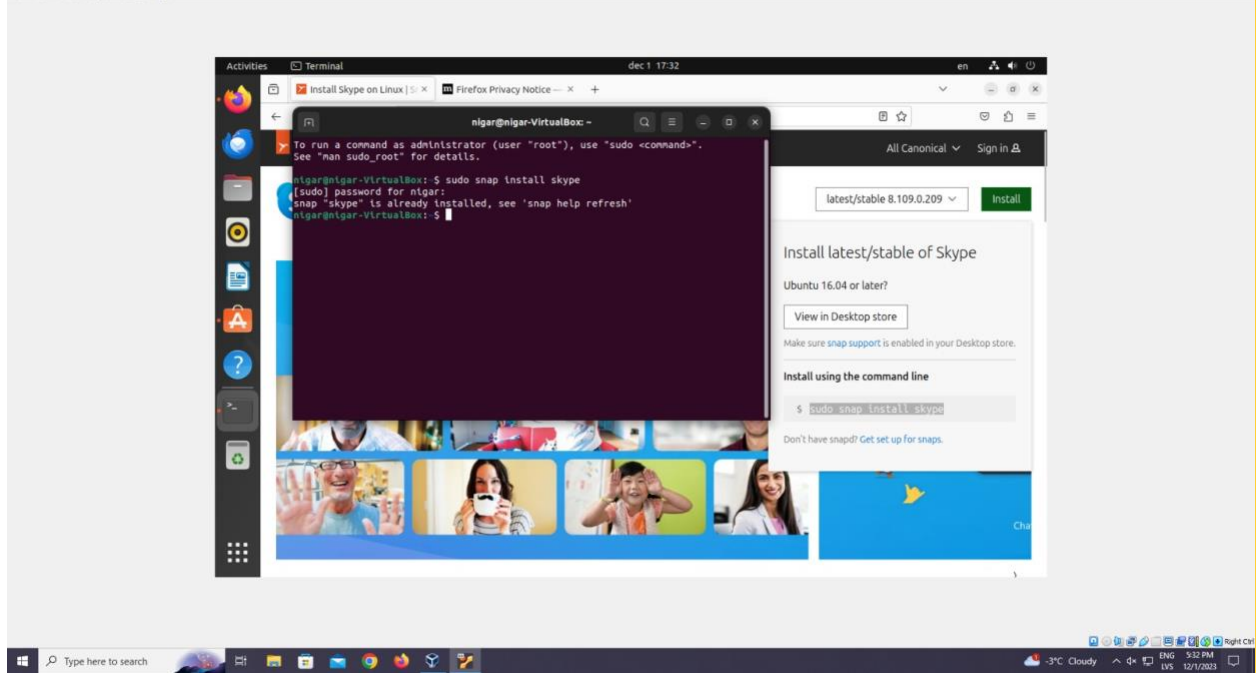
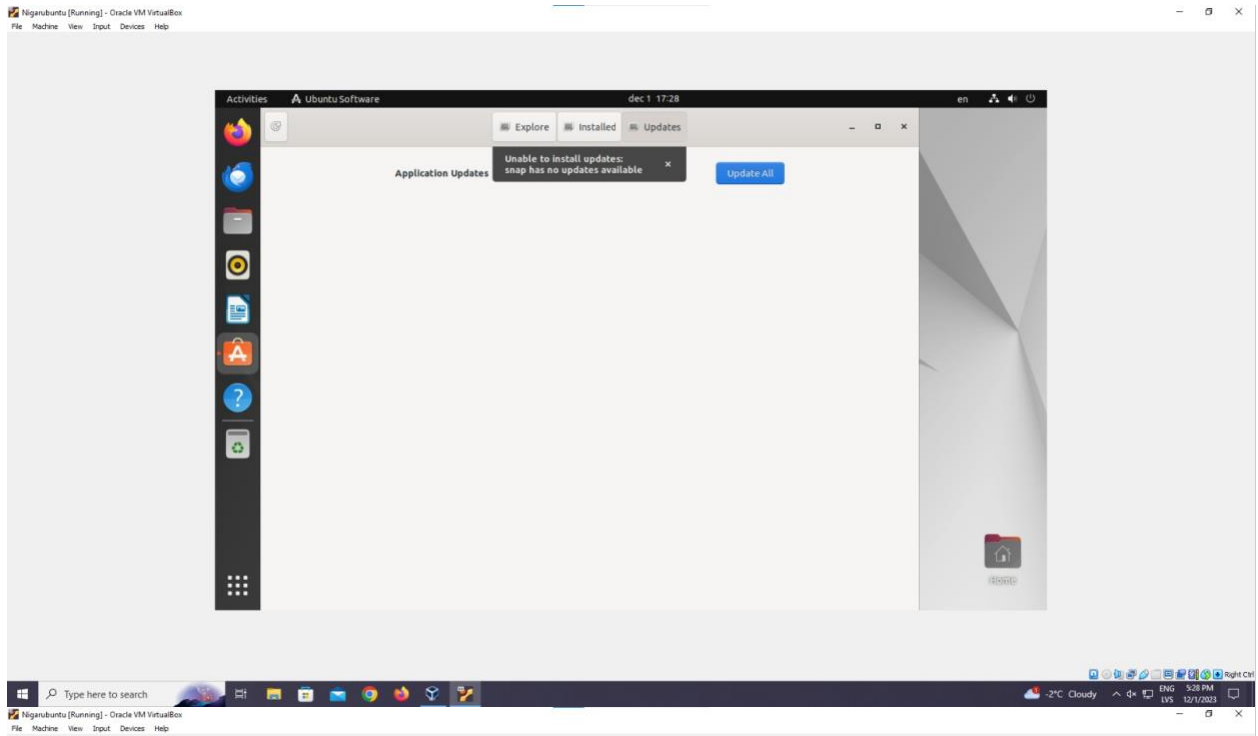
IPCalc), Stellarium.

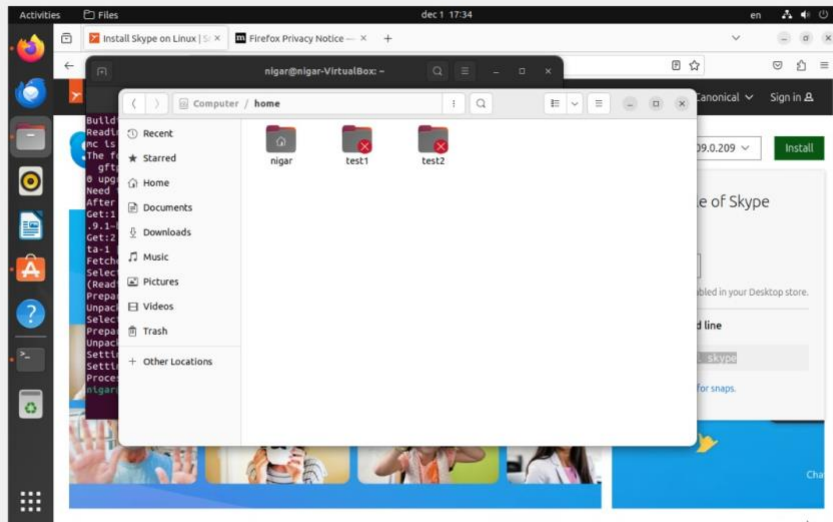
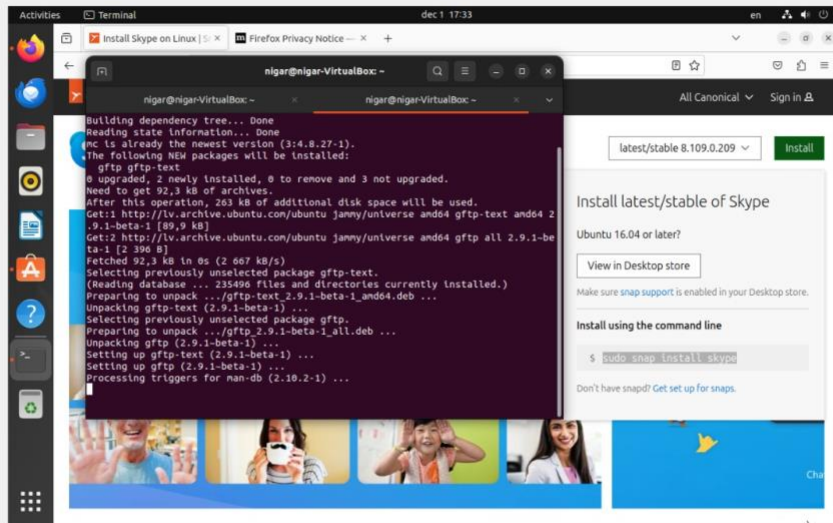


