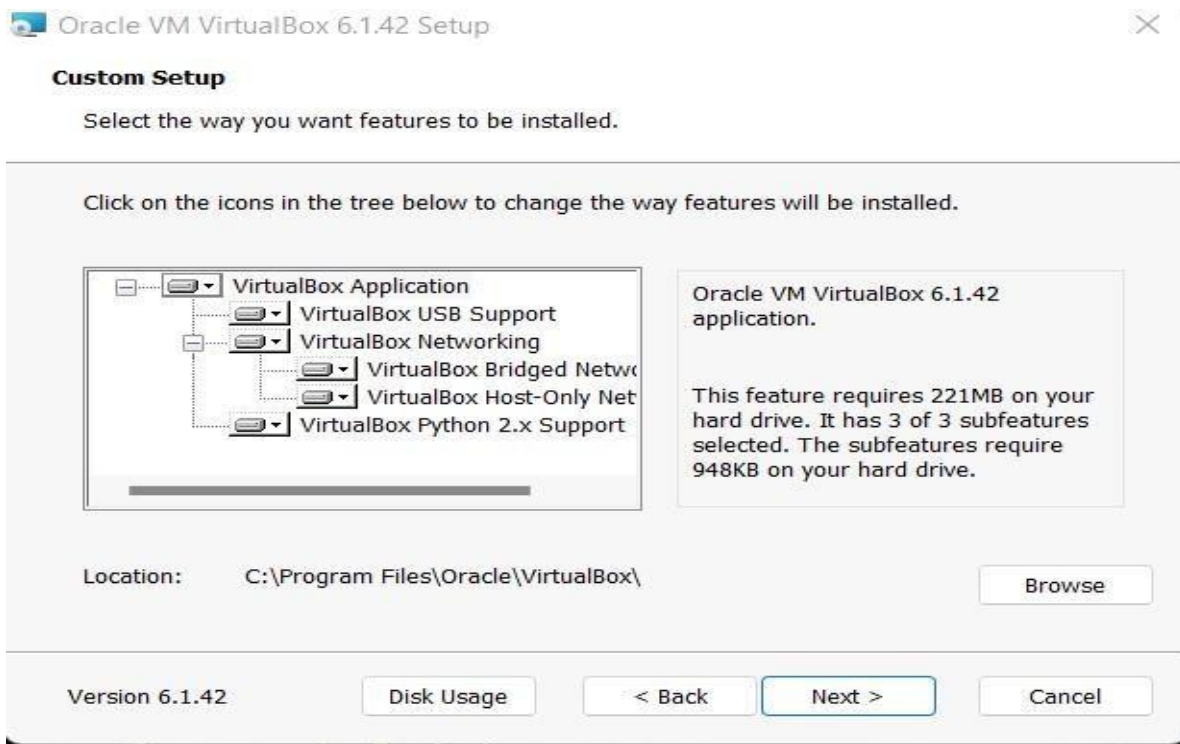
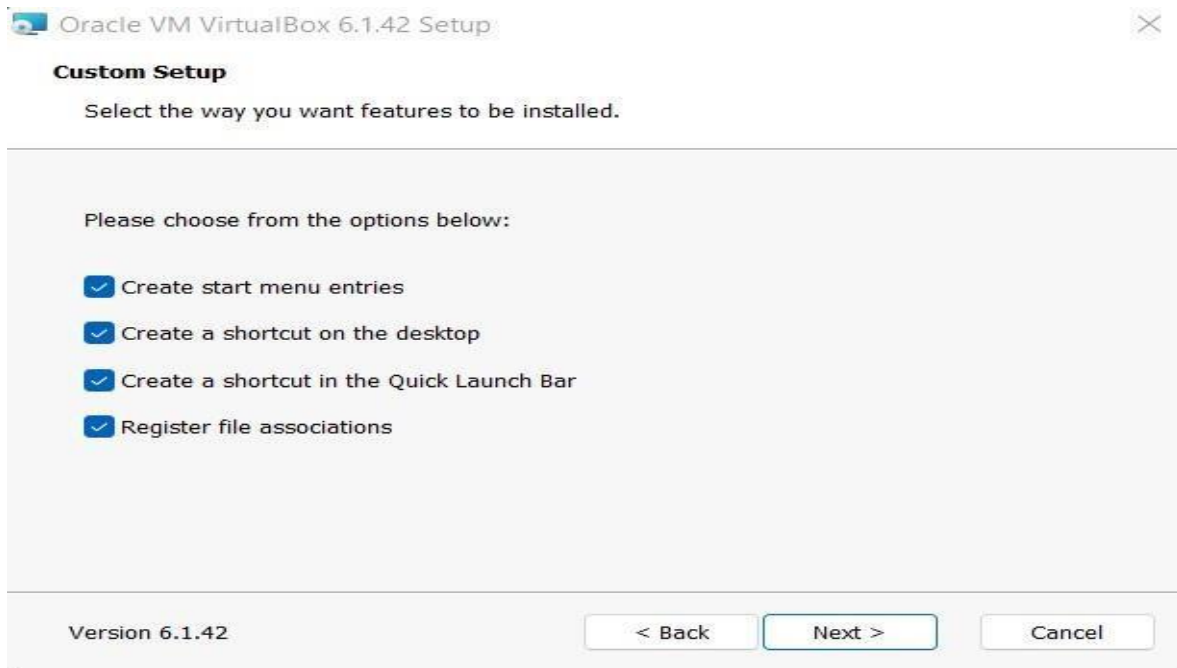


Steps :

1)Download and install Oracle's Virtual Box. (Reboot needed after installation)



