

Principles of Cloud Computing

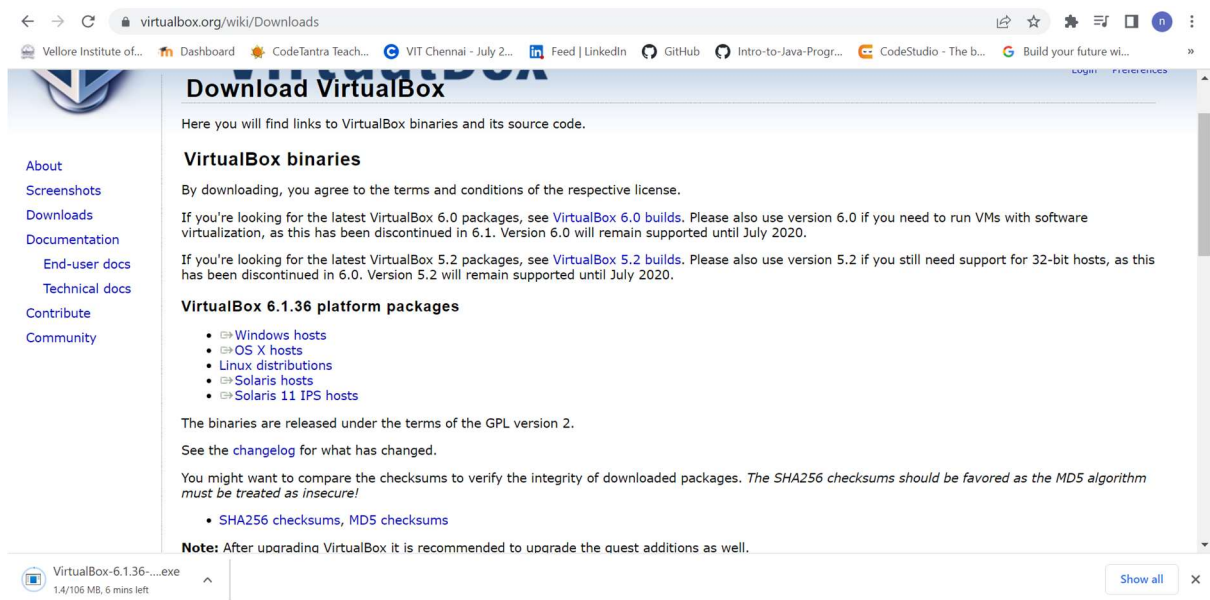
Tejas Rahul Rokade

20BDS0033

LAB-1

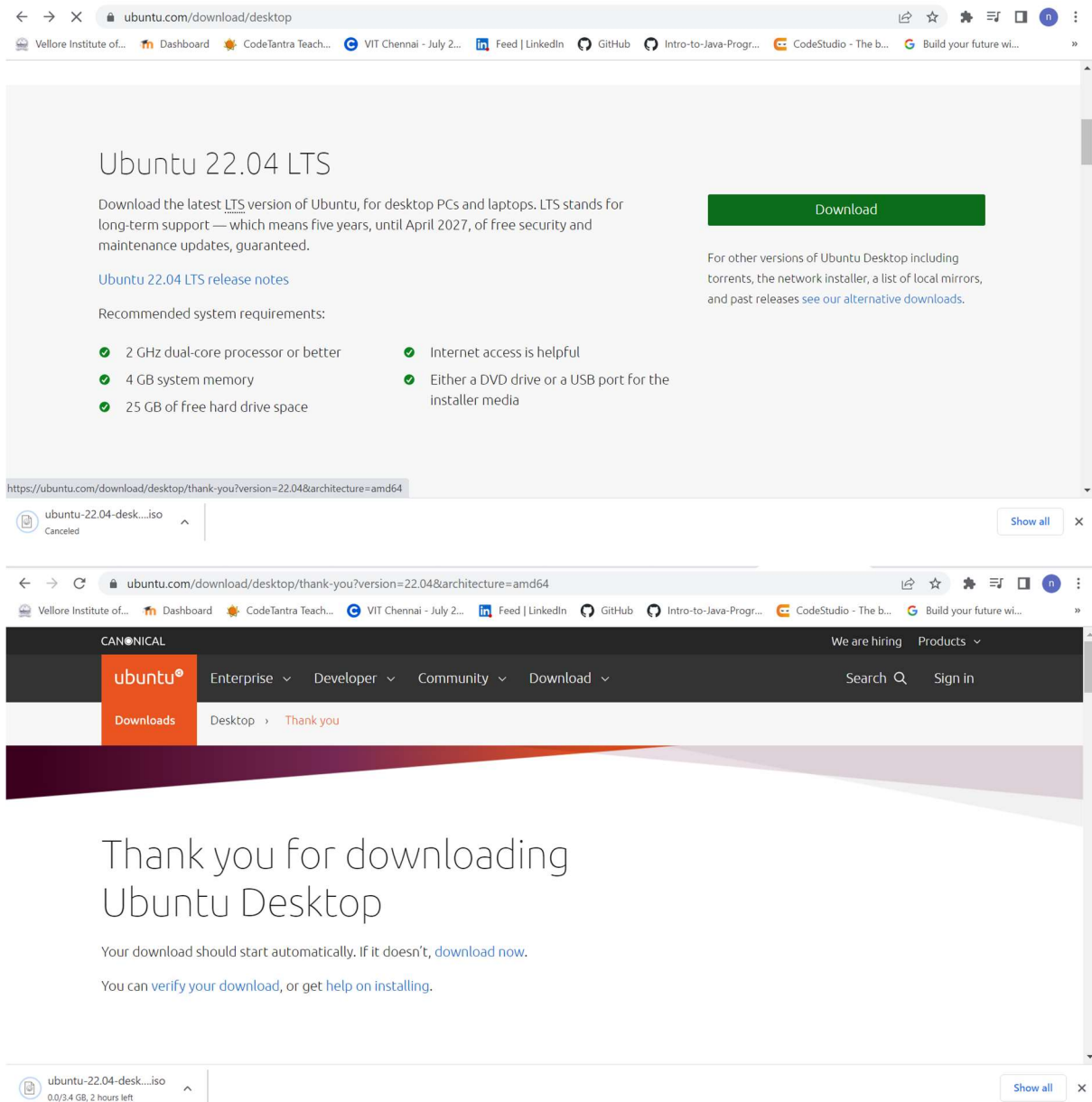
Using the below link download and install the oracle virtual box