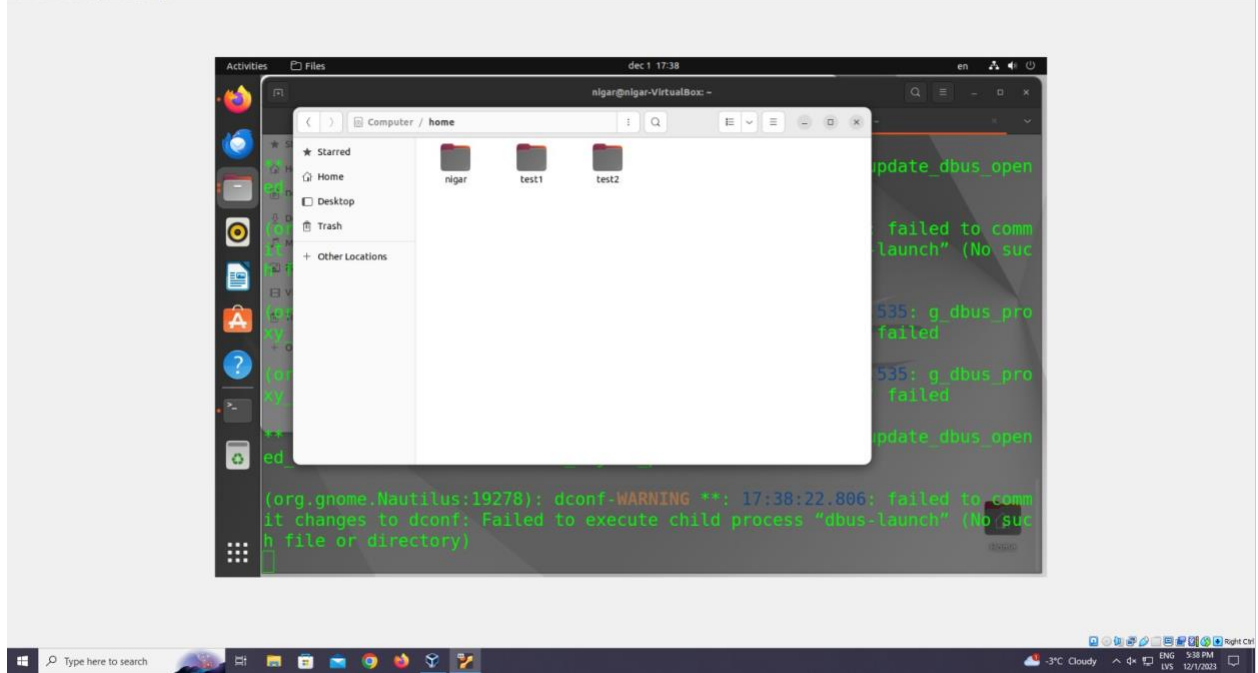
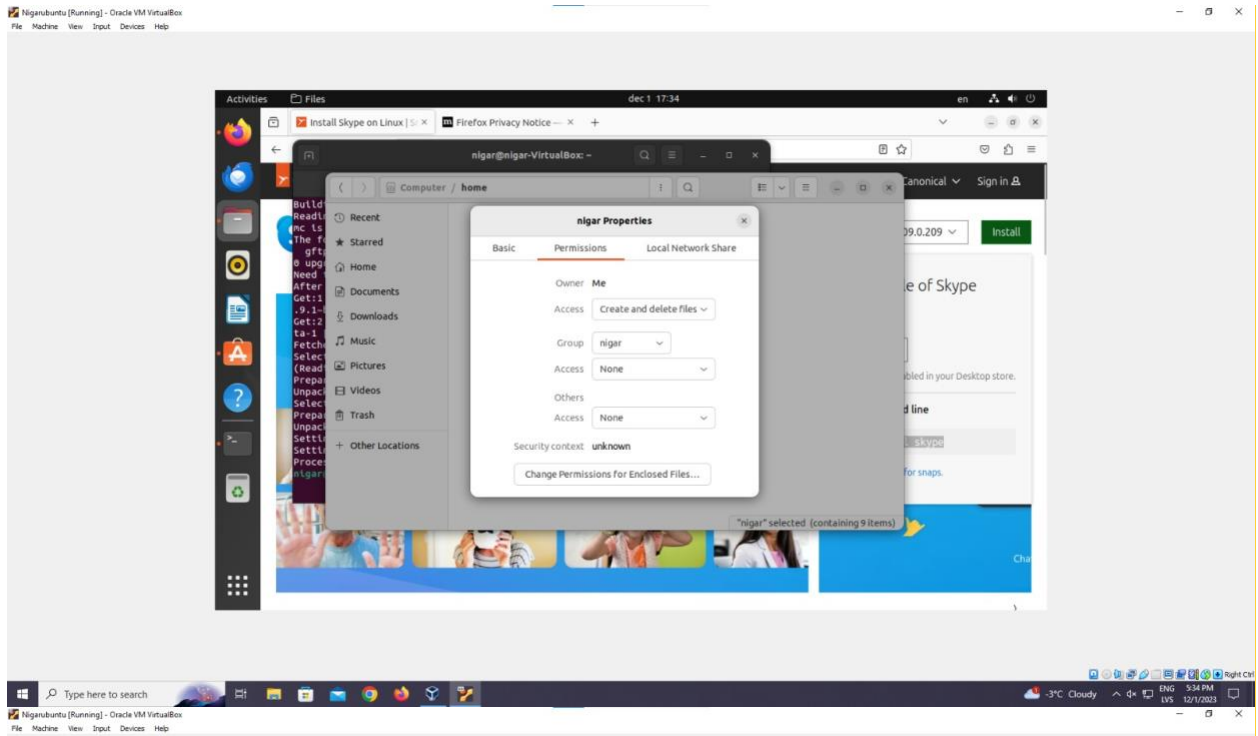
3) Create a couple of new users with isolated home folders (others none access).

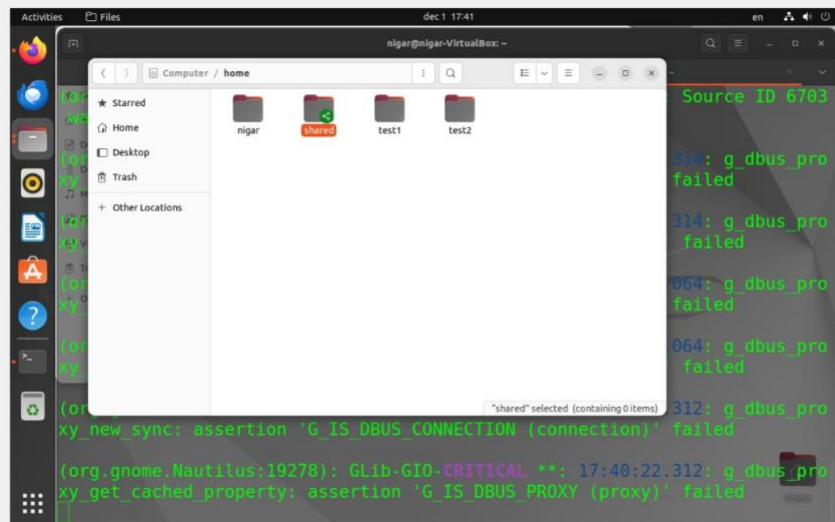
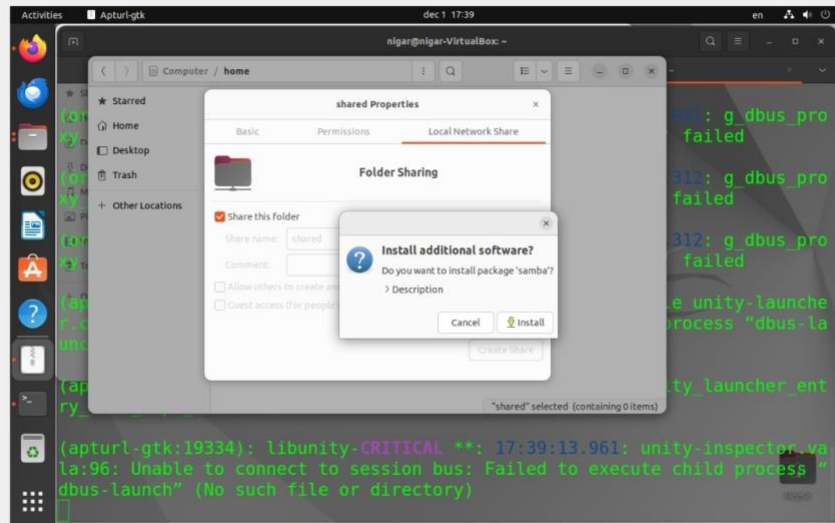