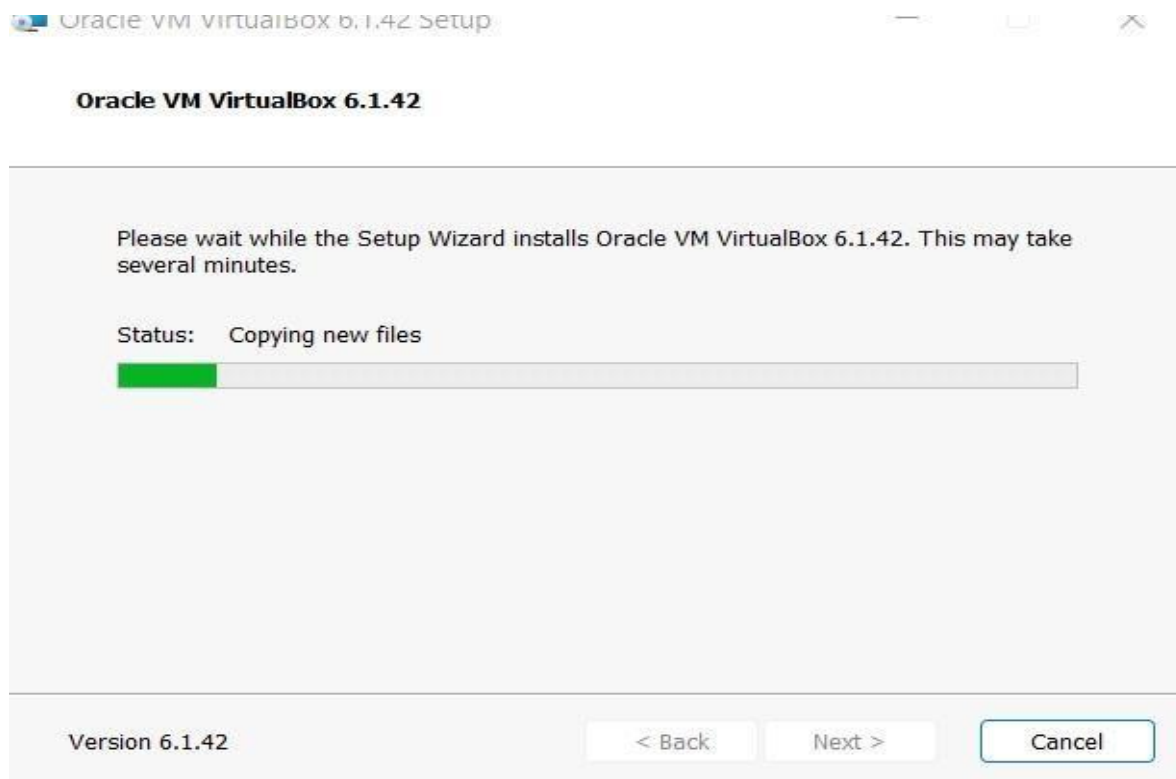
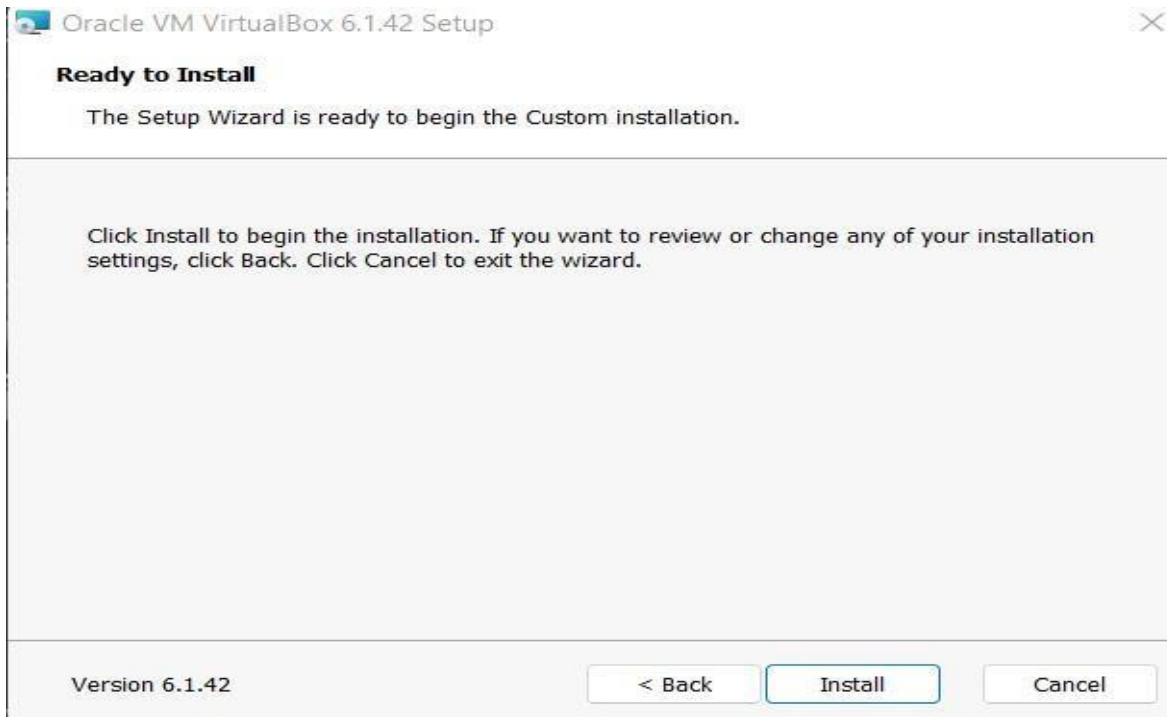
2)Now check all the checkbox and click on Next.



3)Then the confirmation window open. Click on YES to proceed further.



4) To start the installation click on Install.