<https://www.virtualbox.org/wiki/Downloads>

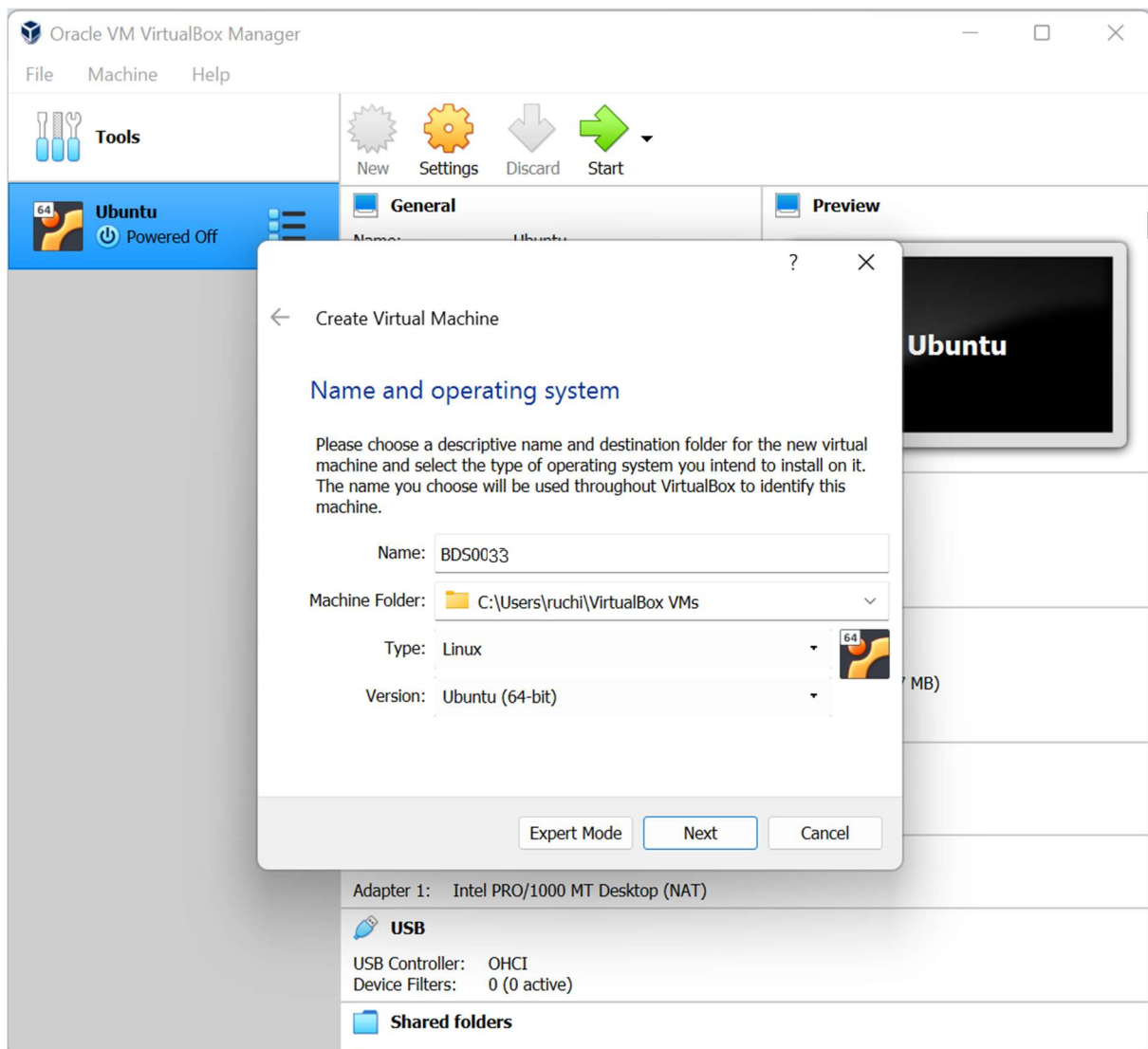


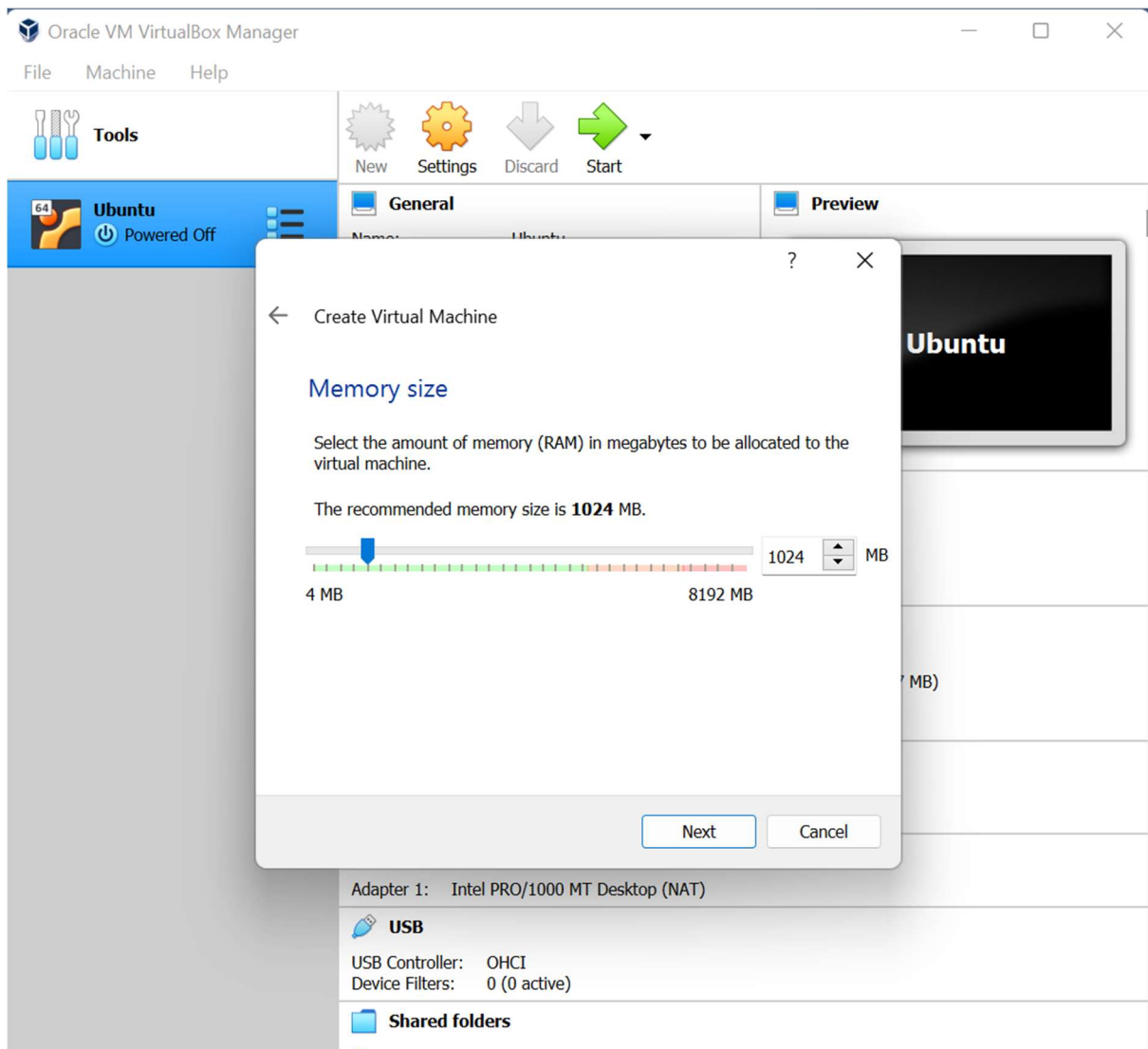
Download the ubuntu OS using the given below link

<https://ubuntu.com/download/desktop>



iso file will be downloaded using this







Tools



New



Settings



Discard



Start



Ubuntu

Powered Off

← Create Virtual Hard Disk

Hard disk file type

Please choose the type of file that you would like to use for the new virtual hard disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.

- ☒ VDI (VirtualBox Disk Image)
- ☐ VHD (Virtual Hard Disk)
- ☐ VMDK (Virtual Machine Disk)

Expert Mode

Next

Cancel

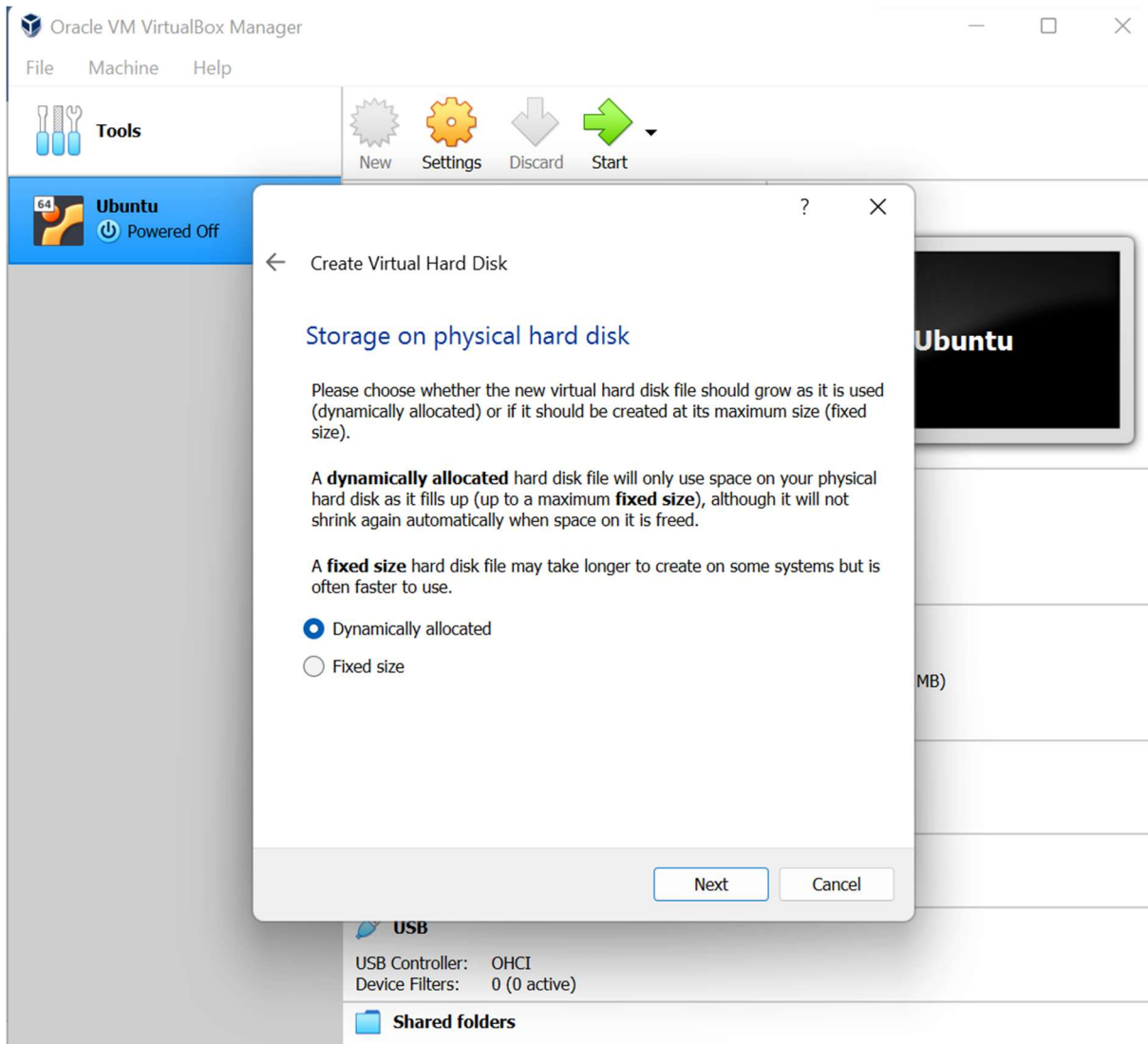
USB

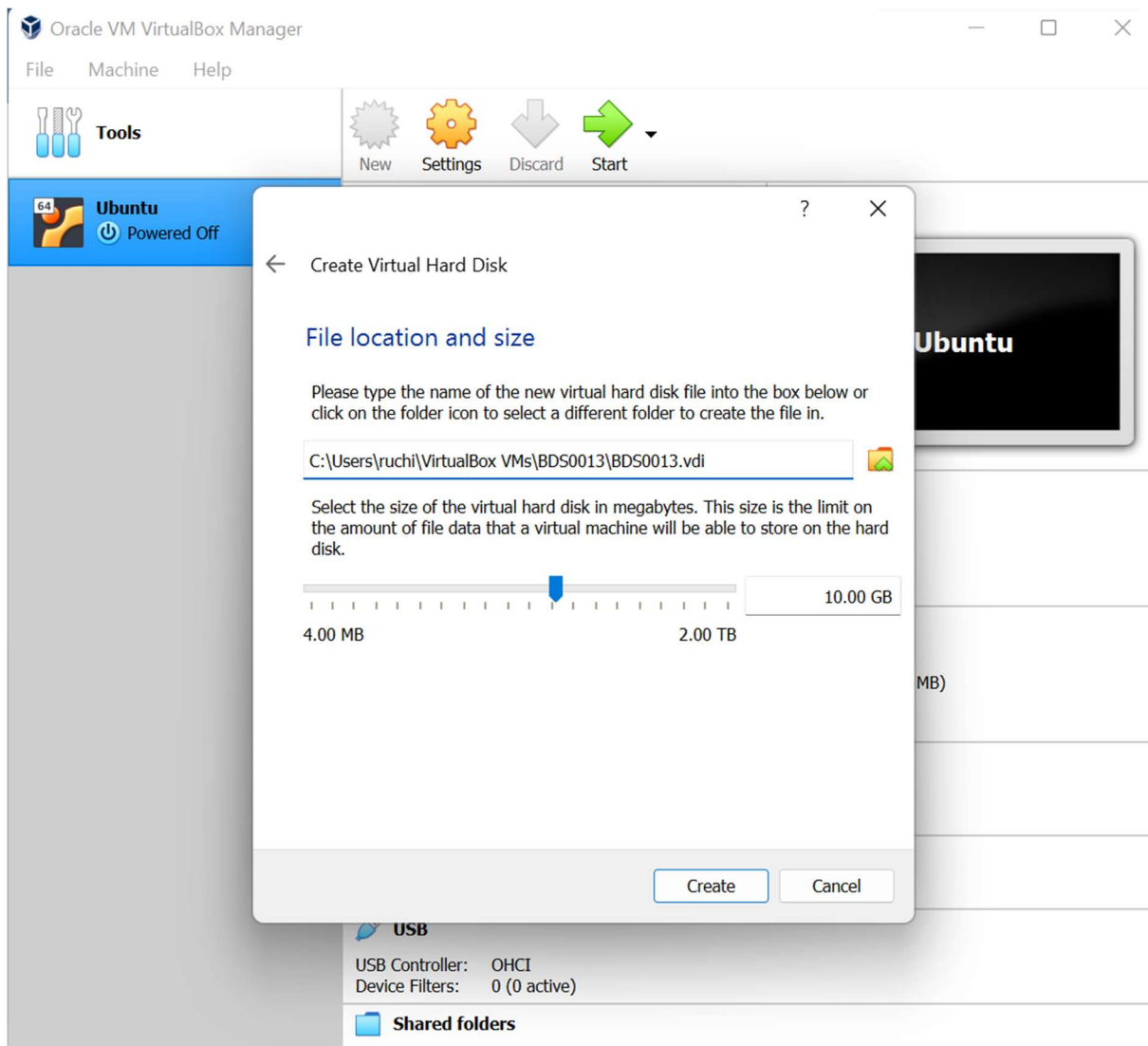
USB Controller: OHCI
Device Filters: 0 (0 active)