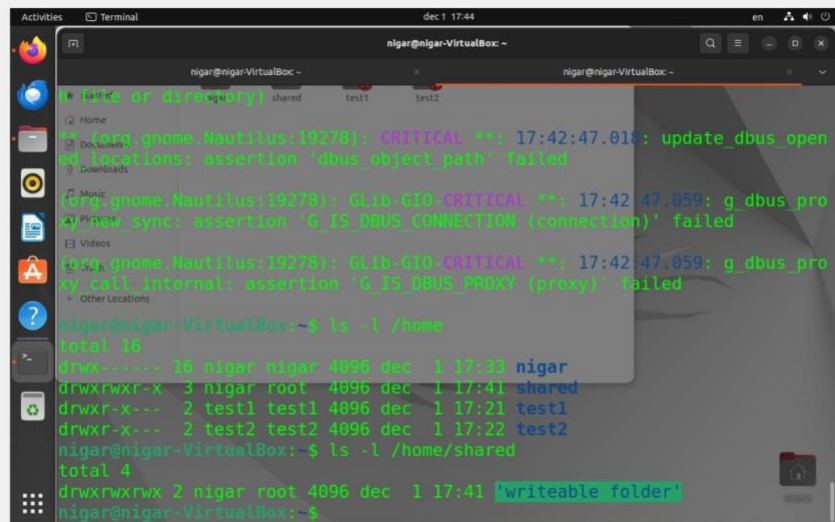
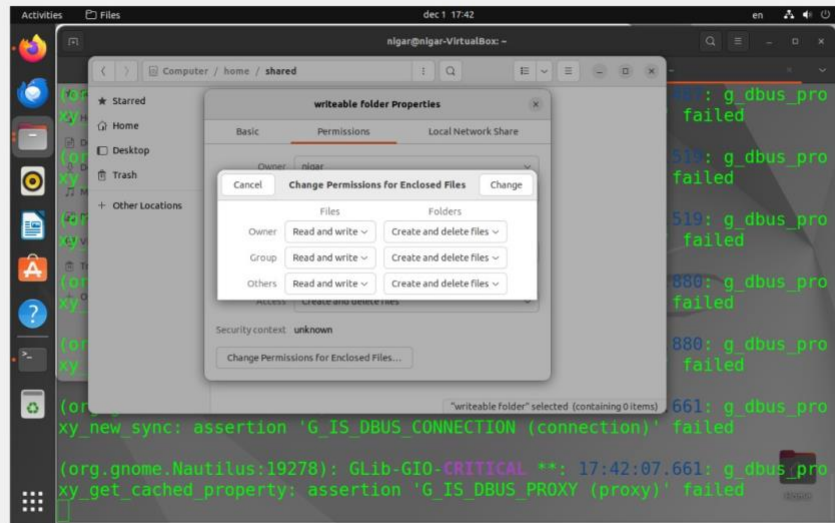


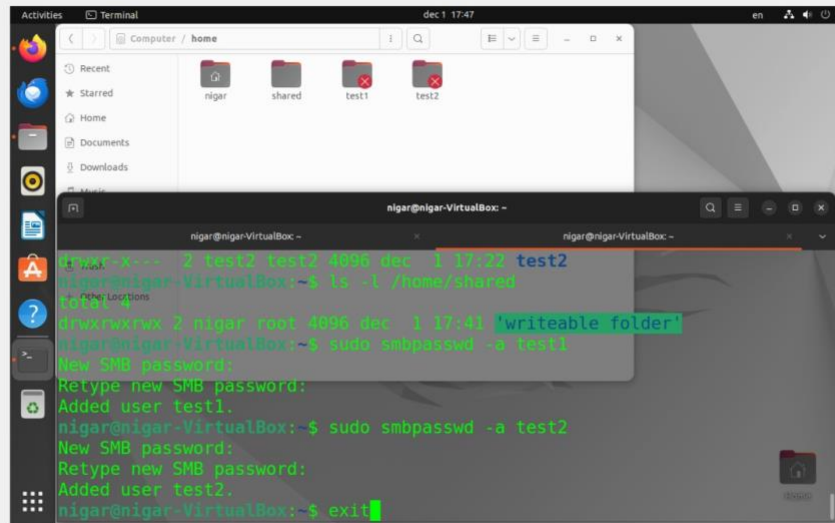












```
nigar@nigar-VirtualBox:~$ ls -l /home/shares
ls: cannot access '/home/shares': No such file or directory
nigar@nigar-VirtualBox:~$ sudo smbpasswd -a test1
New SMB password:
Retype new SMB password:
Added user test1.
nigar@nigar-VirtualBox:~$ sudo smbpasswd -a test2
New SMB password:
Retype new SMB password:
Added user test2.
nigar@nigar-VirtualBox:~$ exit
```

Computer / home

Recent

Starred

Home

Documents

Downloads

Music

Pictures

Videos

Trash

share on 10...

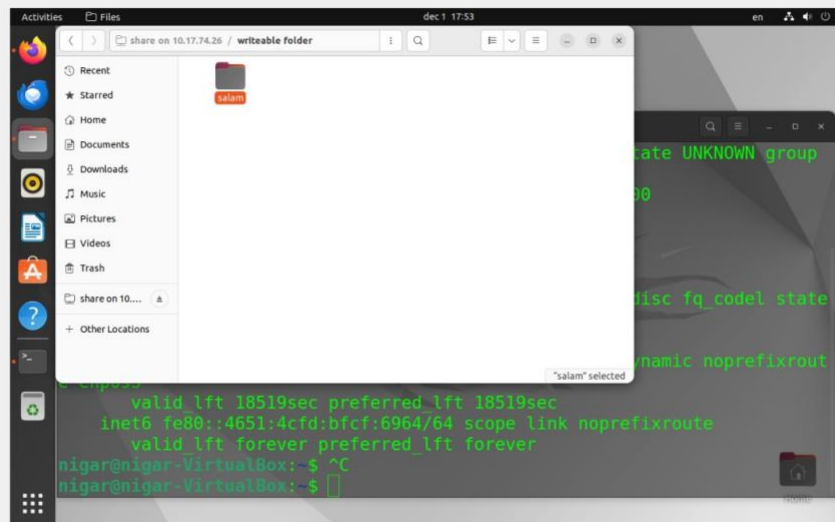
Other Locations

nigar

shared

test1

test2



```
nigar@nigar-VirtualBox:~$ smbclient //10.17.74.26/writeable_folder
smbclient //10.17.74.26/writeable_folder -U nigar# -
smb:> ls
ls: command failed: NT_STATUS_INVALID_PARAMETER
smb:~>
nigar@nigar-VirtualBox:~$
```