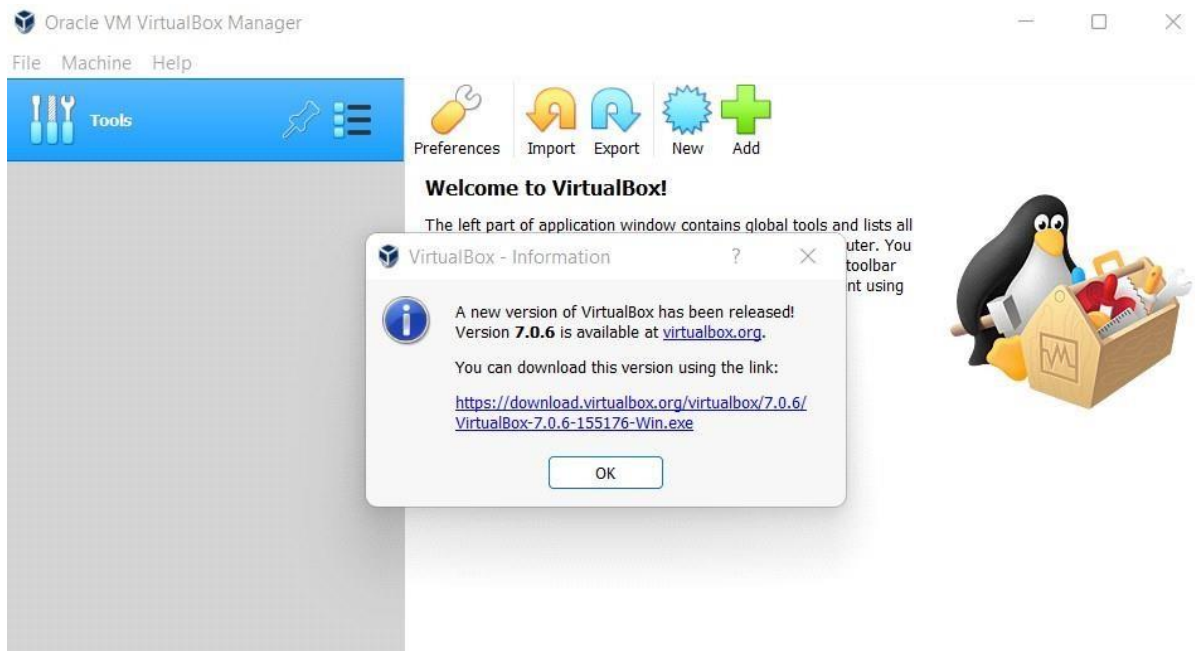


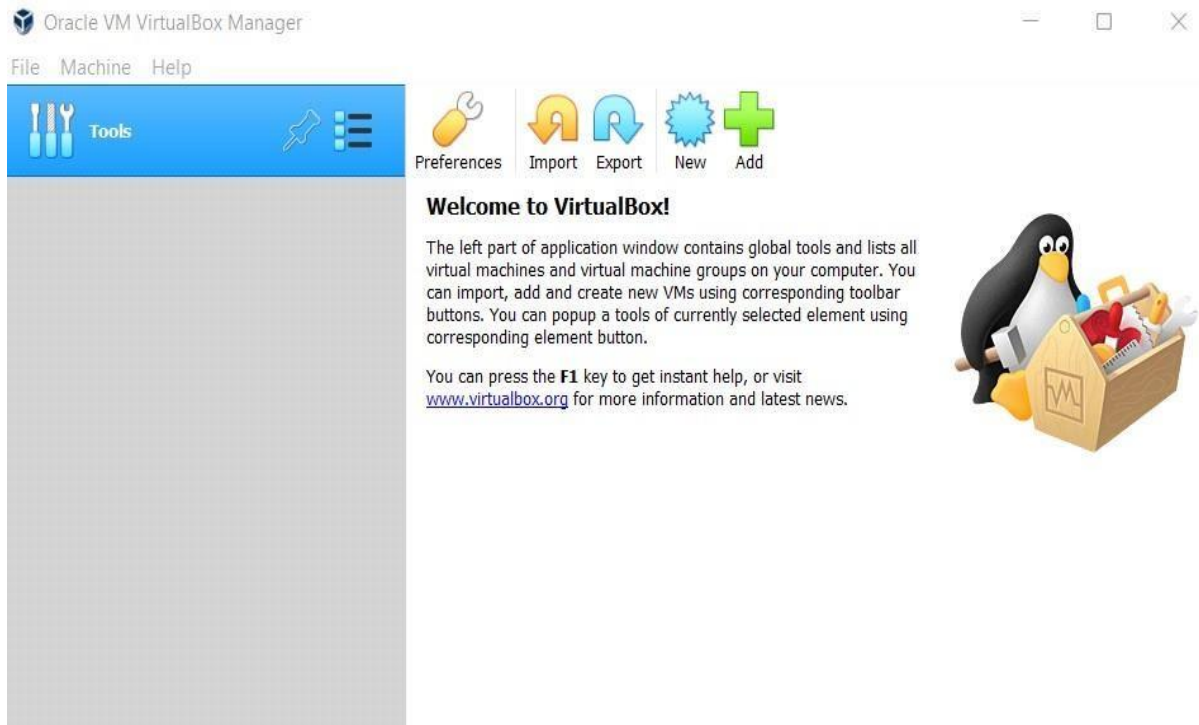
6) Click on "Finish" to complete installation.



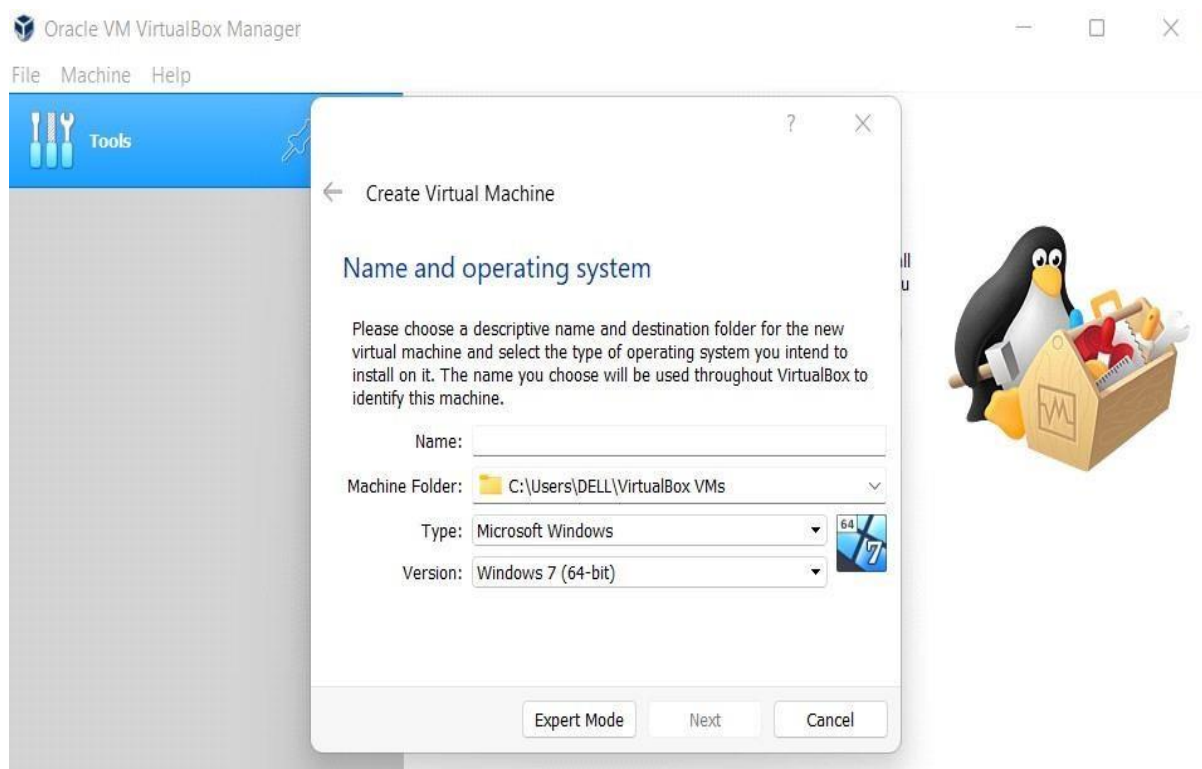
Steps to Create and connect two Virtual Machines:

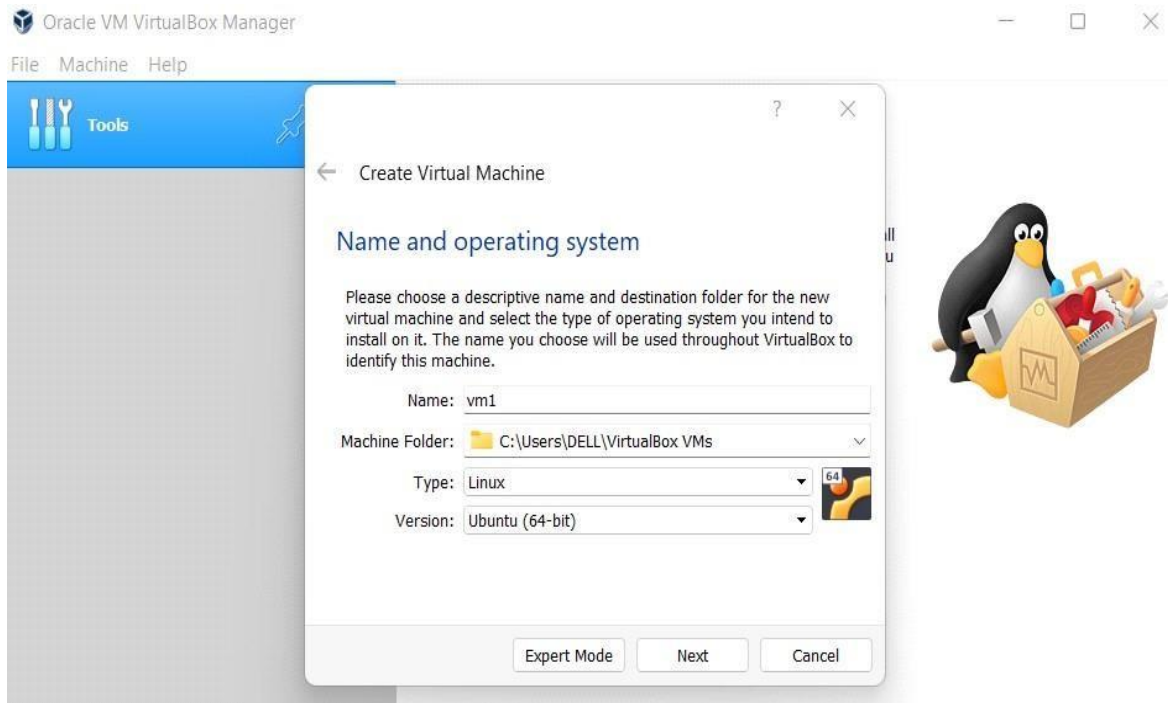
1) Click on the New icon.