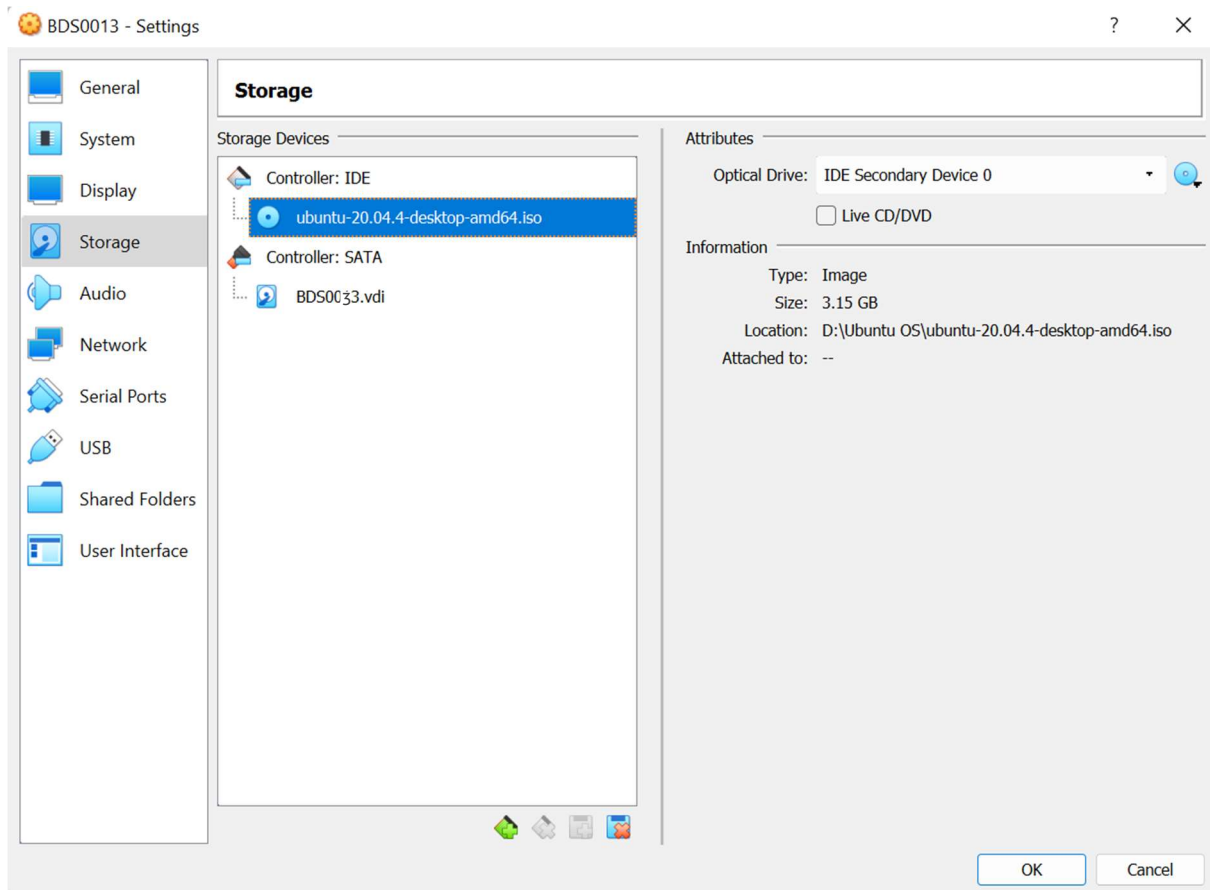
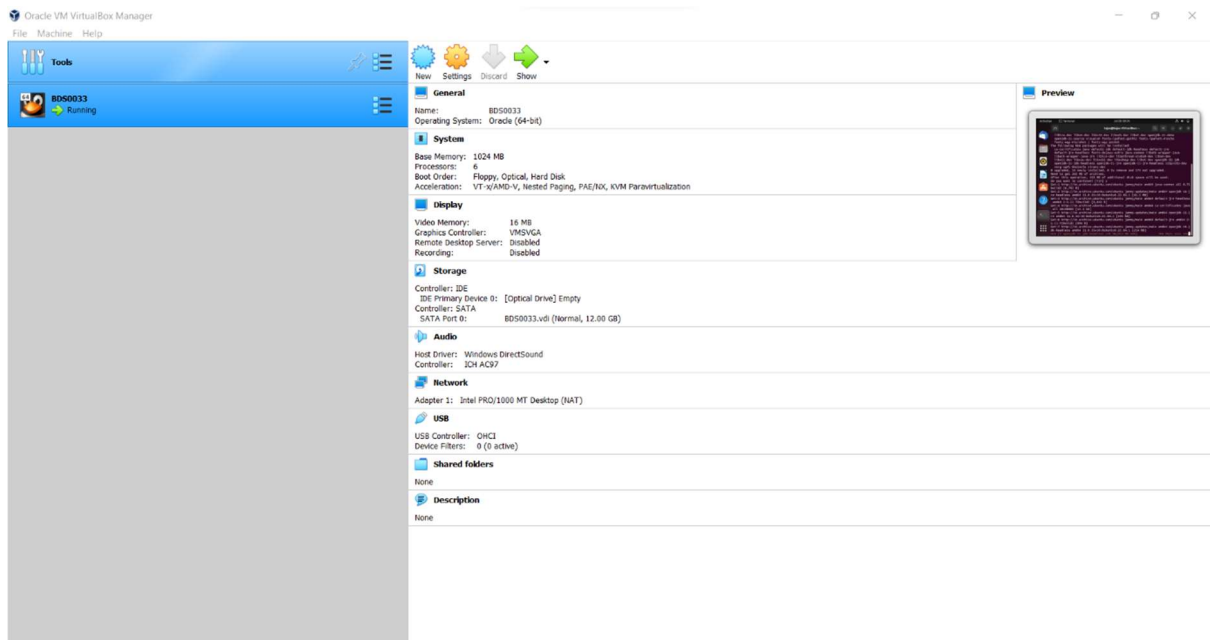
Shared folders

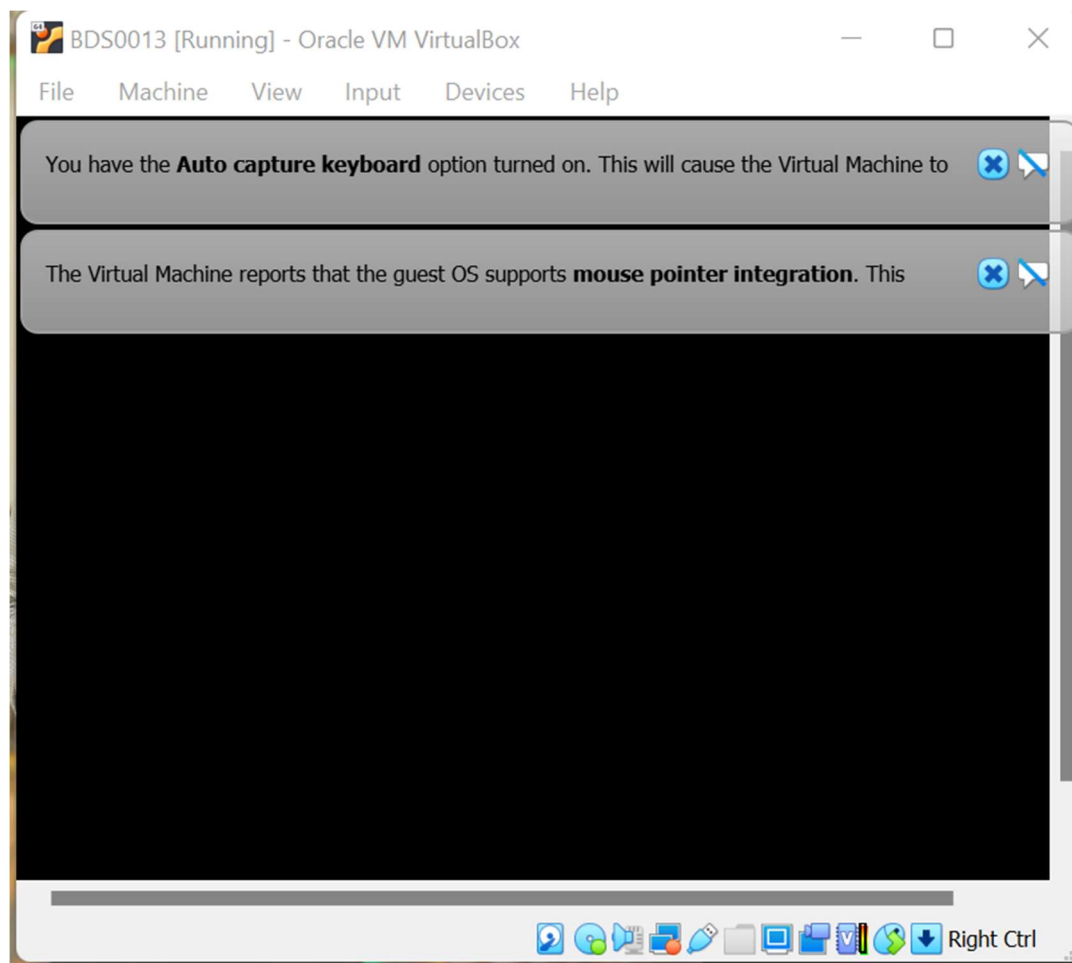
Ubuntu

MB)



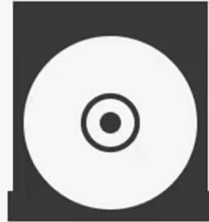






Welcome

- English
- Español
- Esperanto
- Euskara
- Français
- Gaeilge
- Galego
- Hrvatski
- Íslenska
- Italiano
- Kurdî
- Latviski
- Lietuviškai
- Magyar
- Nederlands
- No localization (UTF-8)
- Norsk bokmål



Try Ubuntu

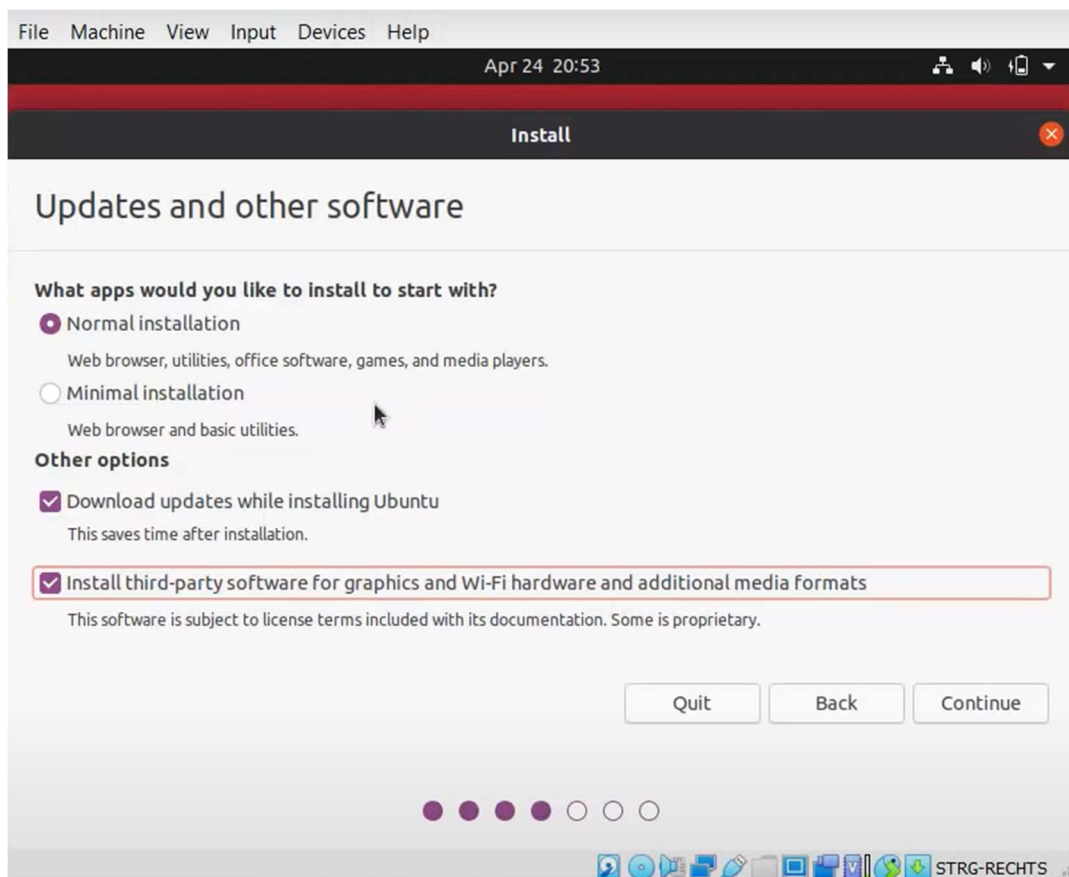
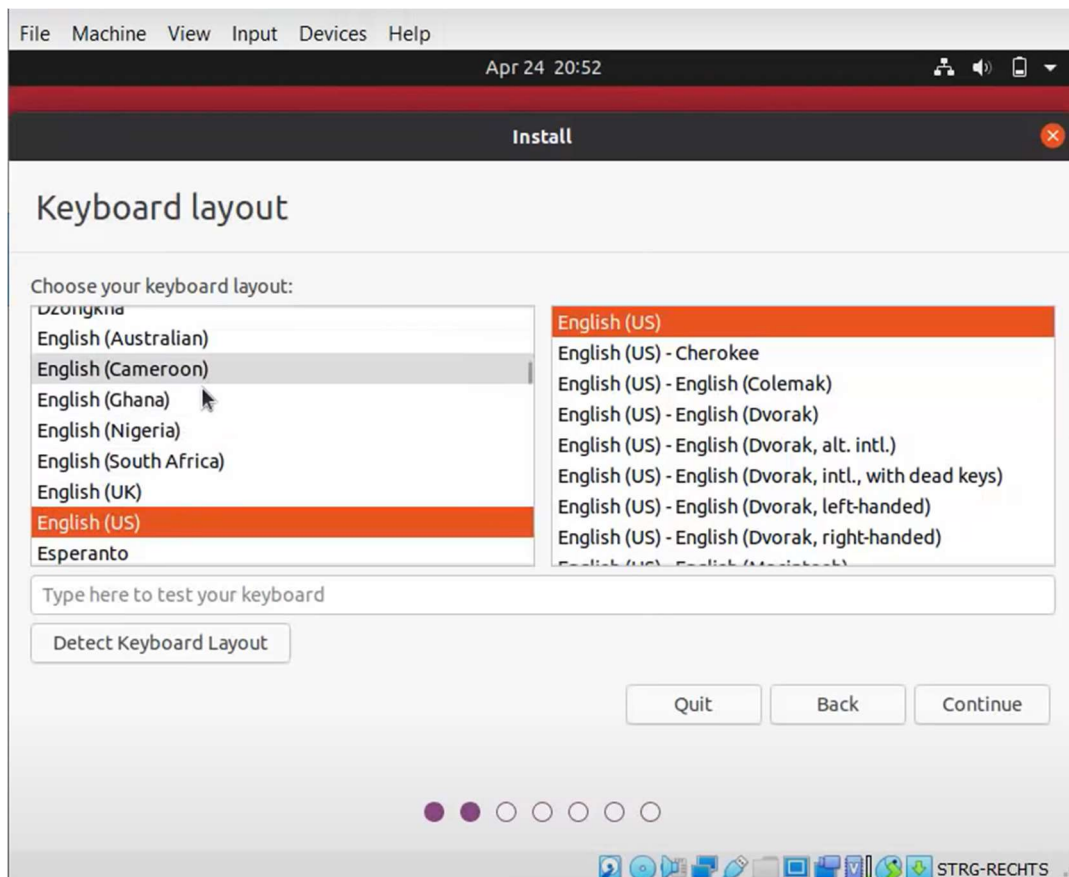