share on 10.17.74.26 / writeable folder

Recent

Starred

Home

Documents

Downloads

Music

Pictures

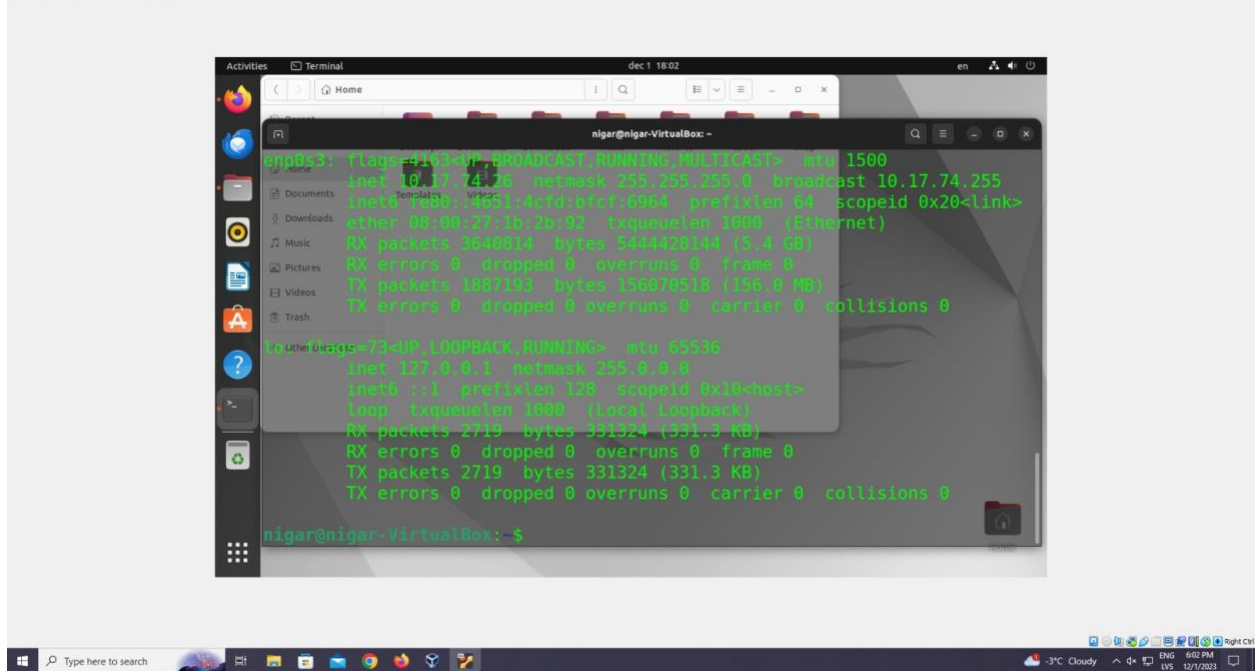
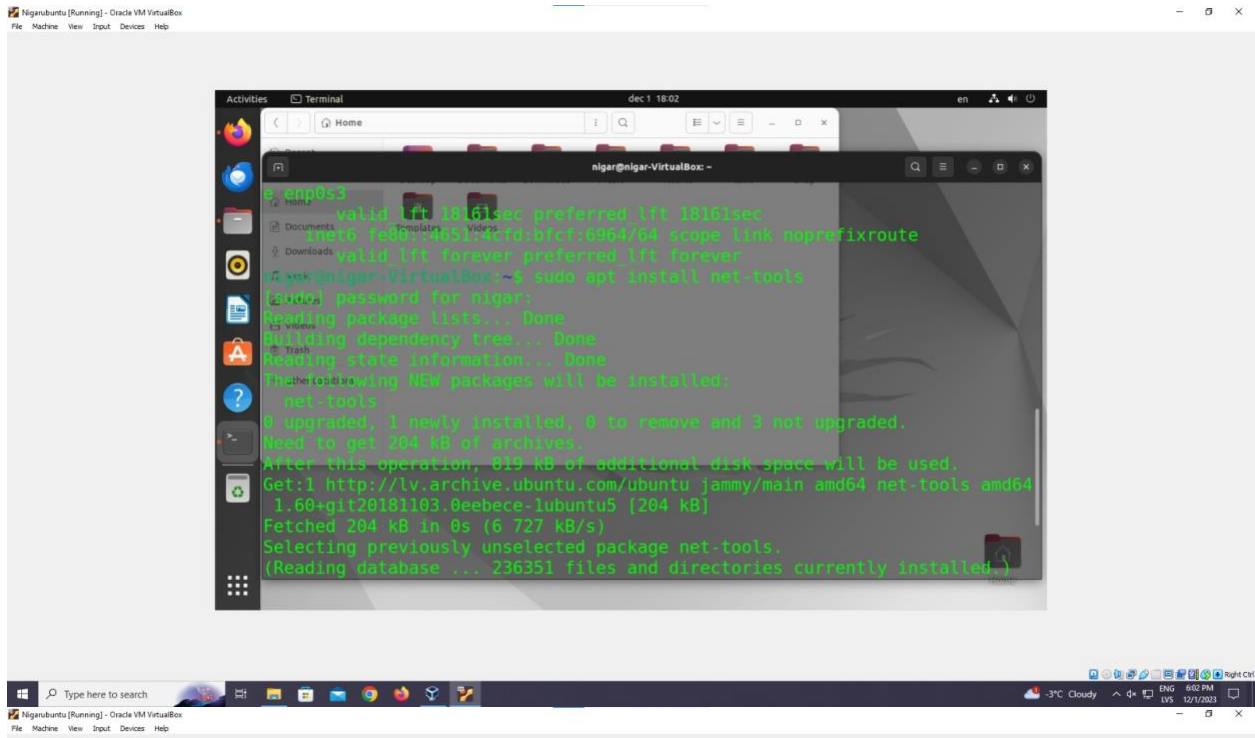
Videos

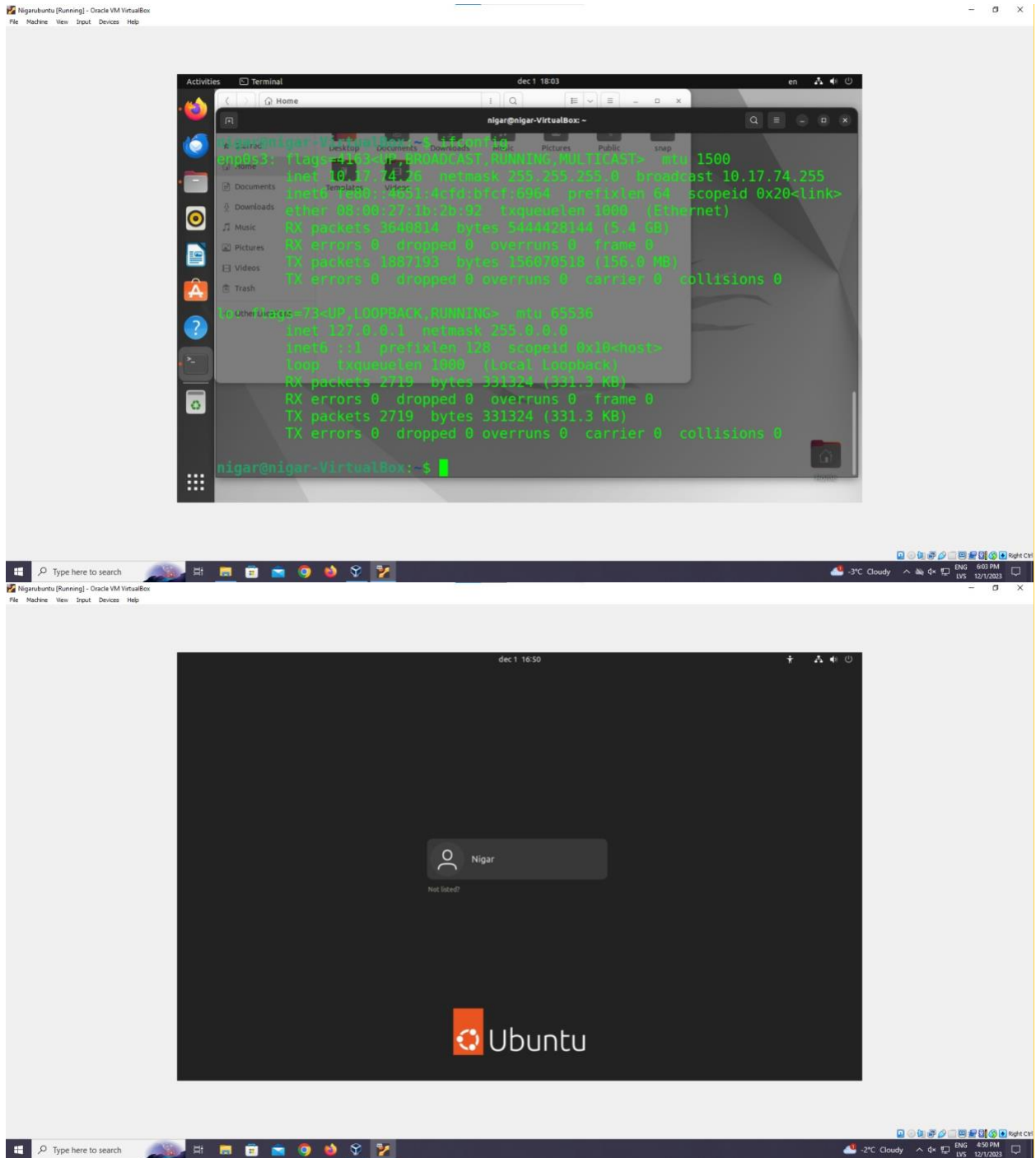
Trash

share on 10...