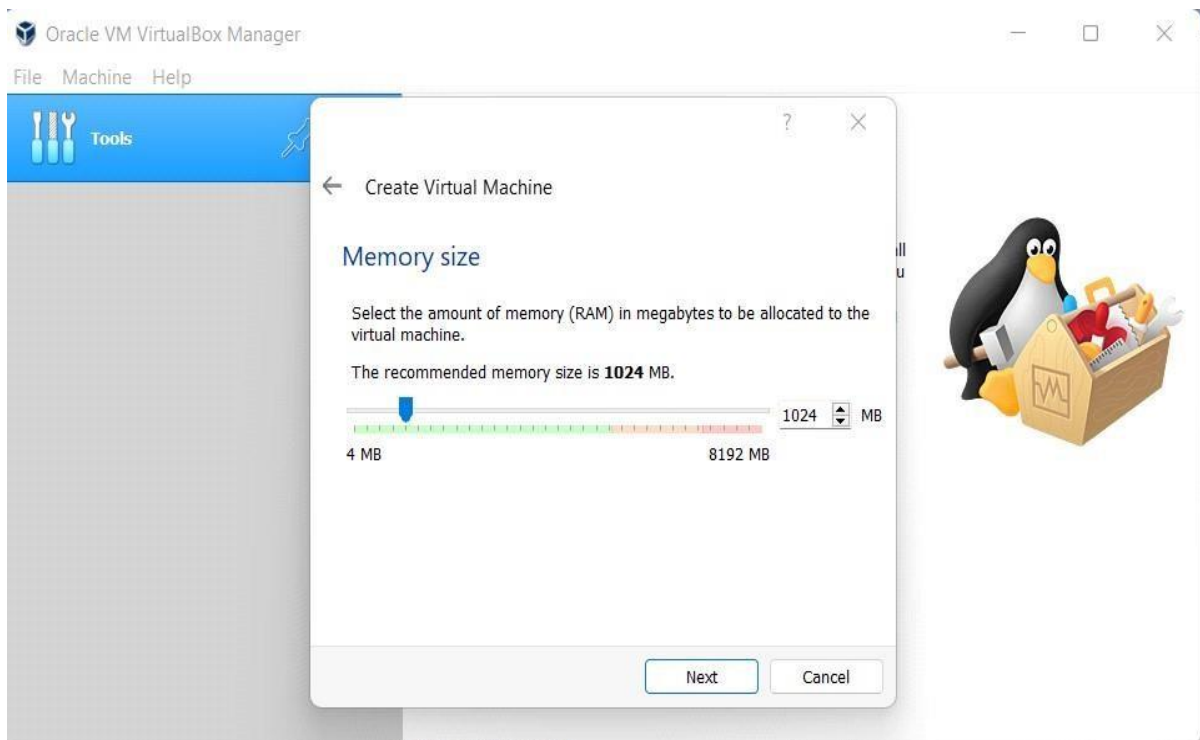


2)Click on new and mention the Name and the machine folder along with the Type and Version of the Machine to be created.

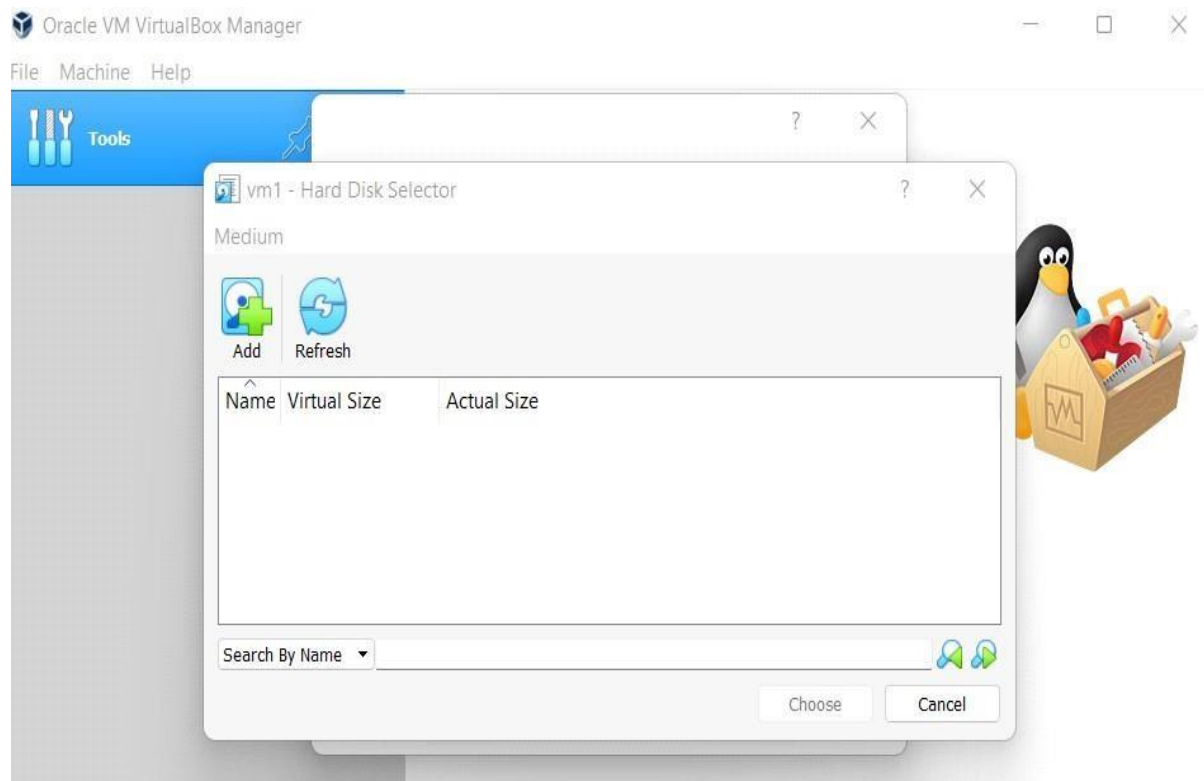
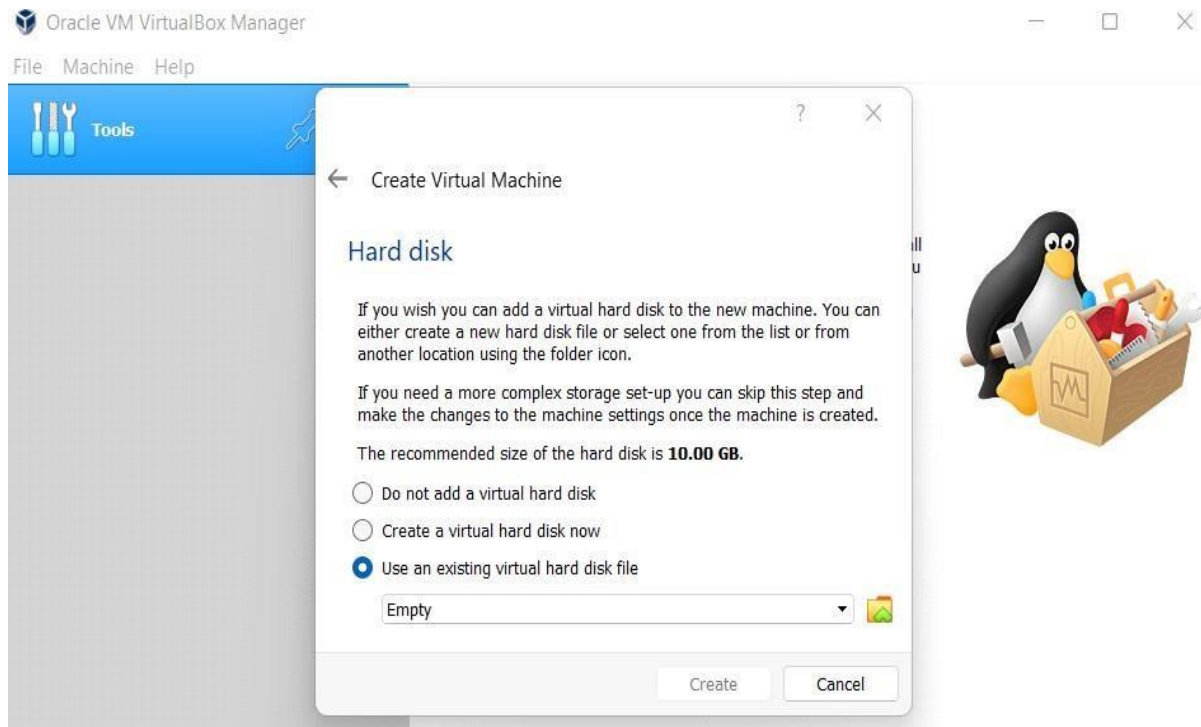