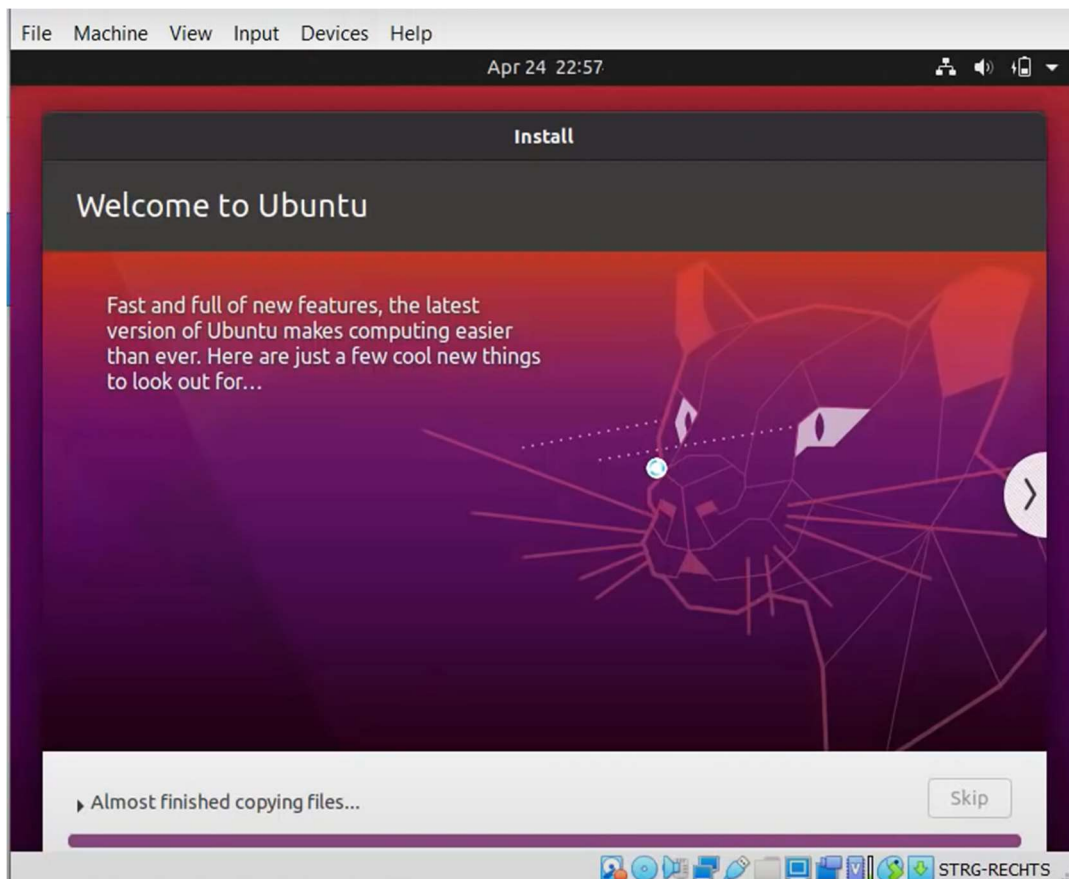
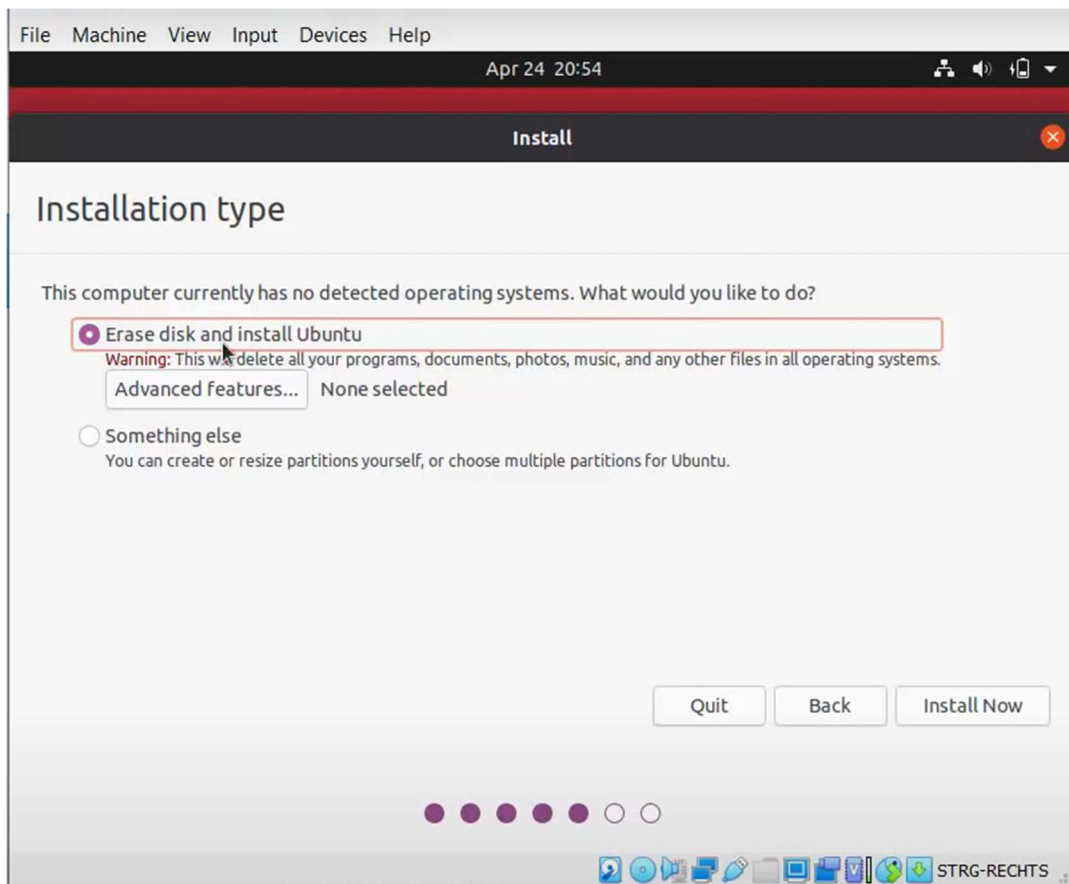
Install Ubuntu

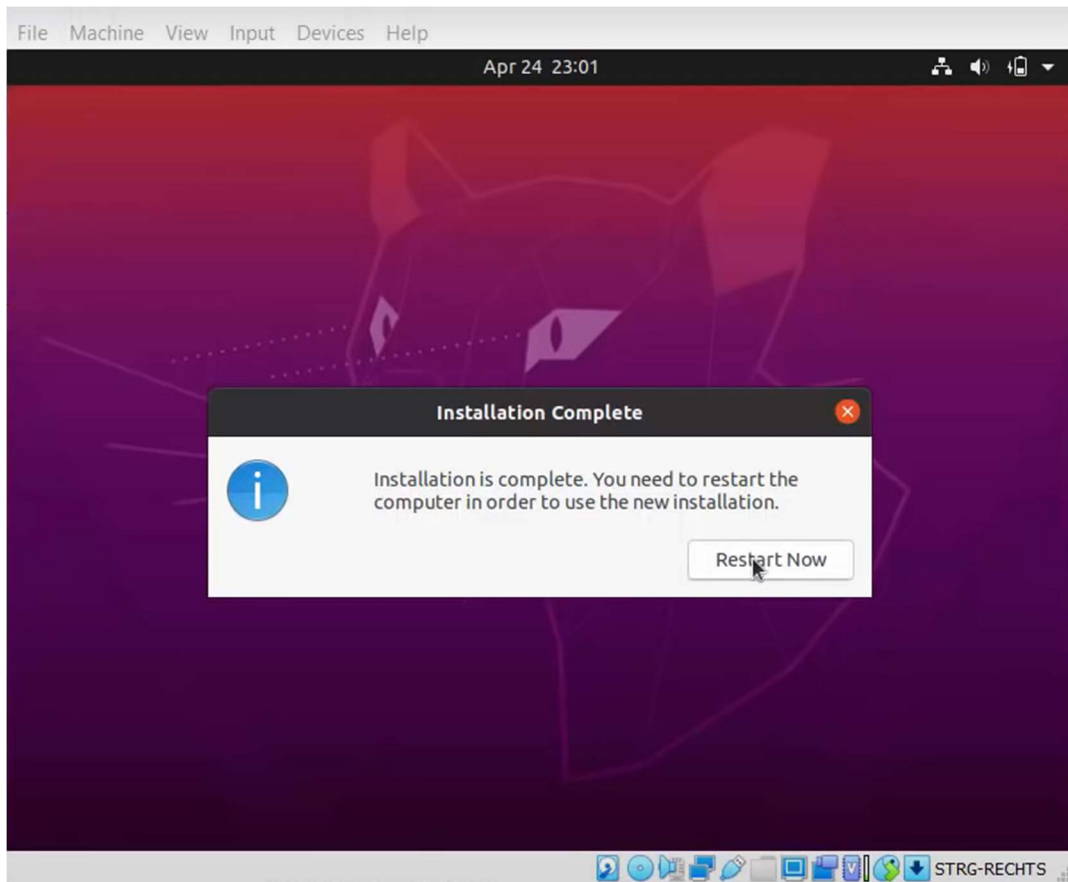
You can try Ubuntu without making any changes to your computer, directly from this CD.

Or if you're ready, you can install Ubuntu alongside (or instead of) your current operating system. This shouldn't take too long.

You may wish to read the [release notes](#).