Other Locations

salam





4) Learn the Linux command line following this theme 3 step-by-step tutorial Part 2, create some users on the command line or grafically with adduser before and **after editing adduser.conf from 0755 or 0750 to 0700**, show folder permissions with **ls -l / home**. Learn **chmod** command

too.

Niginubuntu (Running) - Oracle VM VirtualBox
File Machine View Input Devices Help

```
Activities Terminal 1 dec, 19:06 en
nigar@nigar-VirtualBox: ~
ently installed.)
Preparing to unpack .../irqbalance_1.8.0-1ubuntu0.2_amd64.deb ...
Unpacking irqbalance (1.8.0-1ubuntu0.2) over (1.8.0-1ubuntu0.2) ...
Setting up irqbalance (1.8.0-1ubuntu0.2) ...
Processing triggers for man-db (2.10.2-1) ...
nigar@nigar-VirtualBox: $ sudo apt install samba
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
samba is already the newest version (2:4.15.13+dfsg-0ubuntu1.5).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
nigar@nigar-VirtualBox: $
```

Type here to search
Niginubuntu (Running) - Oracle VM VirtualBox
File Machine View Input Devices Help
4°C Cloudy 2:06 PM ENG 12/1/2023

```
Activities Terminal 1 dec, 19:09 en
nigar@nigar-VirtualBox: ~
.gz /usr/share/man/man8/samba.8.gz
nigar@nigar-VirtualBox: $ sudo apt update
Hit:1 http://lv.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://lv.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://lv.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
2 packages can be upgraded. Run 'apt list --upgradable' to see them.
nigar@nigar-VirtualBox: $
```

Type here to search
Niginubuntu (Running) - Oracle VM VirtualBox
File Machine View Input Devices Help
4°C Cloudy 2:09 PM ENG 12/1/2023

```
Activities Terminal 1 dec, 19:10 en
nigar@nigar-VirtualBox: -
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
Get more security updates through Ubuntu Pro with 'esm-
apps' enabled:
  libjs-jquery-ui libopenexr25 python3-scipy libmagickc
ore-6.q16-6-extra
  libavcodec58 libmagickwand-6.q16-6 libavutil56 libmag
ickcore-6.q16-6
  libswresample3 imagemagick-6-common
Learn more about Ubuntu Pro at https://ubuntu.com/pro
The following packages have been kept back:
  gjs libgjs0g
0 upgraded, 0 newly installed, 0 to remove and 2 not up
graded.
nigar@nigar-VirtualBox:~$
```

```
Activities Terminal 1 dec, 19:14 en
nigar@nigar-VirtualBox: -
nigar@nigar-VirtualBox:~$ ls -l /home
total 16
drwx----- 18 nigar nigar 4096 dec 1 18:34 nigar
drwxrwxr-x 3 nigar root 4096 dec 1 17:41 shared
drwxr-x--- 2 test1 test1 4096 dec 1 17:21 test1
drwxr-x--- 2 test2 test2 4096 dec 1 17:22 test2
nigar@nigar-VirtualBox:~$ sudo mkdir /home/shared4
[sudo] password for nigar:
nigar@nigar-VirtualBox:~$ ls -l /home
total 20
drwx----- 18 nigar nigar 4096 dec 1 18:34 nigar
drwxrwxr-x 3 nigar root 4096 dec 1 17:41 shared
drwxr-xr-x 2 root root 4096 dec 1 19:14 shared4
drwxr-x--- 2 test1 test1 4096 dec 1 17:21 test1
drwxr-x--- 2 test2 test2 4096 dec 1 17:22 test2
nigar@nigar-VirtualBox:~$
```

```
Activities Terminal 1 dec, 19:18 en
```

```
nigar@nigar-VirtualBox -
```

```
nigar@nigar-VirtualBox -
```

```
0 upgraded, 0 newly installed, 0 to remove and 2 not up
graded.
nigar@nigar-VirtualBox:~$ sudo mc

Select an editor. To change later, run 'select-editor'
.
 1. /bin/nano      <---- easiest
 2. /usr/bin/mcedit
 3. /usr/bin/vim.tiny
 4. /bin/ed

Choose 1-4 [1]: 1

nigar@nigar-VirtualBox:~$ sudo service smb stop
nigar@nigar-VirtualBox:~$ sudo service smb start
nigar@nigar-VirtualBox:~$
```

```
Activities Files 1 dec, 19:20 en
```

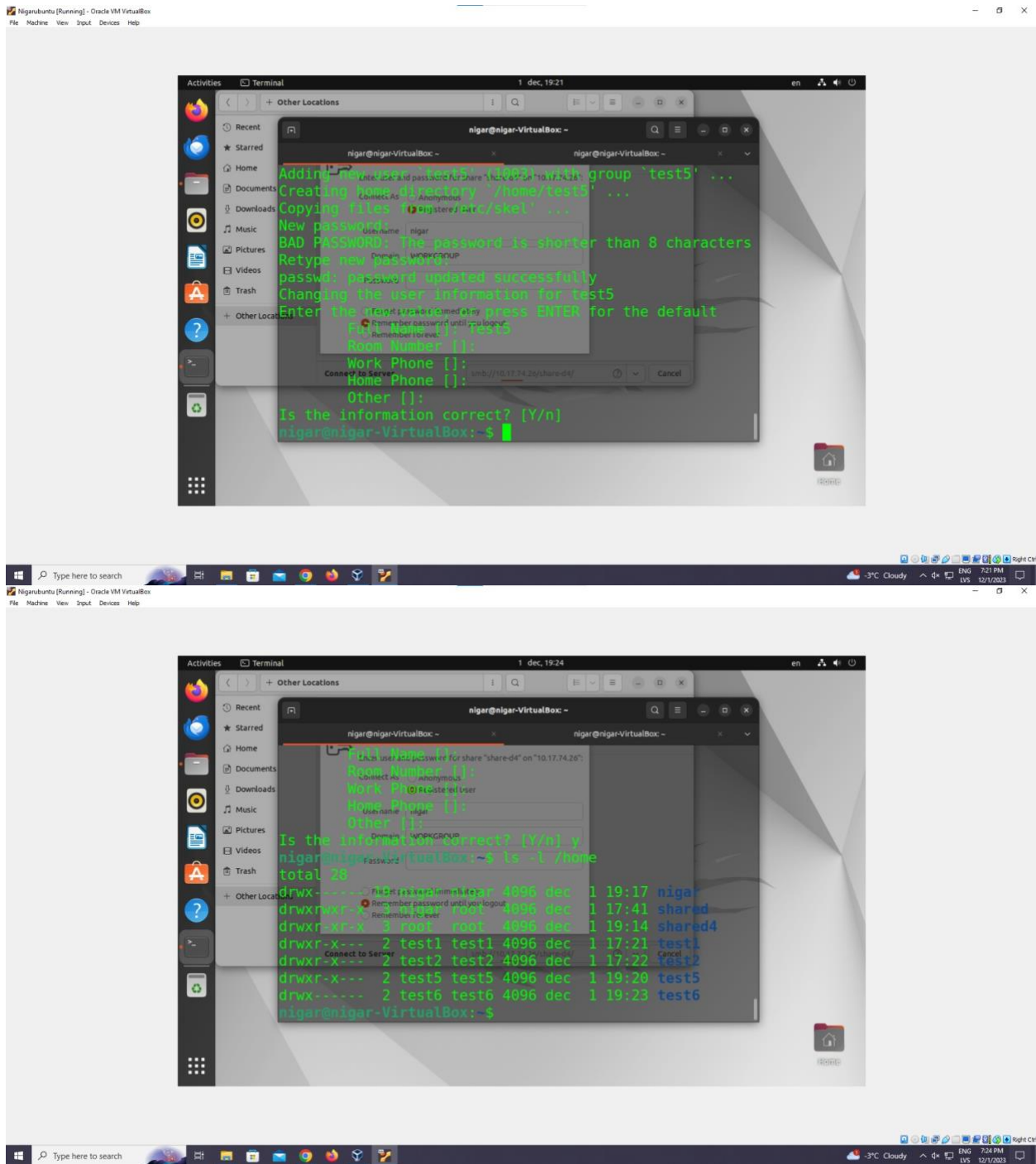
```
Windows shares on nigar-virtualbox.local
```