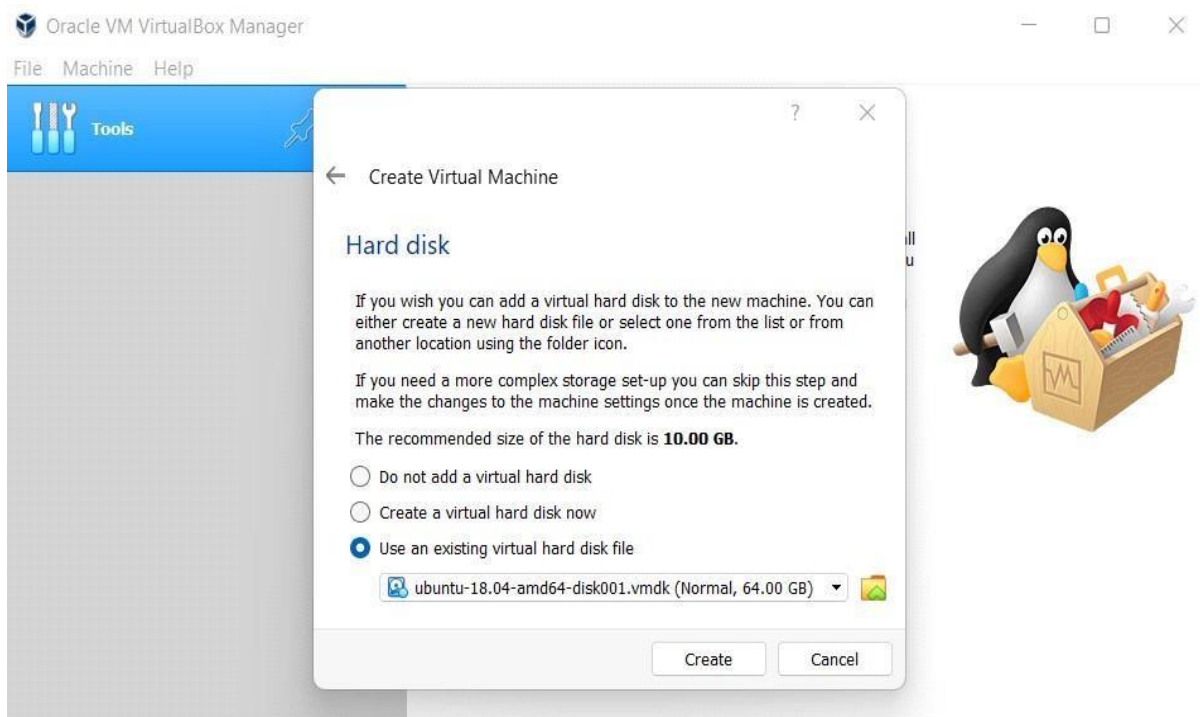
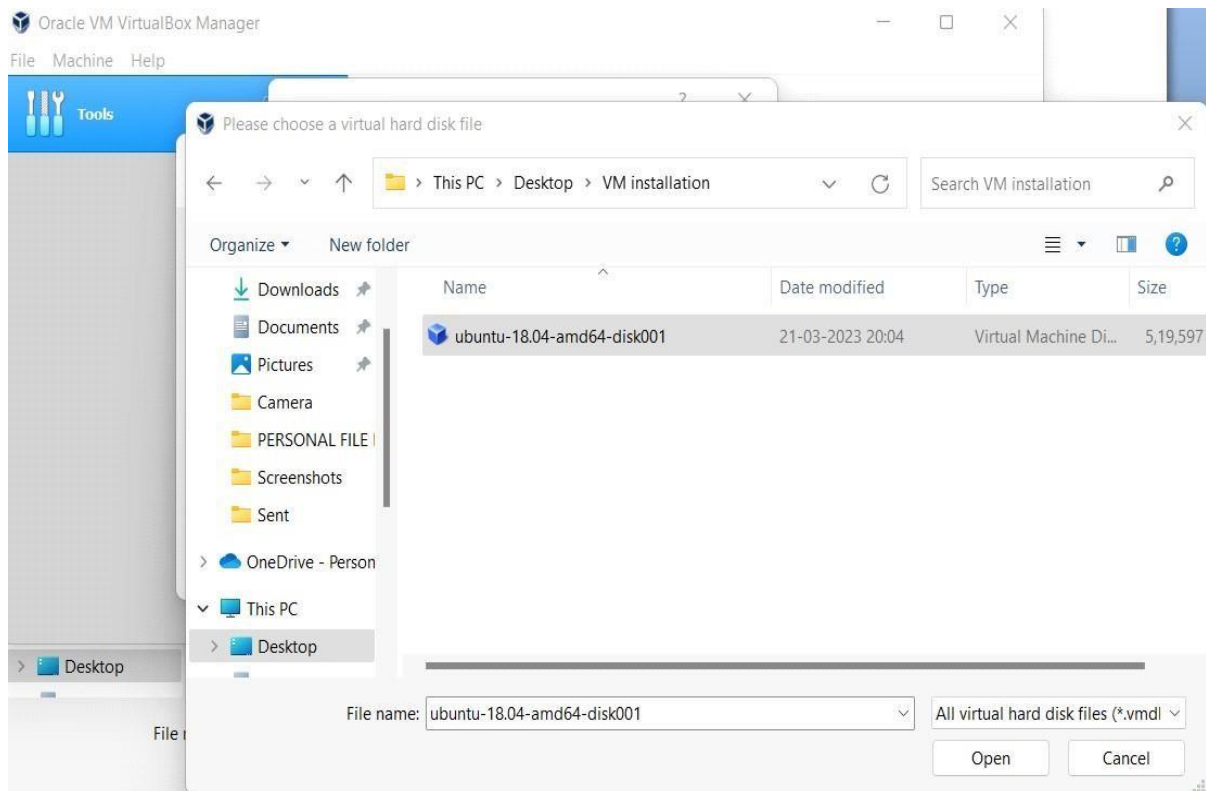