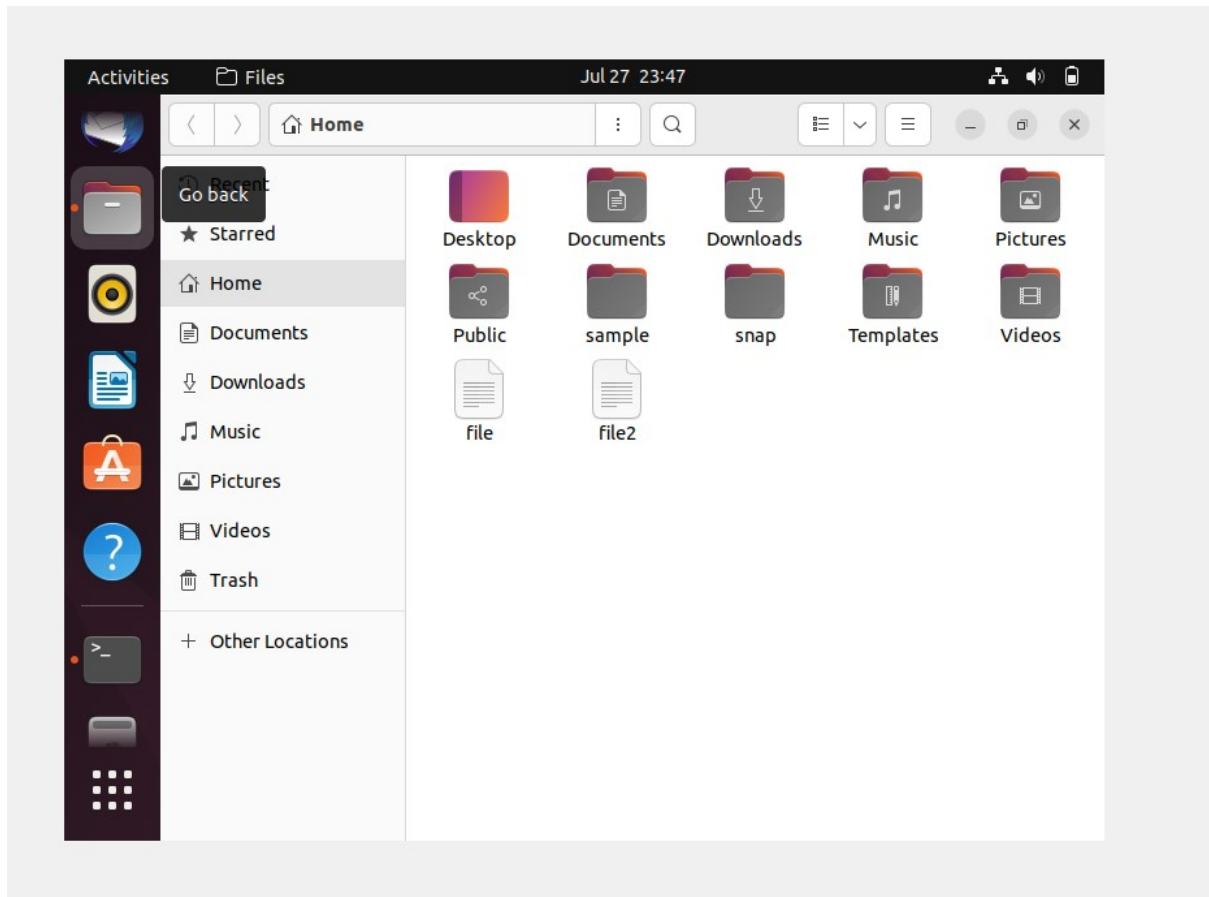


Linux Commands :

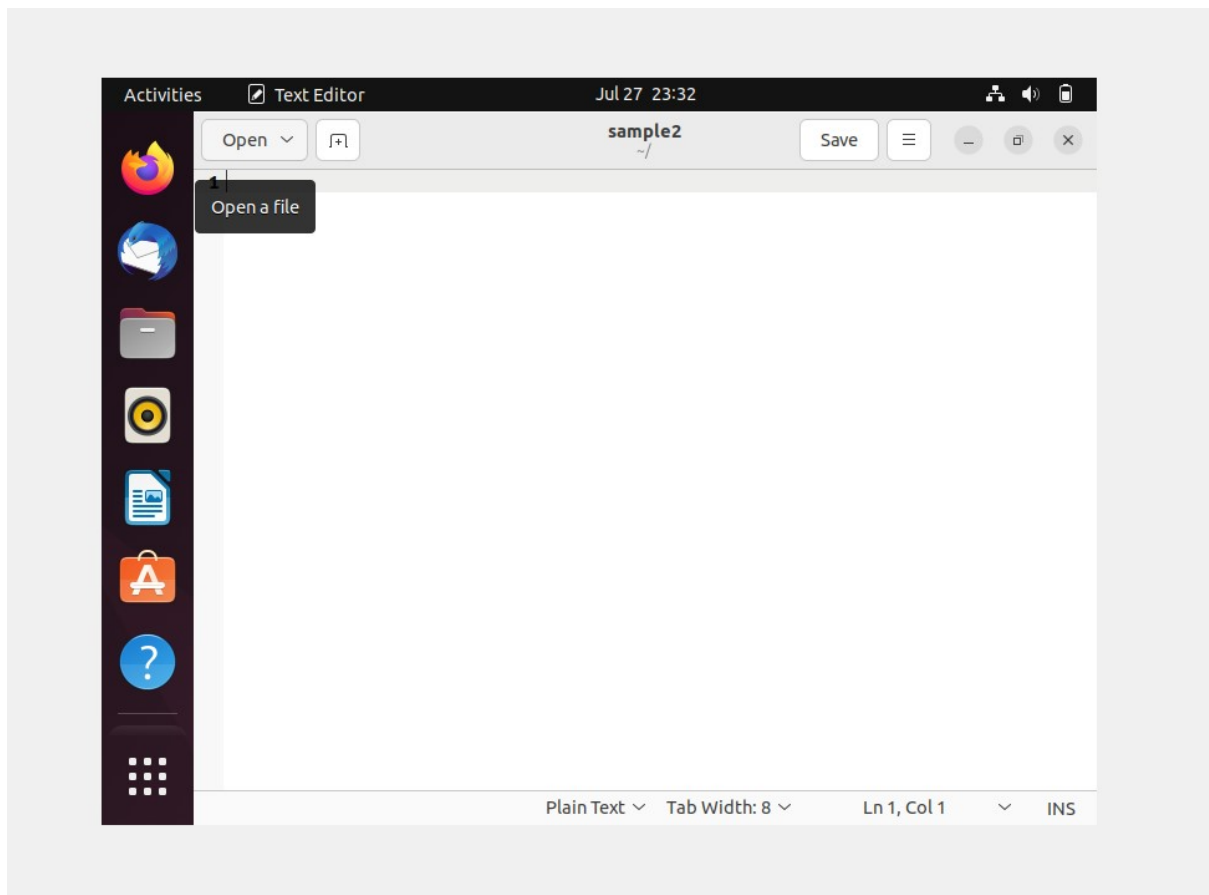
```
Activities  Terminal  Jul 27 23:45
tejas@tejas-VirtualBox: ~
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  Pictures  snap      Videos
Documents Music      Public   Templates
tejas@tejas-VirtualBox:~$ pwd
/home/tejas
tejas@tejas-VirtualBox:~$ mkdir
mkdir: missing operand
Try 'mkdir --help' for more information.
tejas@tejas-VirtualBox:~$ mkdir sample
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  Pictures  sample  Templates
Documents Music      Public   snap     Videos
tejas@tejas-VirtualBox:~$ cd sample
tejas@tejas-VirtualBox:~/sample$ cd
tejas@tejas-VirtualBox:~$ gedit sample2
tejas@tejas-VirtualBox:~$ touch file
tejas@tejas-VirtualBox:~$ cat file2
cat: file2: No such file or directory
tejas@tejas-VirtualBox:~$ cat > file2
Hello Tejas here
^Z
[1]+  Stopped                  cat > file2
tejas@tejas-VirtualBox:~$ cat file2
Hello Tejas here
tejas@tejas-VirtualBox:~$
```