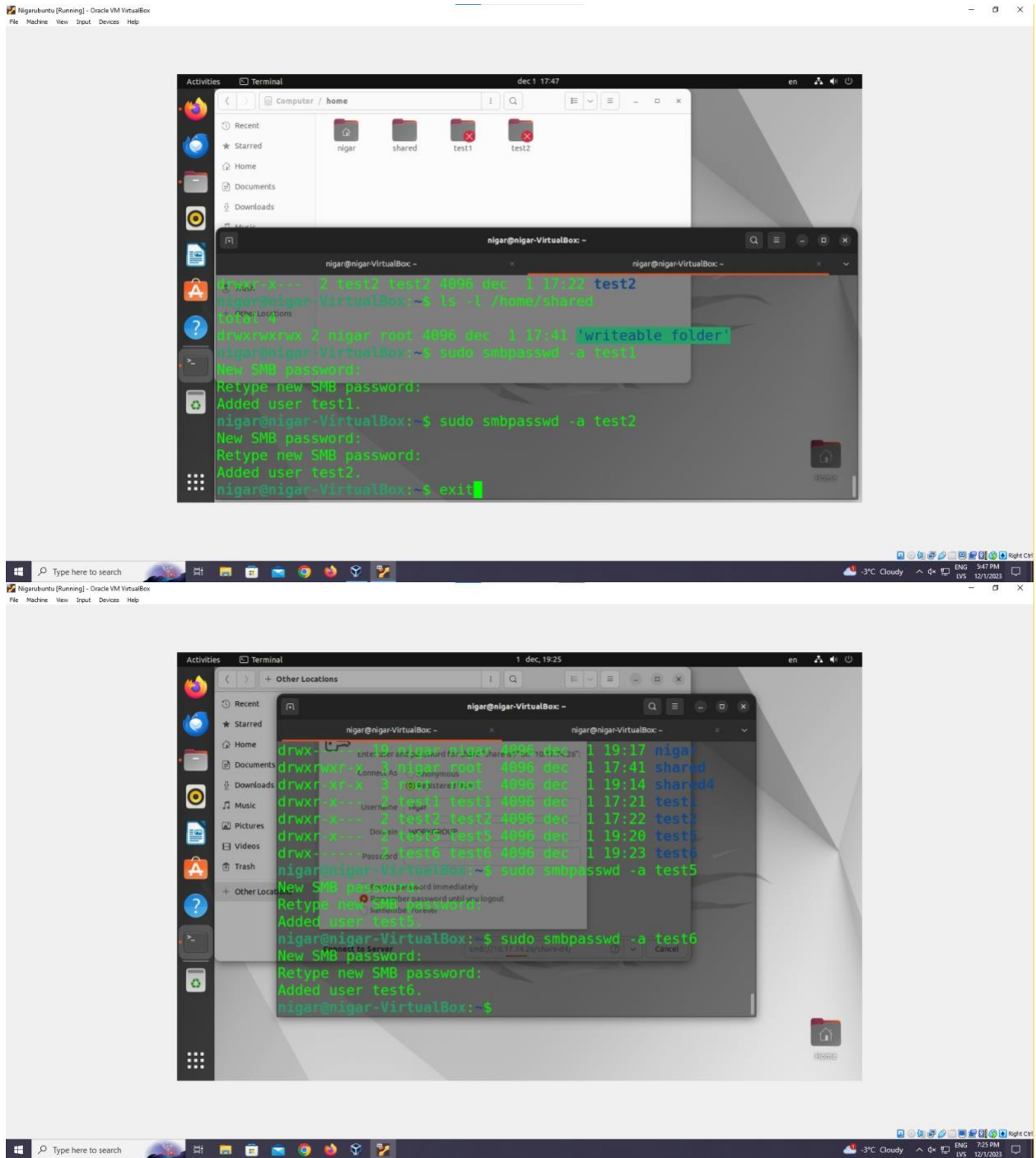
```
share share-d4
```

```
ollisions 0
nigar@nigar-VirtualBox:~$
```

5) Create writable Share with graphical environment and connect to it from Linux and, if

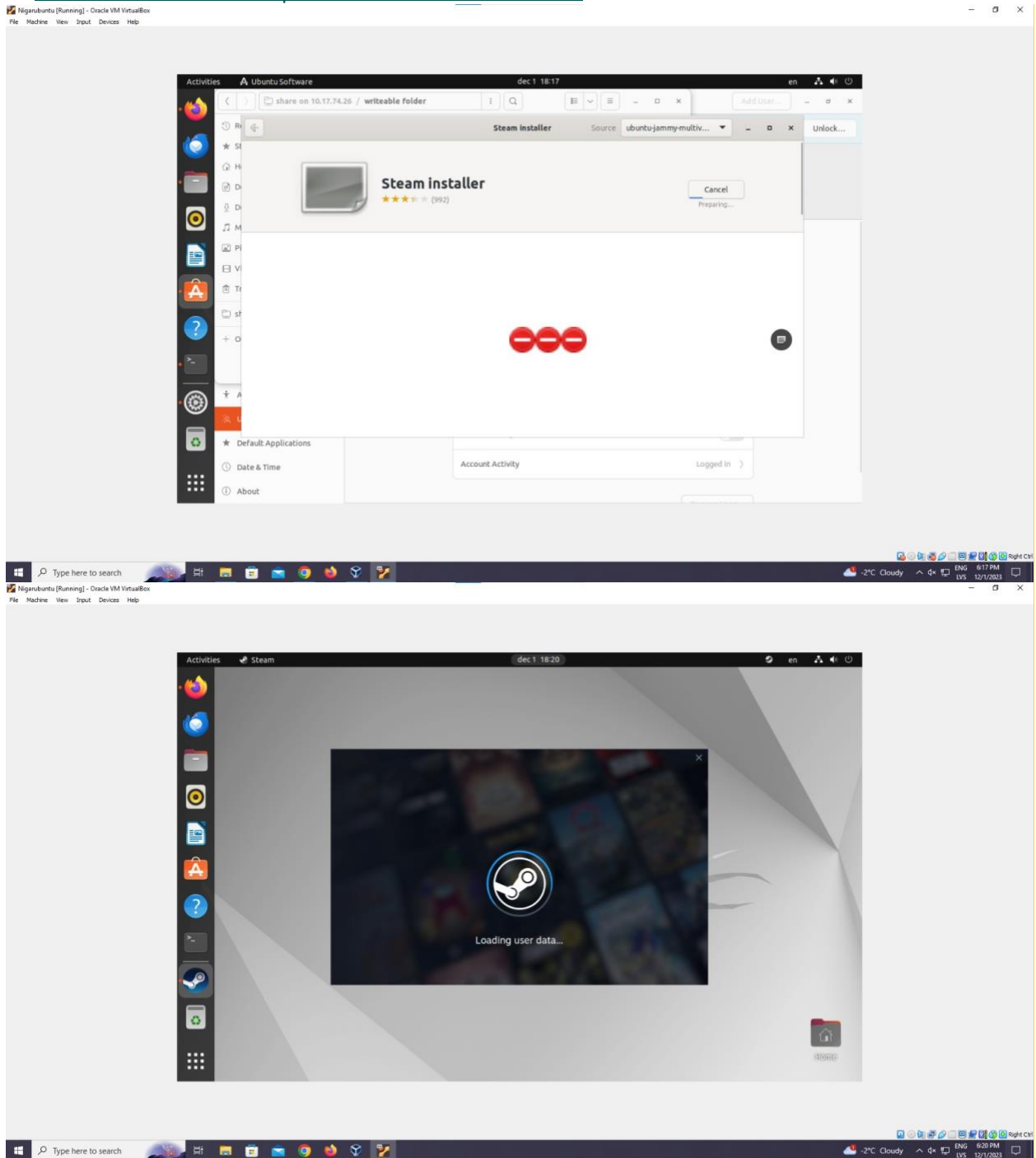
possible, Windows too.