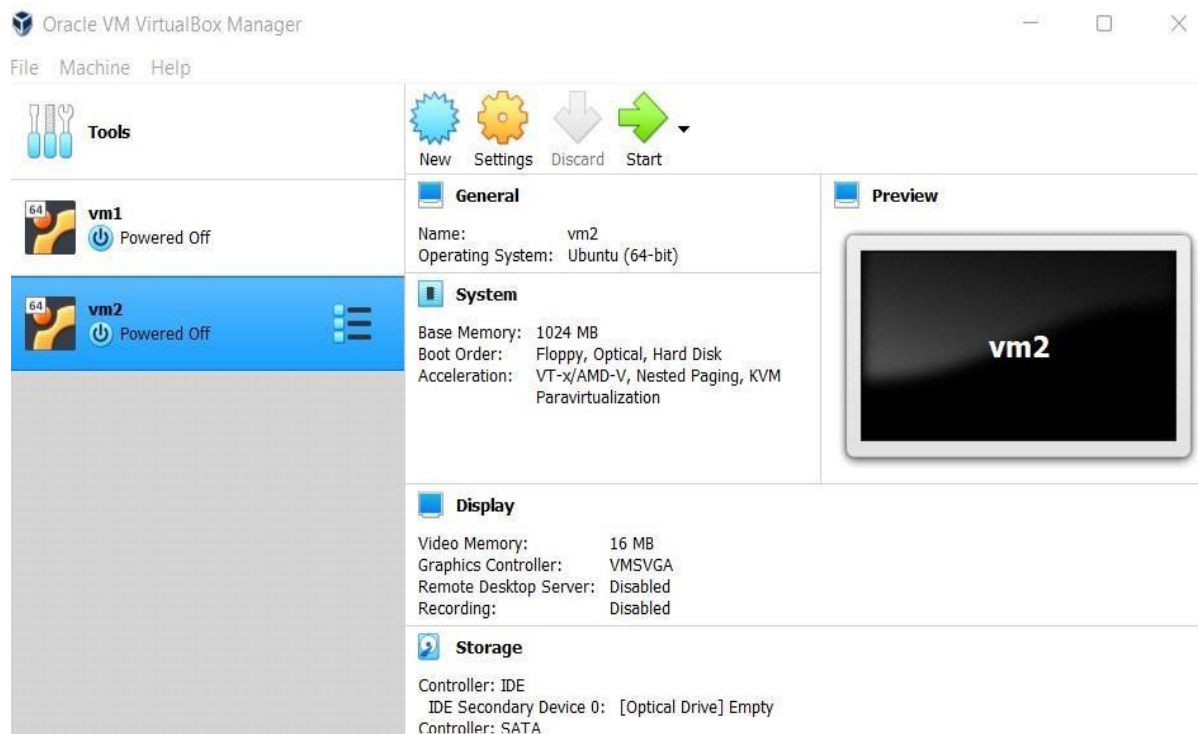
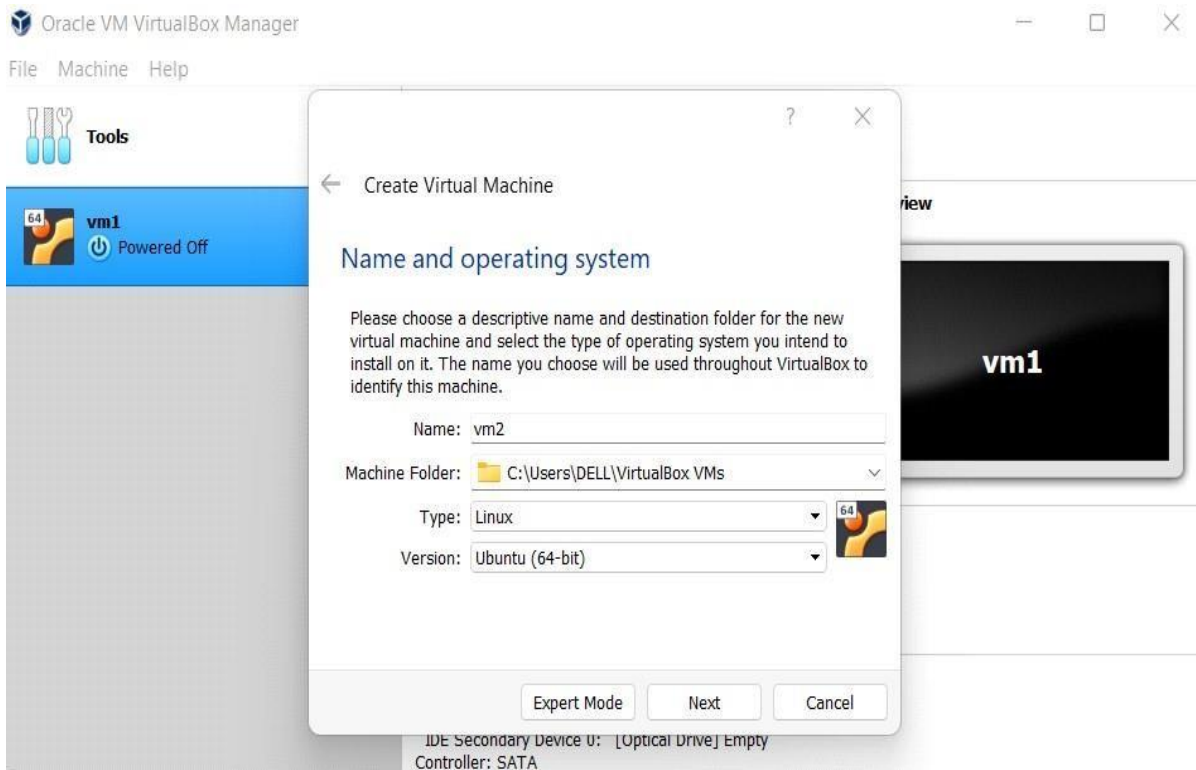
3)Assign memory size for our VM (1024 MB sufficient for now). 6. Select the option Use an existing virtual hard disk file and locate the downloaded VMDK image below and create VM.

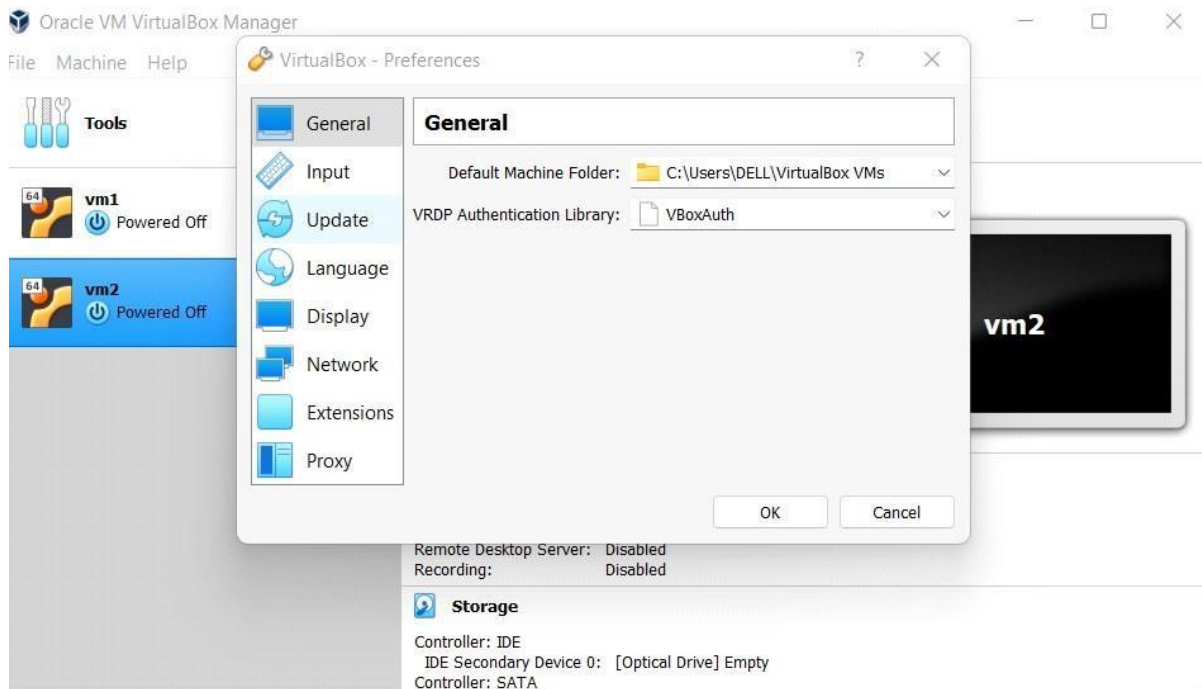


4) Use an existing hard disk file i.e., ubuntu file from local storage.