Mkdir

```
tejas@tejas-VirtualBox:~$ mkdir sample
```

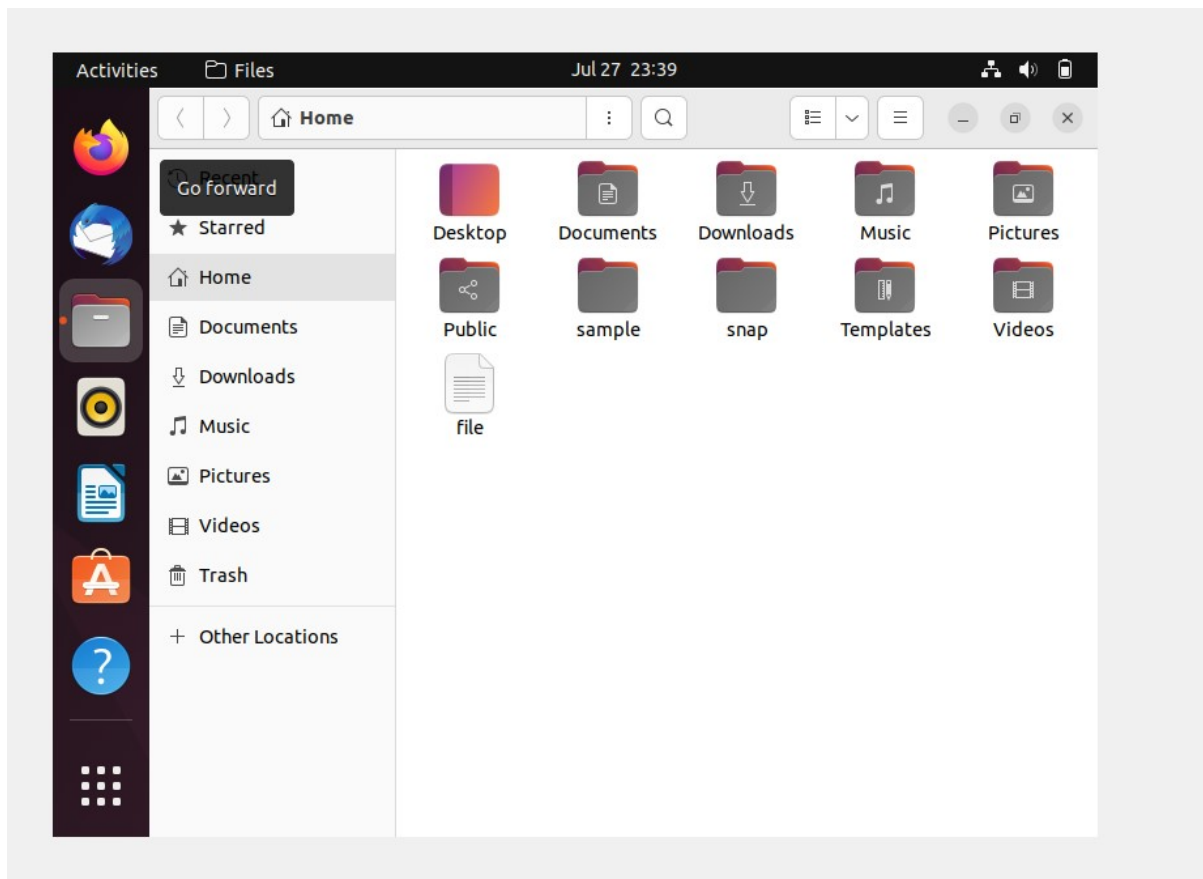


Gedit



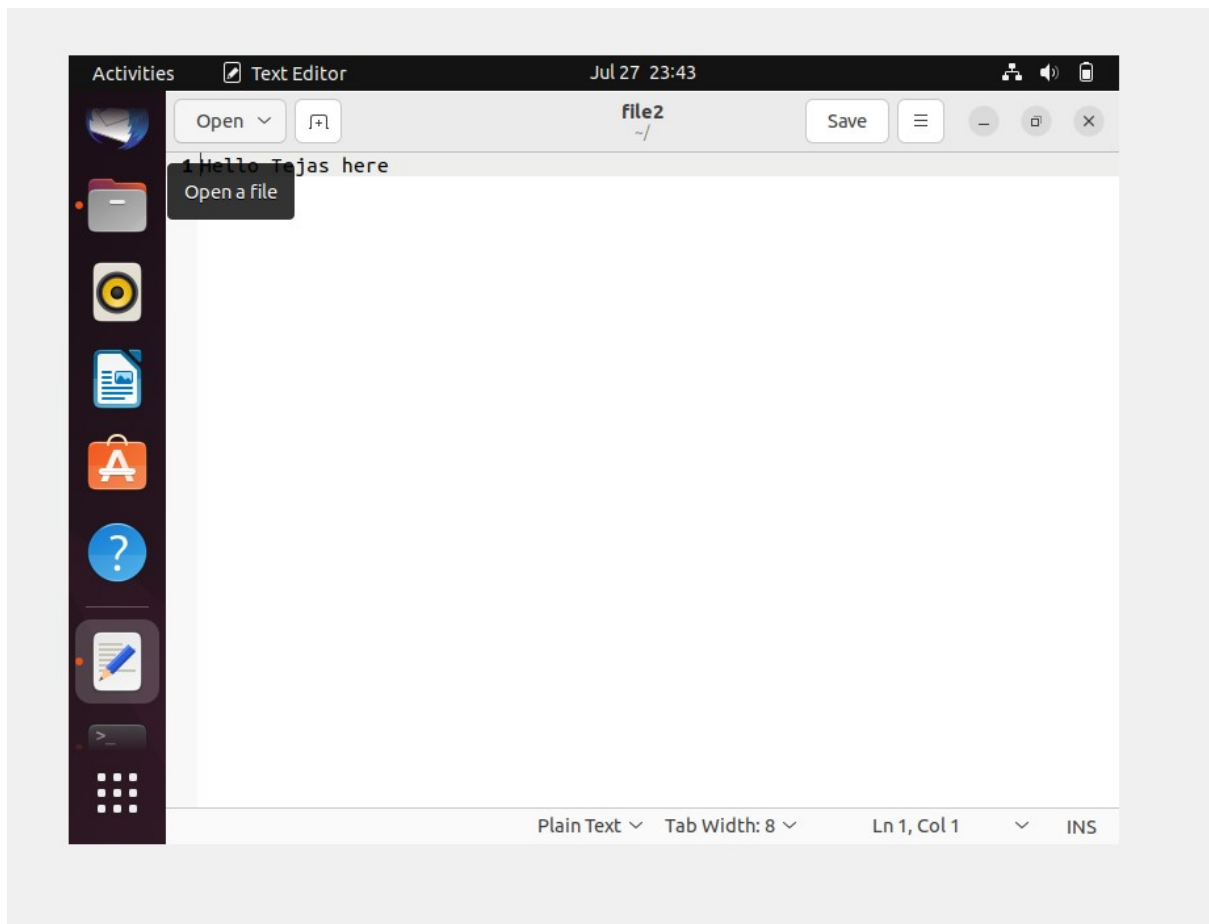
Touch

```
tejas@tejas-VirtualBox:~$ touch file
```



Cat

```
tejas@tejas-VirtualBox:~$ cat > file2
Hello Tejas here
^Z
[1]+  Stopped                  cat > file2
tejas@tejas-VirtualBox:~$ cat file2
Hello Tejas here
tejas@tejas-VirtualBox:~$
```

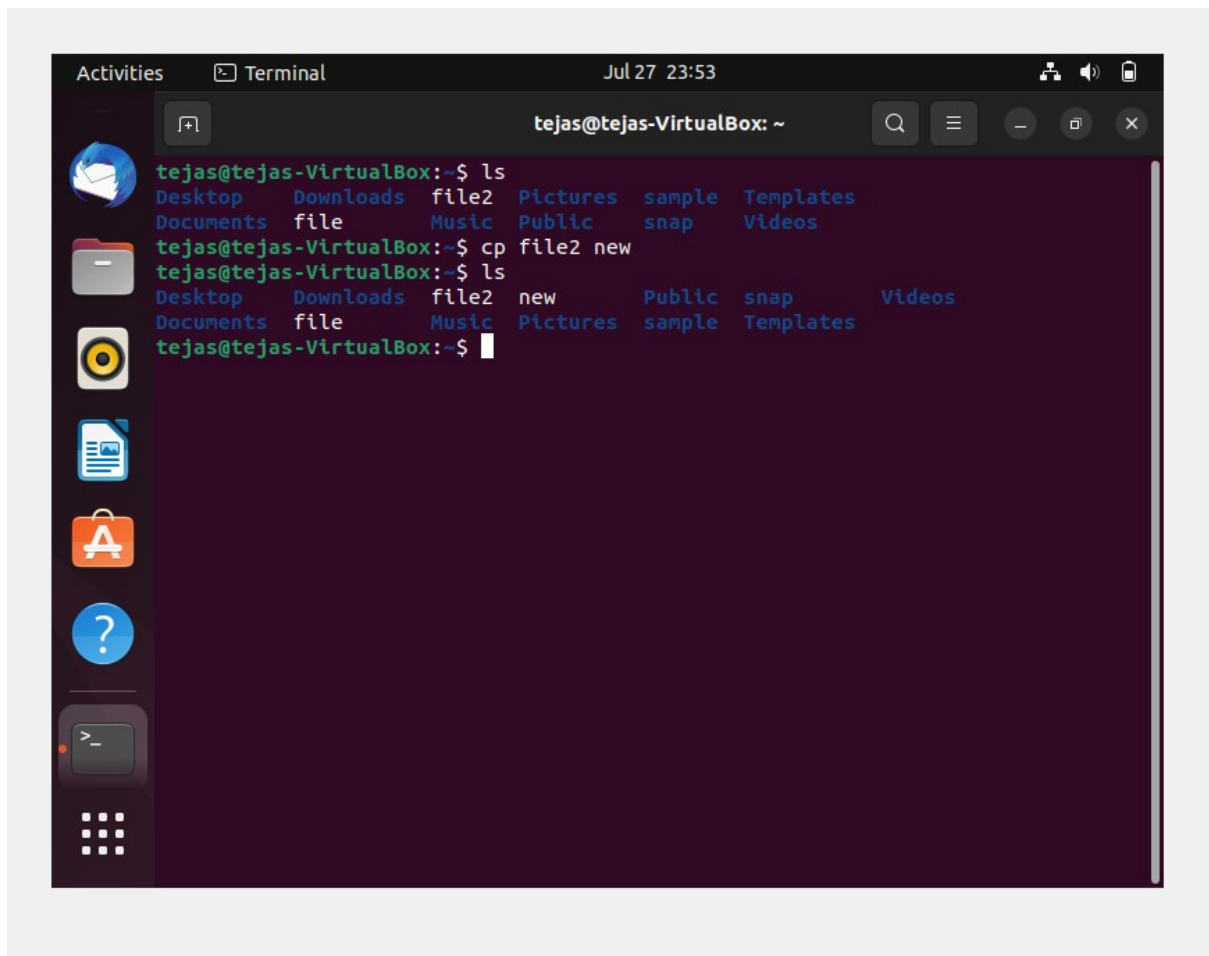
Mv

```
tejas@tejas-VirtualBox:~$ mkdir f1 f2
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  f2      file2  new      Public  snap      Videos
Documents f1         file   Music  Pictures sample  Templates

tejas@tejas-VirtualBox:~$ sudo mv f2/ f1
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  file  Music  Pictures  sample  Templates
Documents f1        file2  new    Public    snap    Videos

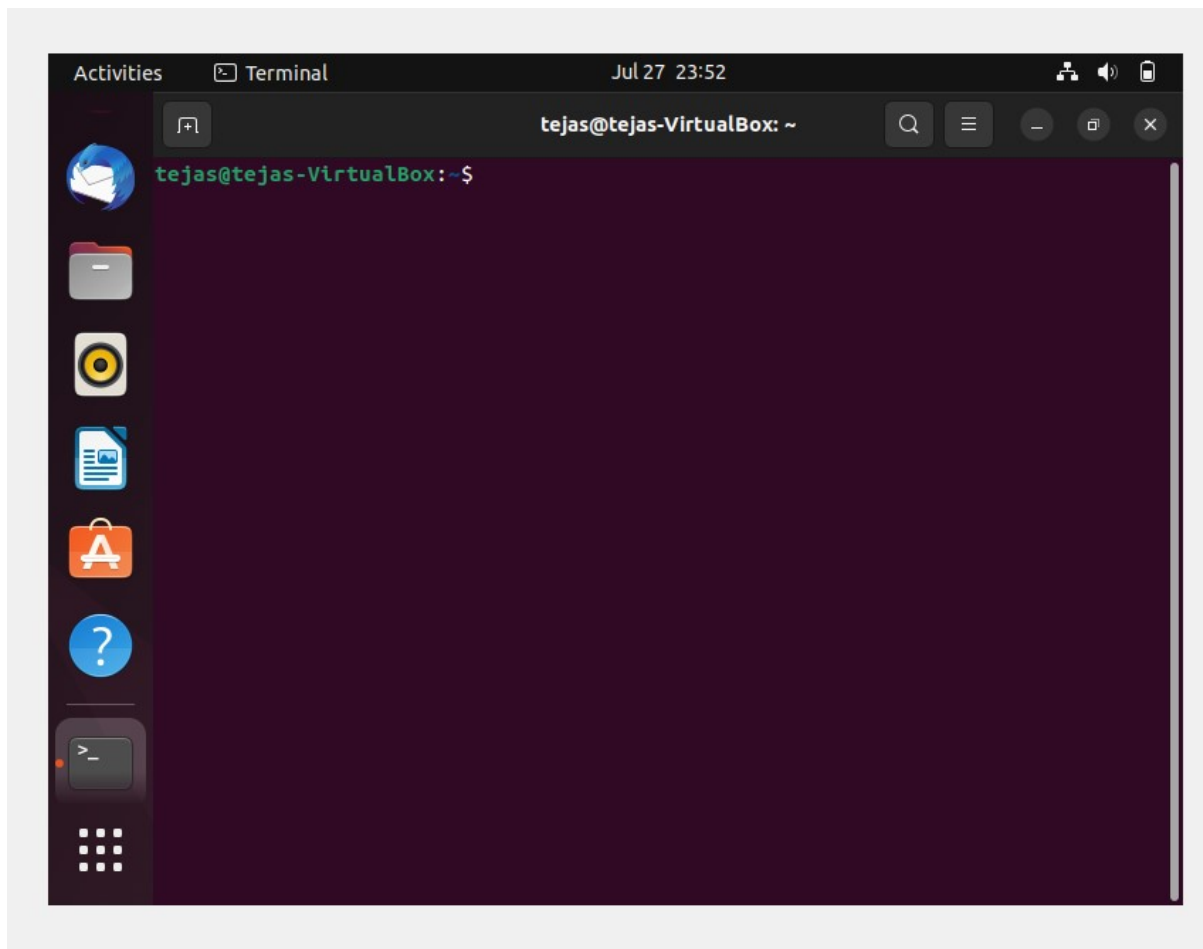
tejas@tejas-VirtualBox:~$ cd f1
tejas@tejas-VirtualBox:~/f1$ ls
f2
tejas@tejas-VirtualBox:~/f1$
```