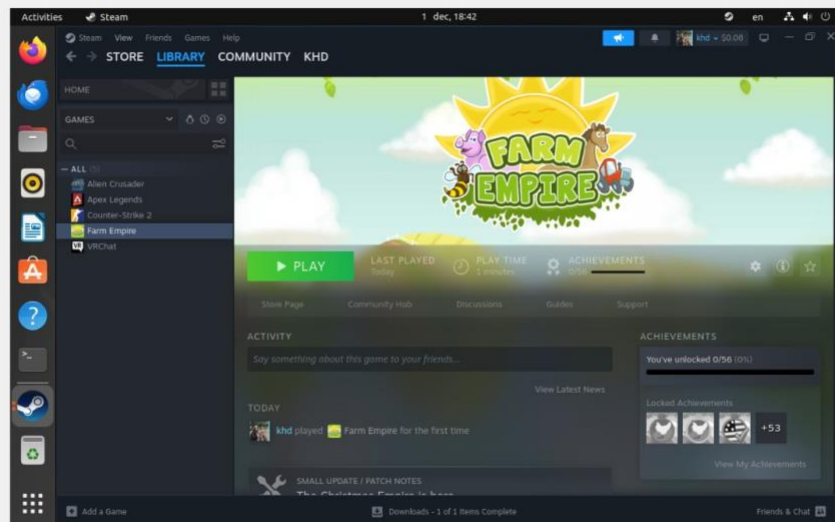


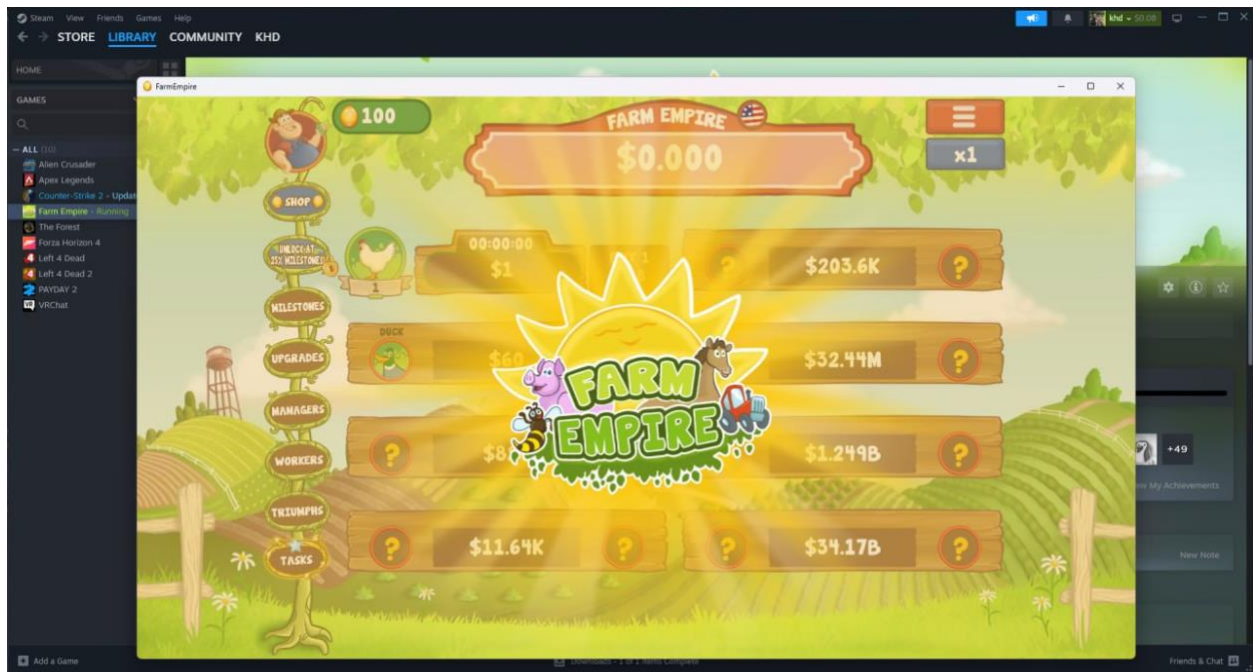


6) Learn from Ubuntu e.t.c. manuals, test other interesting things, such as installing the **Steam** gaming platform and trying out a free game, or introducing a video surveillance console utility **motion**, or children programming app **Scratch** (<https://scratch.mit.edu/>) and create program. (The 6th and 7th exercise is optional, without which you can qualify up to 1.8 out of 2). Install and try Webstorm and other programmers tools from www.jetbrains.com and/

or [GitHub Student Developer Pack - GitHub Education](#).