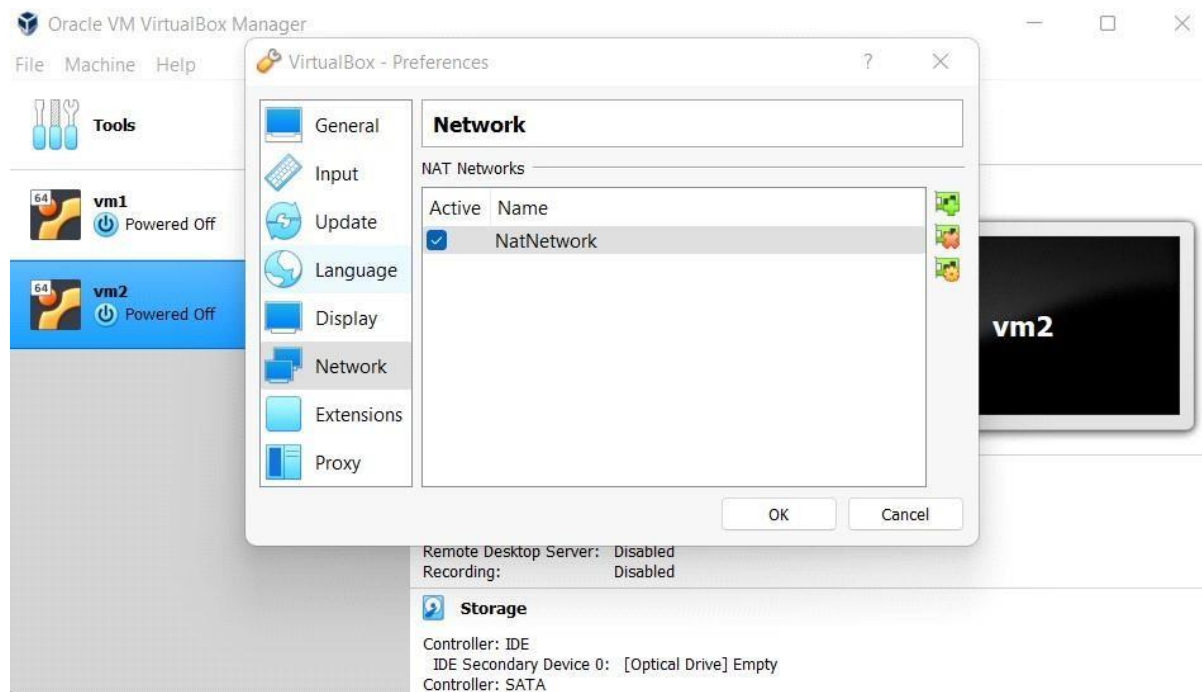




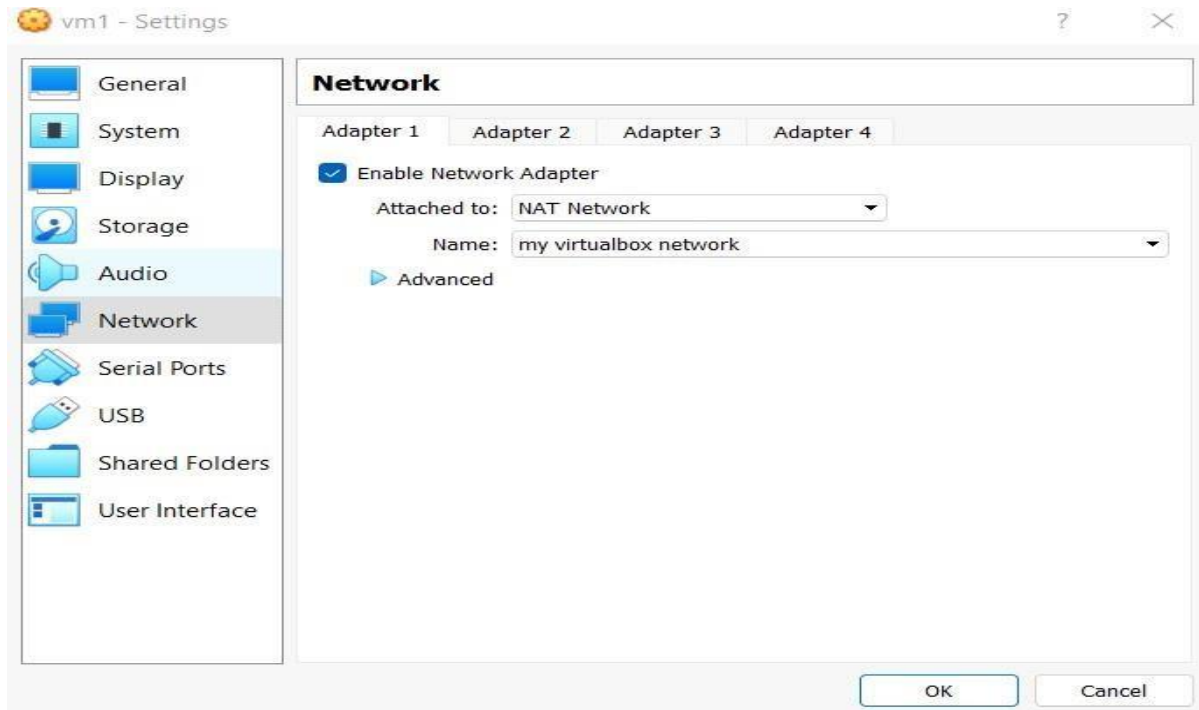




5) Now we have to create a NAT Network so go to File -> Preferences -> Network -> Add a New NAT Network (Click on +)