Cp



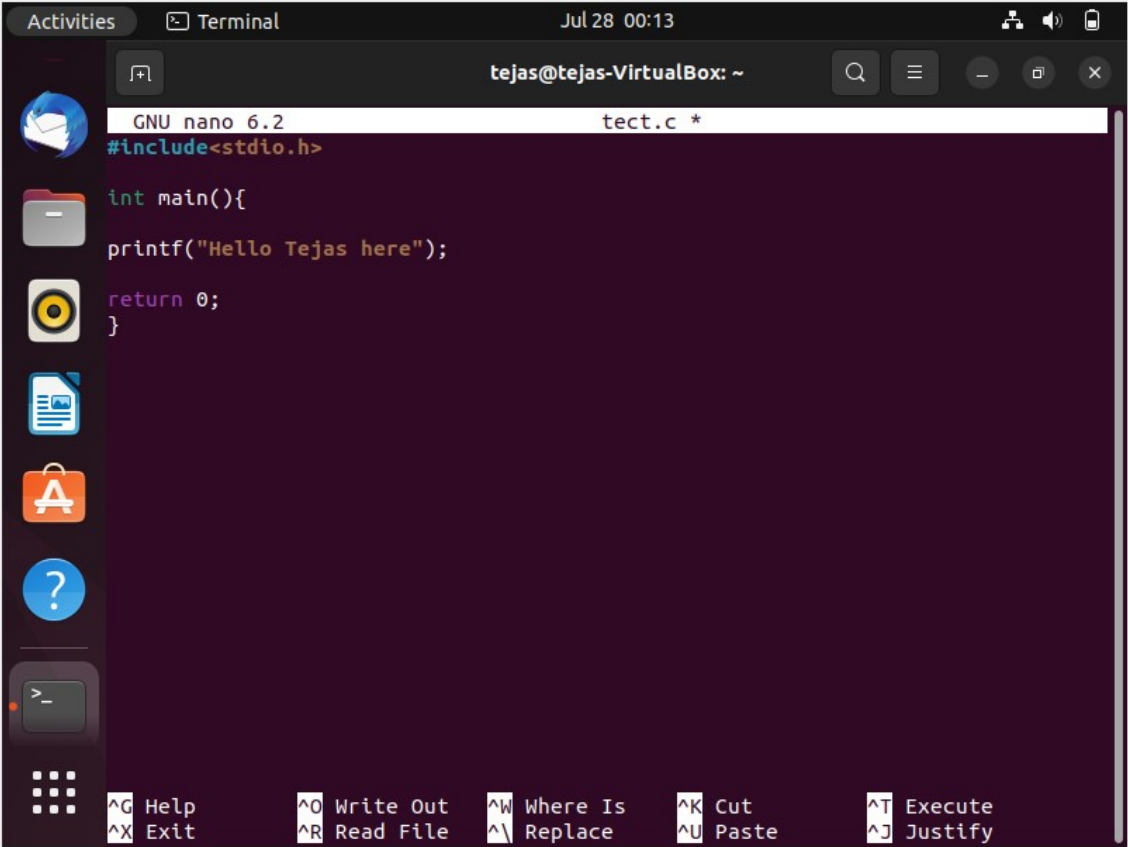
Clear

```
tejas@tejas-VirtualBox:~$ clear
```



Nano

```
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  file2    Music  Pictures  snap    Templates
Documents f1         hello.c  new    Public   tect.c  Videos
tejas@tejas-VirtualBox:~$
```



```
GNU nano 6.2 tect.c *
#include<stdio.h>

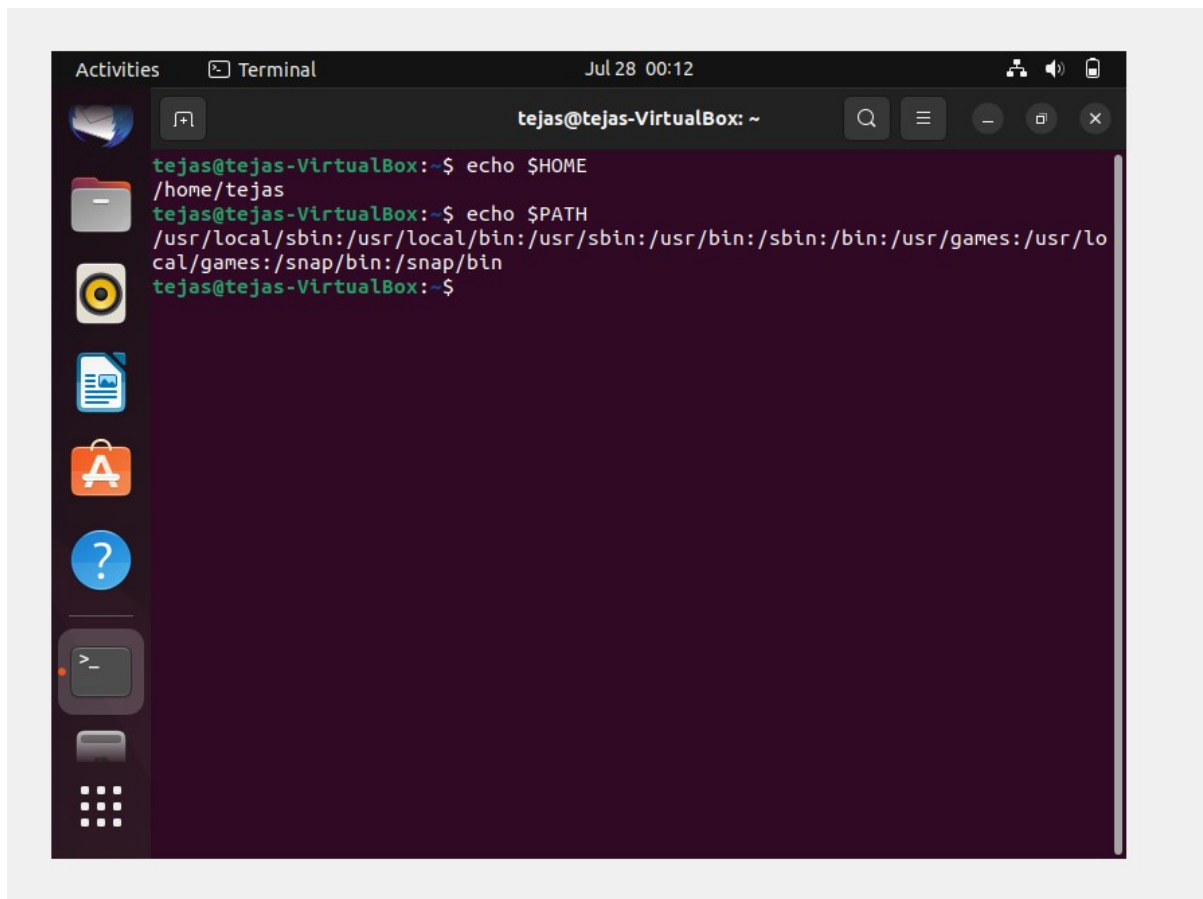
int main(){
printf("Hello Tejas here");

return 0;
}
```

Activities Terminal Jul 28 00:13 tejas@tejas-VirtualBox: ~

Help Exit Write Out Read File Where Is Replace Cut Paste Execute Justify

Echo

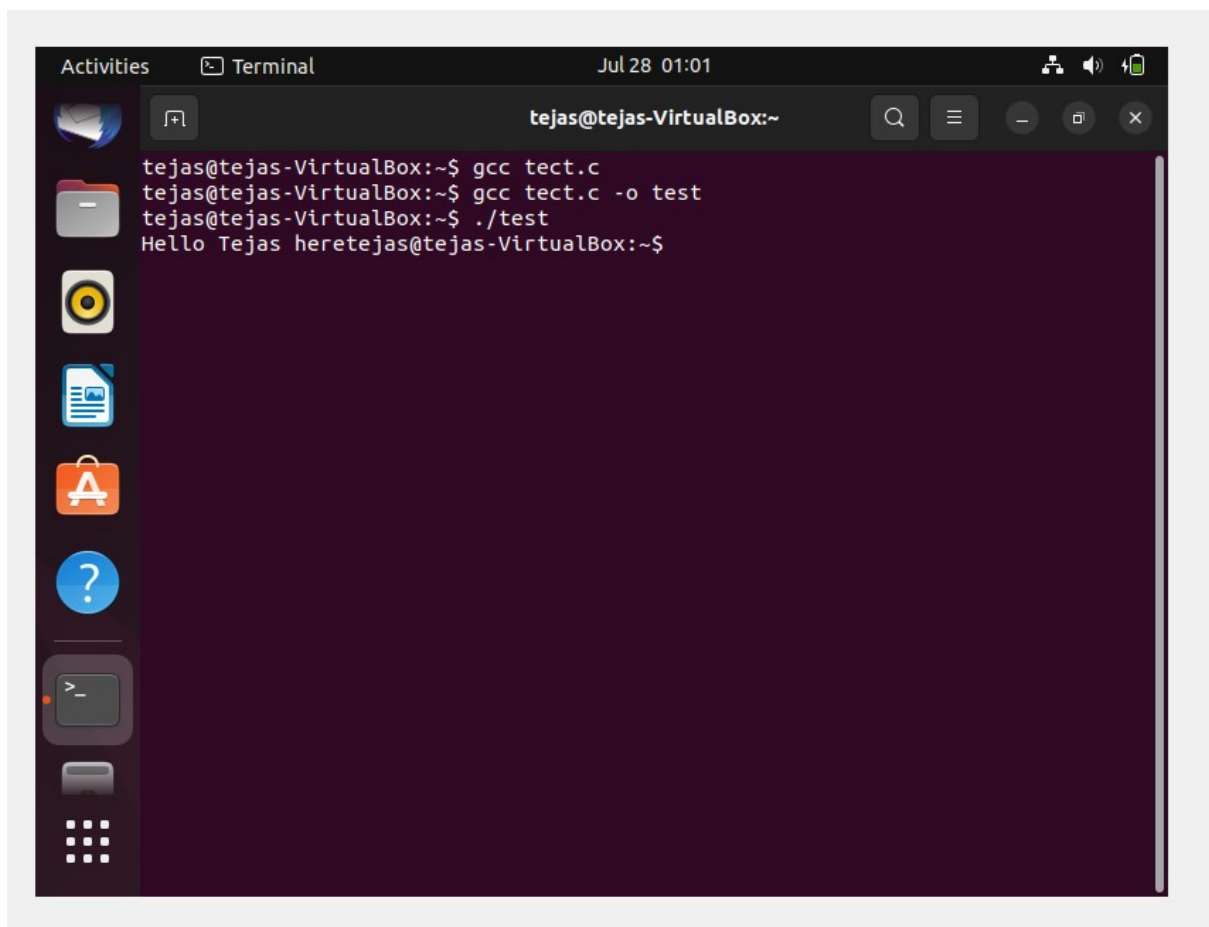


Rm

```
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  file  Music  Pictures  sample  Templates
Documents  f1      file2  new   Public  snap    Videos
tejas@tejas-VirtualBox:~$ rm file
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  file2  new   Public  snap    Videos
Documents  f1      Music  Pictures  sample  Templates
tejas@tejas-VirtualBox:~$ rm -r sample
tejas@tejas-VirtualBox:~$ ls
Desktop  Downloads  file2  new   Public  Templates
Documents  f1      Music  Pictures  snap    Videos
tejas@tejas-VirtualBox:~$
```