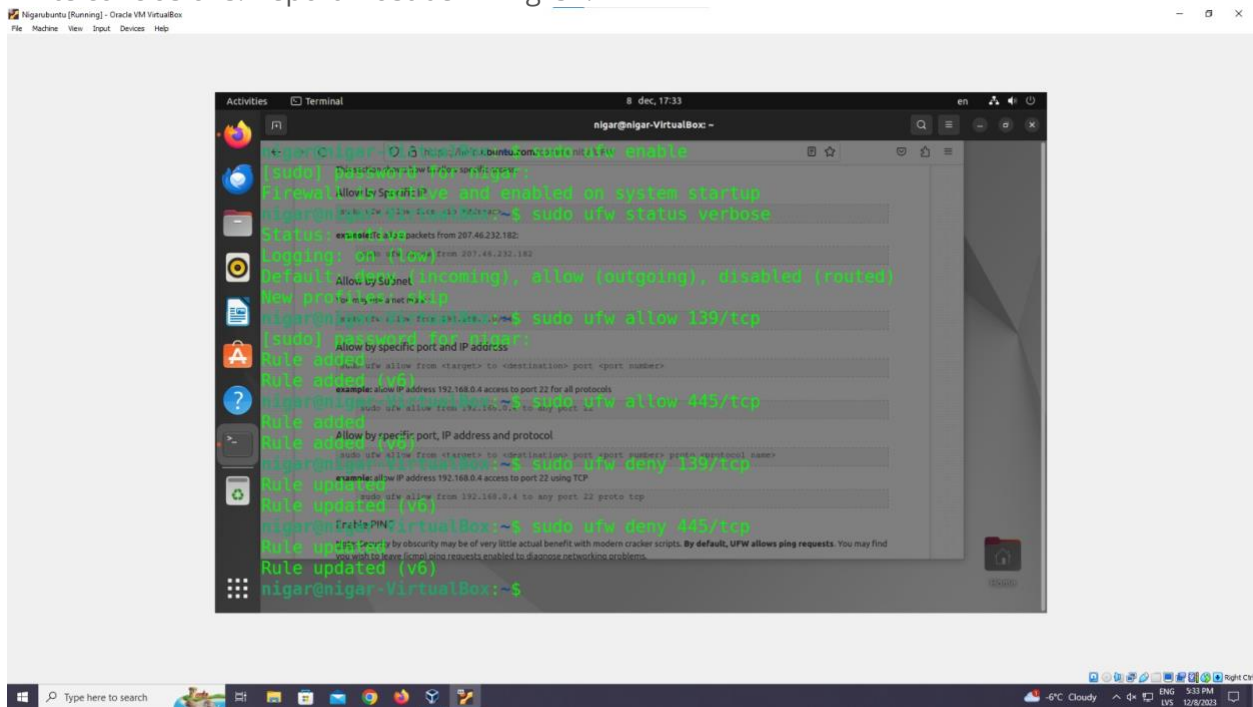


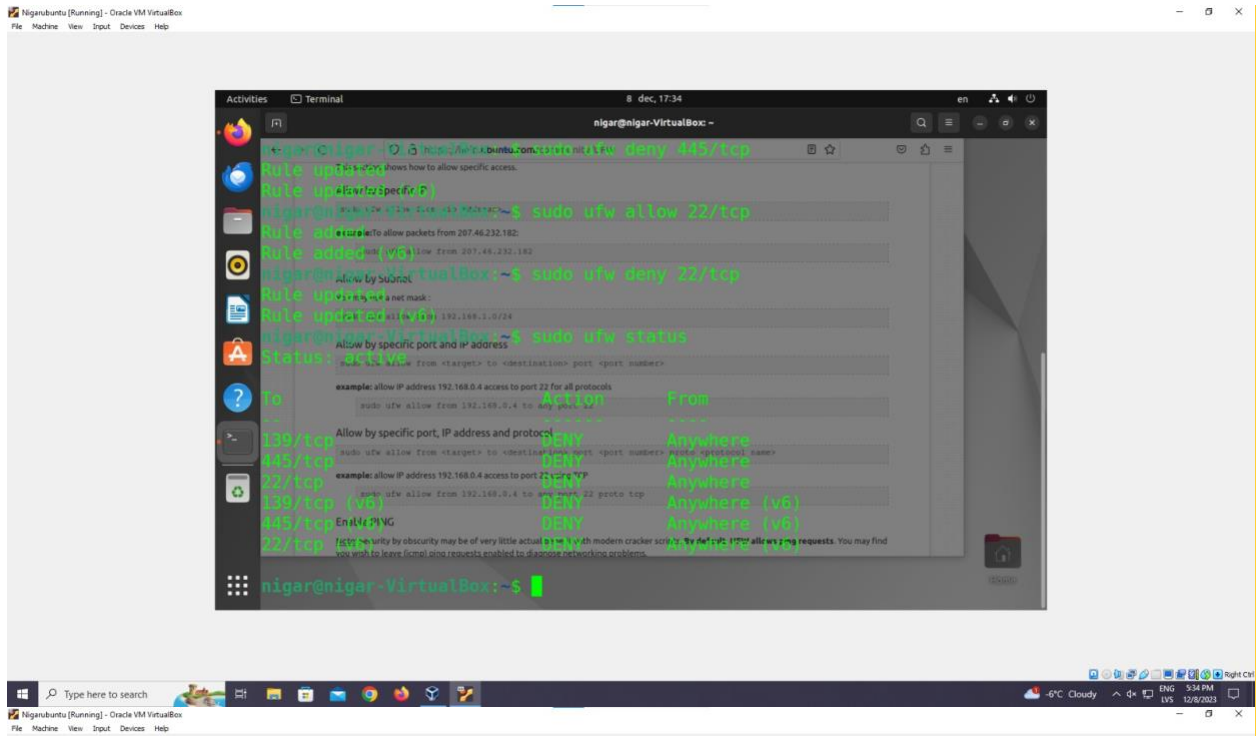




7) Test firewall **UFW** to allow/ deny Samba or SSH. Do it in CLI and GUI. Test different command line commands, make screenshots about them.

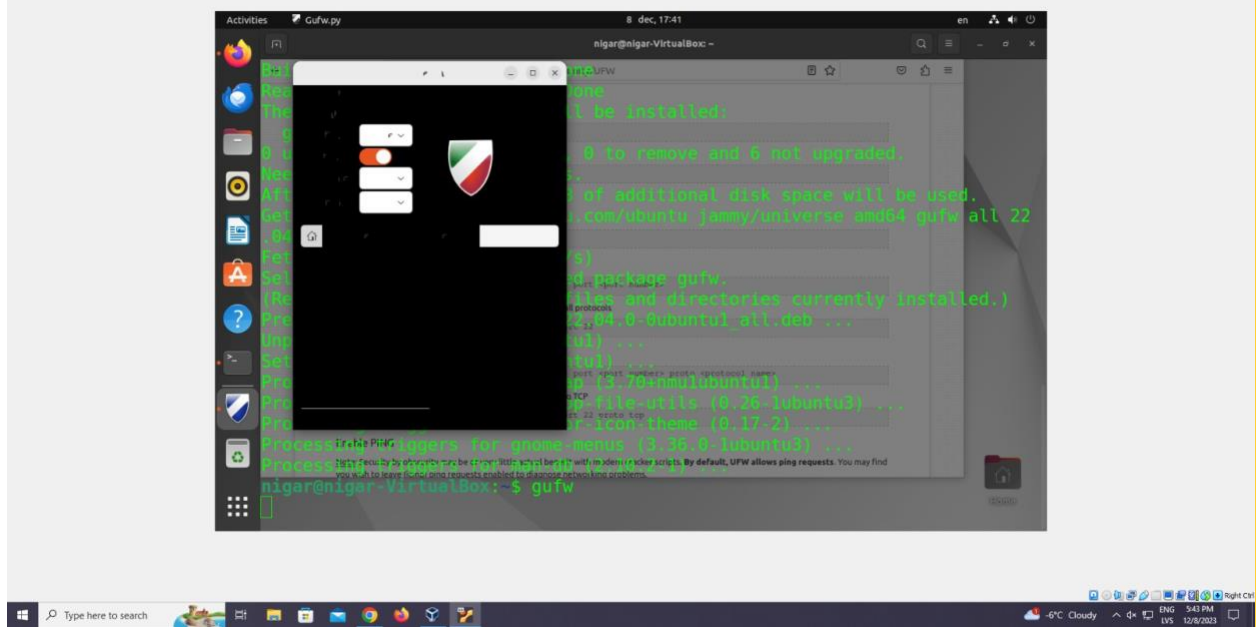
Write conclusions. Report must be in English.





```
nigar@nigar-VirtualBox:~$ sudo ufw deny 445/tcp
Rule added (deny)
nigar@nigar-VirtualBox:~$ sudo ufw allow 22/tcp
Rule added (allow)
nigar@nigar-VirtualBox:~$ sudo ufw deny 22/tcp
Rule added (deny)
nigar@nigar-VirtualBox:~$ sudo ufw status
Status: active
nigar@nigar-VirtualBox:~$
```

The screenshot shows a terminal window titled "nigar@nigar-VirtualBox: ~" with a date of 8 dec, 17:34. The user has executed several UFW commands: `sudo ufw deny 445/tcp`, `sudo ufw allow 22/tcp`, and `sudo ufw deny 22/tcp`. The output shows the rules being added. Finally, `sudo ufw status` shows the firewall is active. The terminal also displays some system messages and a warning about ping requests.



```
nigar@nigar-VirtualBox:~$ sudo apt-get install ubuntu-desktop
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be used:
  ubuntu-desktop-core-22.04 ubuntu-desktop-gnome ubuntu-desktop-minimal
  ubuntu-desktop-speech ubuntu-desktop-speech-core
The following packages will be upgraded:
  ubuntu-desktop-core-22.04 ubuntu-desktop-gnome ubuntu-desktop-minimal
  ubuntu-desktop-speech ubuntu-desktop-speech-core
0 to remove, 5 to upgrade, 0 to install, 0 to remove and 0 not upgraded.
Need to get 1.0 GB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/universe amd64 ubuntu-desktop-core-22.04 amd64 22.04.0-0ubuntu1~22.04.1 [1.0 GB]
Get:2 http://archive.ubuntu.com/ubuntu jammy/universe amd64 ubuntu-desktop-gnome amd64 22.04.0-0ubuntu1~22.04.1 [1.0 GB]
Get:3 http://archive.ubuntu.com/ubuntu jammy/universe amd64 ubuntu-desktop-minimal amd64 22.04.0-0ubuntu1~22.04.1 [1.0 GB]
Get:4 http://archive.ubuntu.com/ubuntu jammy/universe amd64 ubuntu-desktop-speech amd64 22.04.0-0ubuntu1~22.04.1 [1.0 GB]
Get:5 http://archive.ubuntu.com/ubuntu jammy/universe amd64 ubuntu-desktop-speech-core amd64 22.04.0-0ubuntu1~22.04.1 [1.0 GB]
Fetched 5.0 GB of additional disk space will be used.
Do you want to continue? [Y/n]
nigar@nigar-VirtualBox:~$
```

The screenshot shows a terminal window titled "nigar@nigar-VirtualBox: ~" with a date of 8 dec, 17:41. The user has executed `sudo apt-get install ubuntu-desktop`. The output shows the packages to be installed and the disk space requirements. The user has confirmed the installation by pressing 'Y'.

To sum up, finishing this practical gave me important knowledge about installing and adjusting Ubuntu 22.04 LTS. The examination of software programmes, user administration, command line expertise, and file sharing demonstrated how flexible and user-friendly the Linux system is. Furthermore, successful security measures were demonstrated by testing the Uncomplicated Firewall (UFW) for Samba and SSH access using both the command line and graphical interface. The optional chores showed off the strength of Ubuntu's software ecosystem even more, including the installation of a variety of tools and applications. Overall, the hands-on training

improved knowledge and proficiency in Linux system administration, highlighting the practical abilities necessary for efficient usage and upkeep of the operating system.