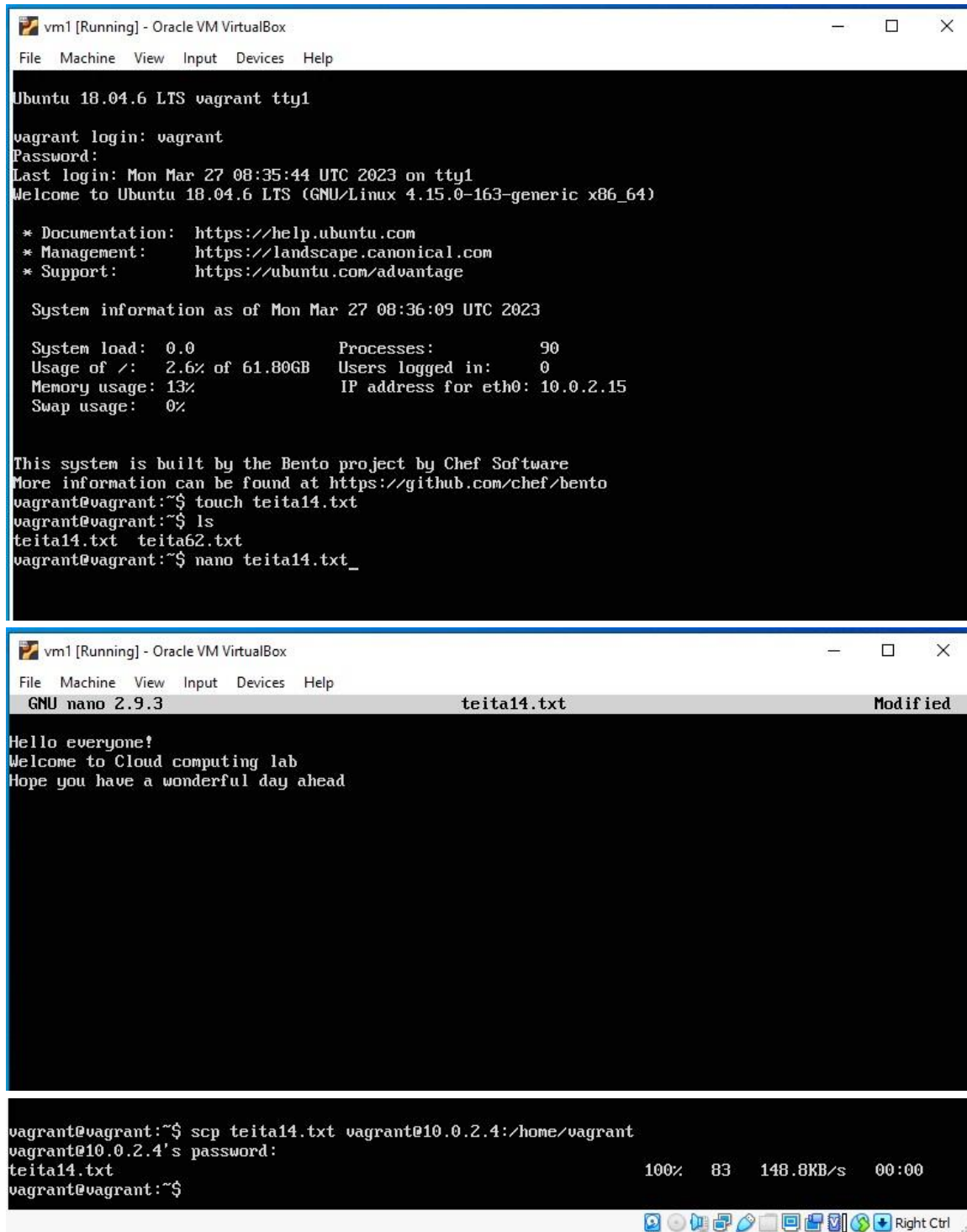


6) Now go to the setting, go to the network setting and change the adapter to NAT Network and select the NAT Network you made (in our case : My VMbox Network) and click ok.



Output:

Virtual Machine 1:



The image displays two screenshots of a VirtualBox VM window titled "vm1 [Running] - Oracle VM VirtualBox".

The first screenshot shows the Ubuntu 18.04.6 LTS login screen. The user "vagrant" logs in with the password "vagrant". The system displays the last login time as "Mon Mar 27 08:35:44 UTC 2023 on tty1" and the welcome message "Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-163-generic x86_64)". It also provides links for documentation, management, and support. System information is shown as of "Mon Mar 27 08:36:09 UTC 2023", including system load, usage of /, memory usage, swap usage, processes, users logged in, and IP address for eth0 (10.0.2.15). The system is built by the Bento project by Chef Software. More information can be found at <https://github.com/chef/bento>. The user then runs the command "touch teita14.txt", "ls", and "nano teita14.txt_".

The second screenshot shows the nano editor editing the file "teita14.txt". The content of the file is "Hello everyone!", "Welcome to Cloud computing lab", and "Hope you have a wonderful day ahead". The user then runs the command "scp teita14.txt vagrant@10.0.2.4:/home/vagrant". The output shows the file being transferred at 100% speed (83 KB/s) in 00:00 seconds.

```
vm1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

Ubuntu 18.04.6 LTS vagrant tty1
vagrant login: vagrant
Password:
Last login: Mon Mar 27 08:35:44 UTC 2023 on tty1
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-163-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Mon Mar 27 08:36:09 UTC 2023

System load:  0.0                Processes:    90
Usage of /:   2.6% of 61.80GB    Users logged in:  0
Memory usage: 13%              IP address for eth0: 10.0.2.15
Swap usage:  0%

This system is built by the Bento project by Chef Software
More information can be found at https://github.com/chef/bento
vagrant@vagrant:~$ touch teita14.txt
vagrant@vagrant:~$ ls
teita14.txt  teita62.txt
vagrant@vagrant:~$ nano teita14.txt_

vm1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
GNU nano 2.9.3 teita14.txt Modified

Hello everyone!
Welcome to Cloud computing lab
Hope you have a wonderful day ahead

vagrant@vagrant:~$ scp teita14.txt vagrant@10.0.2.4:/home/vagrant
vagrant@10.0.2.4's password:
teita14.txt                                100% 83 148.8KB/s 00:00
vagrant@vagrant:~$
```

Virtual Machine 2:

```
vm2 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Last login: Mon Mar 27 08:18:57 UTC 2023 on tty1
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 4.15.0-163-generic x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Mon Mar 27 08:41:13 UTC 2023

System load:  0.0          Processes:      89
Usage of /:   2.6% of 61.80GB Users logged in:   0
Memory usage: 13%         IP address for eth0: 10.0.2.4
Swap usage:   0%

This system is built by the Bento project by Chef Software
More information can be found at https://github.com/chef/bento
vagrant@vagrant:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 10.0.2.4  netmask 255.255.255.0  broadcast 10.0.2.255
    inet6 fe80::a00:27ff:fe2e:e5c9  prefixlen 64  scopeid 0x20<link>
    ether 08:00:27:2e:e5:c9  txqueuelen 1000  (Ethernet)
    RX packets 68  bytes 20238 (20.2 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 74  bytes 10675 (10.6 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 8  bytes 712 (712.0 B)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 8  bytes 712 (712.0 B)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

vagrant@vagrant:~$
```

```
vm2 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

System information as of Mon Mar 27 08:41:13 UTC 2023

System load:  0.0          Processes:      89
Usage of /:   2.6% of 61.80GB Users logged in:   0
Memory usage: 13%         IP address for eth0: 10.0.2.4
Swap usage:   0%

This system is built by the Bento project by Chef Software
More information can be found at https://github.com/chef/bento
vagrant@vagrant:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 10.0.2.4  netmask 255.255.255.0  broadcast 10.0.2.255
    inet6 fe80::a00:27ff:fe2e:e5c9  prefixlen 64  scopeid 0x20<link>
    ether 08:00:27:2e:e5:c9  txqueuelen 1000  (Ethernet)
    RX packets 68  bytes 20238 (20.2 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 74  bytes 10675 (10.6 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 8  bytes 712 (712.0 B)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 8  bytes 712 (712.0 B)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

vagrant@vagrant:~$ ls /home/vagrant
teita14.txt teita62.txt
vagrant@vagrant:~$ cat teita14.txt
Hello everyone!
Welcome to Cloud Computing lab
Hope you have a wonderful day ahead
vagrant@vagrant:~$
```