Multiple commands

C program

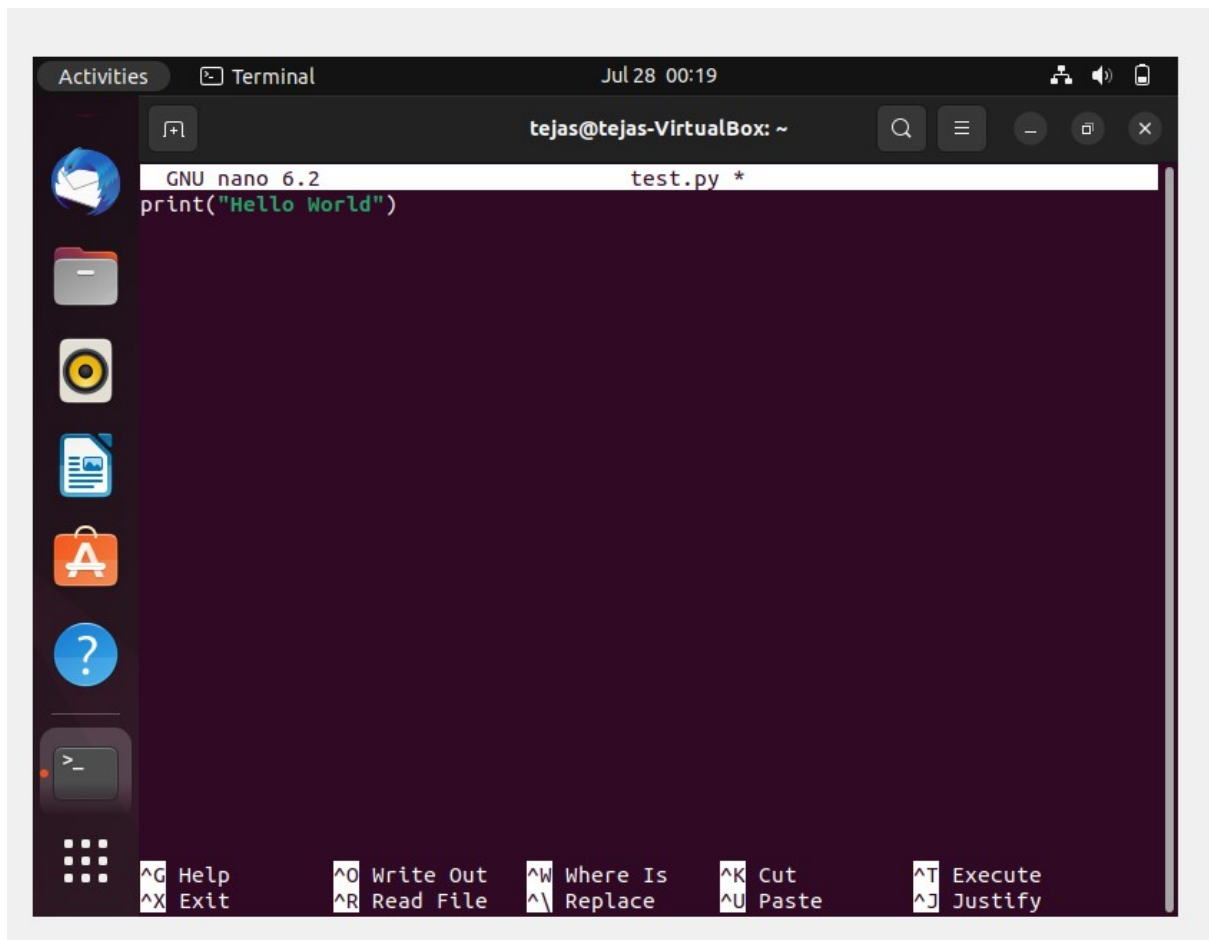


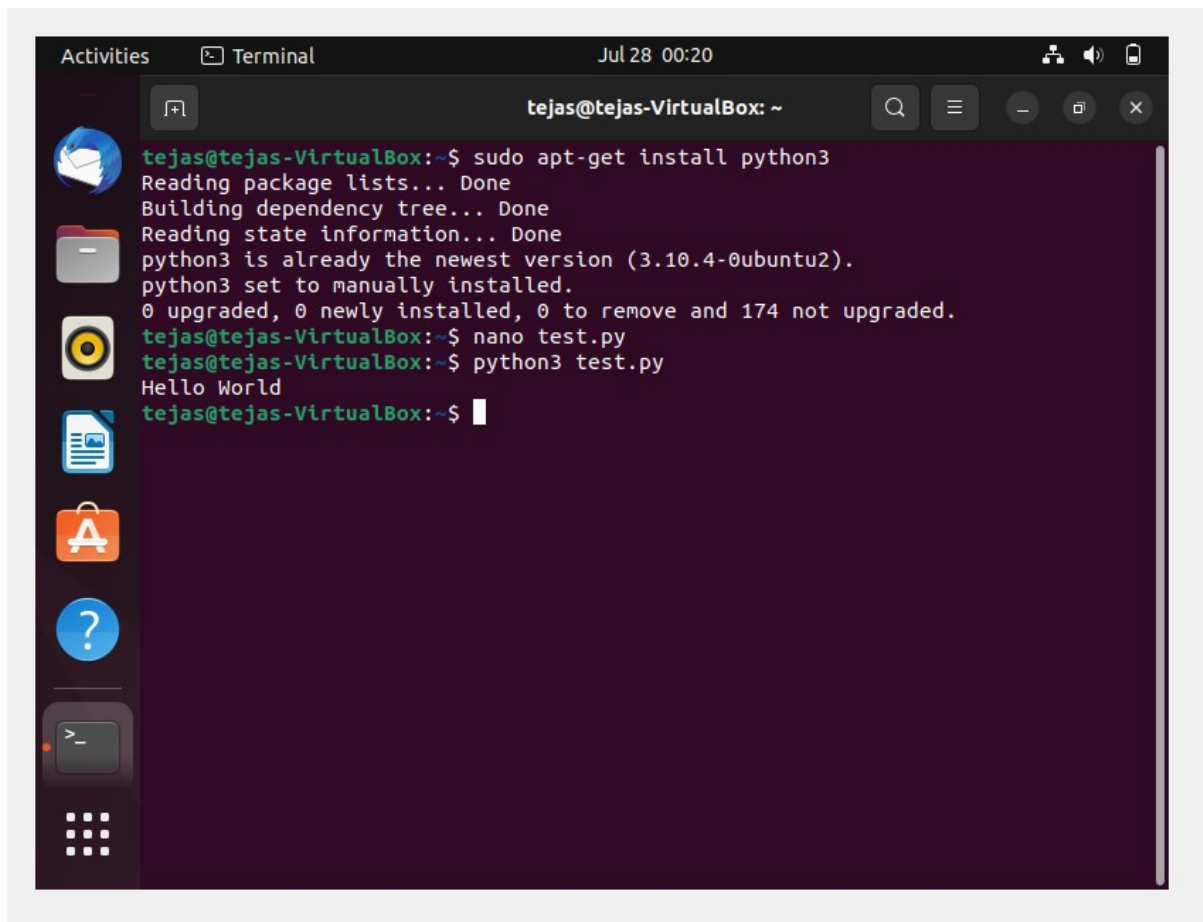
The screenshot shows a terminal window titled "tejas@tejas-VirtualBox:~" with a dark purple background. The terminal displays the following commands and output:

```
tejas@tejas-VirtualBox:~$ gcc tect.c
tejas@tejas-VirtualBox:~$ gcc tect.c -o test
tejas@tejas-VirtualBox:~$ ./test
Hello Tejas heretejas@tejas-VirtualBox:~$
```

The terminal window is part of a desktop environment with a sidebar on the left containing icons for Activities, Terminal, and various applications. The top of the window shows the date and time as "Jul 28 01:01".

Python

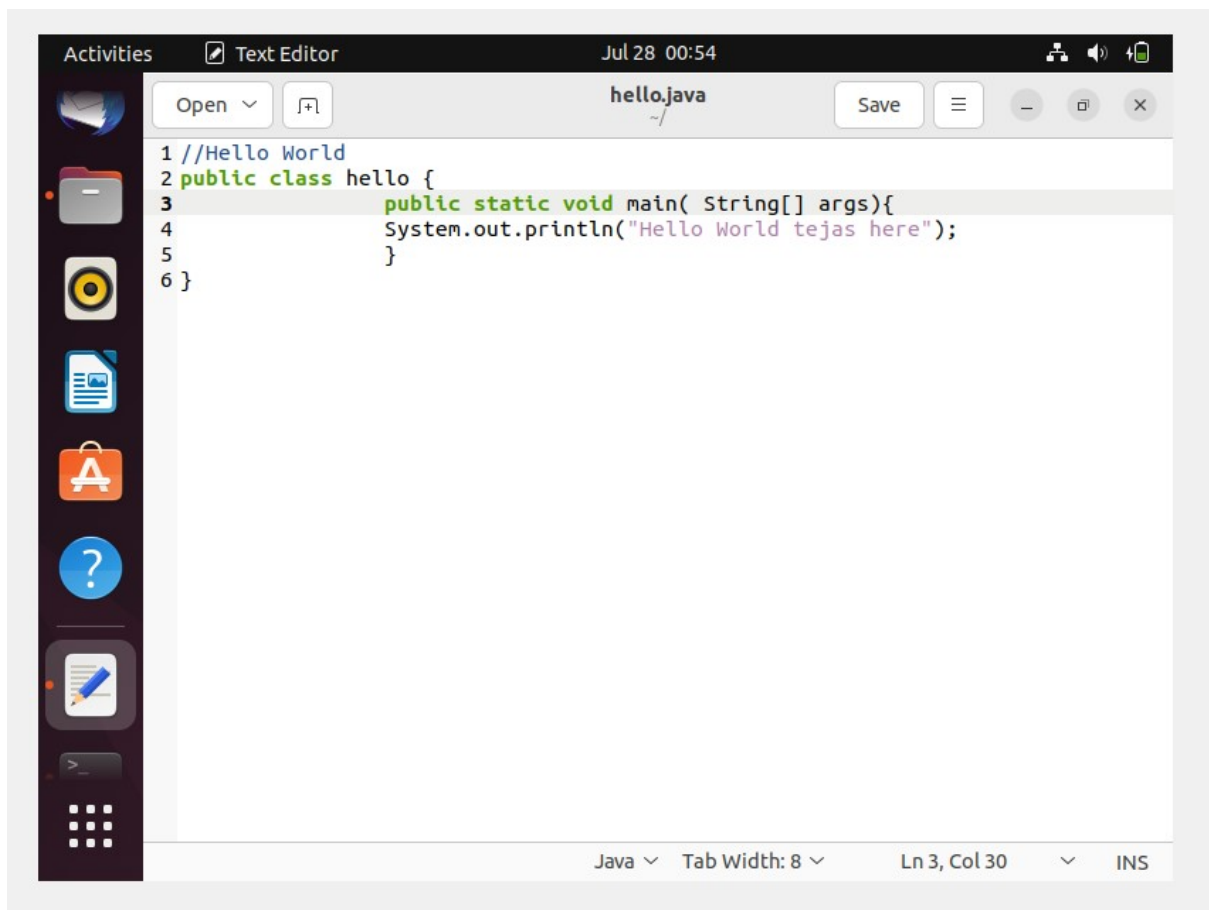




The image shows a terminal window titled "tejas@tejas-VirtualBox: ~" with a dark purple background. The window is part of a desktop environment with a sidebar on the left containing icons for Activities, Terminal, and various applications. The terminal output shows the following commands and results:

```
tejas@tejas-VirtualBox:~$ sudo apt-get install python3
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3 is already the newest version (3.10.4-0ubuntu2).
python3 set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 174 not upgraded.
tejas@tejas-VirtualBox:~$ nano test.py
tejas@tejas-VirtualBox:~$ python3 test.py
Hello World
tejas@tejas-VirtualBox:~$
```

Java



The screenshot shows a Linux desktop environment. At the top, there is a panel with 'Activities', 'Text Editor', and the date/time 'Jul 28 00:54'. On the left is a vertical dock with icons for a file manager, a terminal, a web browser, and other applications. The main window is a text editor titled 'hello.java' with a 'Save' button and window controls. The code inside is a simple Java program: a comment '//Hello World', a class declaration 'public class hello {', and a main method 'public static void main(String[] args){' containing a single line 'System.out.println("Hello World tejas here");'. The status bar at the bottom of the editor shows 'Java', 'Tab Width: 8', 'Ln 3, Col 30', and 'INS'.

```
1 //Hello World
2 public class hello {
3     public static void main( String[] args){
4         System.out.println("Hello World tejas here");
5     }
6 }
```

```
tejas@tejas-VirtualBox:~$ java --version
openjdk 11.0.15 2022-04-19
OpenJDK Runtime Environment (build 11.0.15+10-Ubuntu-0ubuntu0.22.04.1)
OpenJDK 64-Bit Server VM (build 11.0.15+10-Ubuntu-0ubuntu0.22.04.1, mixed mode,
sharing)
tejas@tejas-VirtualBox:~$ sudo update-alternatives --config java
There is only one alternative in link group java (providing /usr/bin/java): /us
r/lib/jvm/java-11-openjdk-amd64/bin/java
Nothing to configure.
tejas@tejas-VirtualBox:~$ sudo gedit /etc/profile
```

```
tejas@tejas-VirtualBox:~$ source /etc/profile
tejas@tejas-VirtualBox:~$ echo $JAVA_HOME
usr/lib/jvm/java-11-openjdk-amd64
tejas@tejas-VirtualBox:~$ touch hello.java
tejas@tejas-VirtualBox:~$ ls
Desktop  f1      hello.java  Pictures  tect.c    Videos
Documents file2    Music       Public    Templates
Downloads hello.c  new         snap      test.py

tejas@tejas-VirtualBox:~$ gedit hello.java
tejas@tejas-VirtualBox:~$ javac hello.java
hello.java:3: error: <identifier> expected
    public statis void main( String[] args){
           ^
1 error
tejas@tejas-VirtualBox:~$ javac hello.java
tejas@tejas-VirtualBox:~$ ls
Desktop  f1      hello.class  new      snap      test.py
Documents file2    hello.java   Pictures  tect.c    Videos
Downloads hello.c  Music       Public    Templates

tejas@tejas-VirtualBox:~$ java hello
Hello World tejas here
tejas@tejas-VirtualBox:~$
```