

## PRACTICAL 2

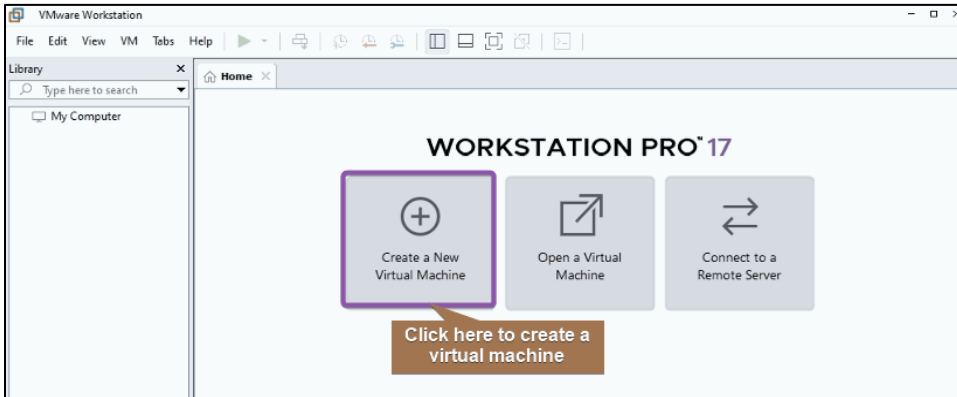
AIM: Installation and Configuration of virtualization using KVM.

### Steps:

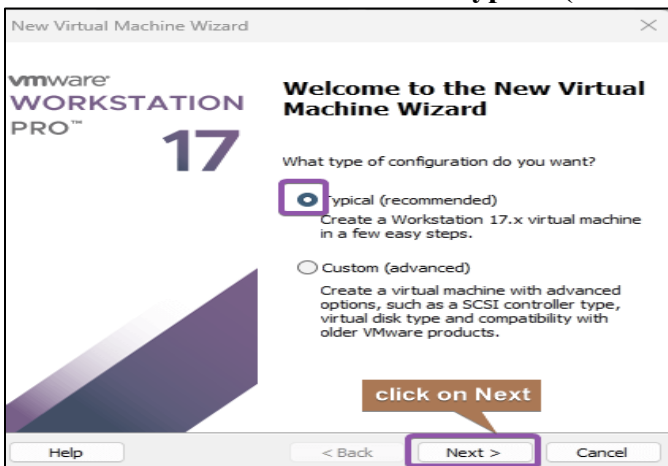
1:-Download VMware Workstation and ubuntu.



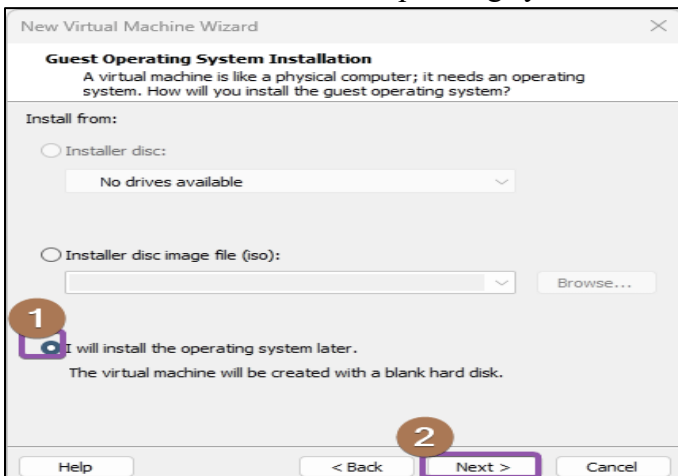
2:- Open VMware and click on the option Create a New Virtual Machine.



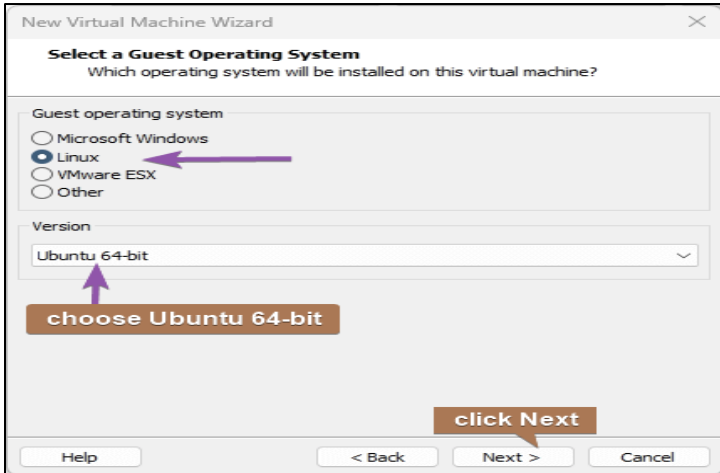
3:- Select the first checkbox called **Typical (recommended)** and click on the **Next** button.



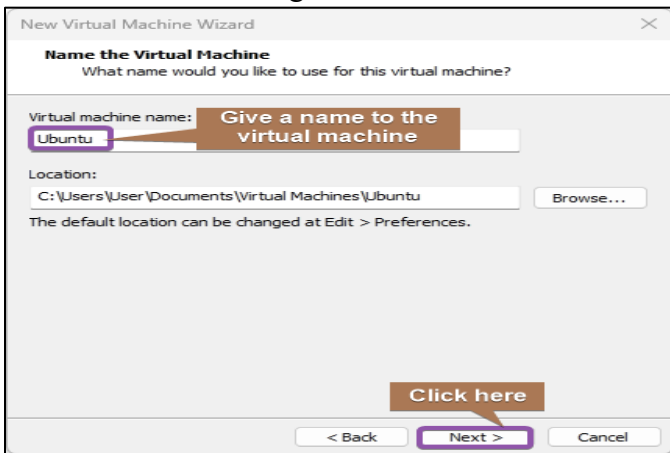
4.Select the “I will install the operating system later” option and click **Next**.



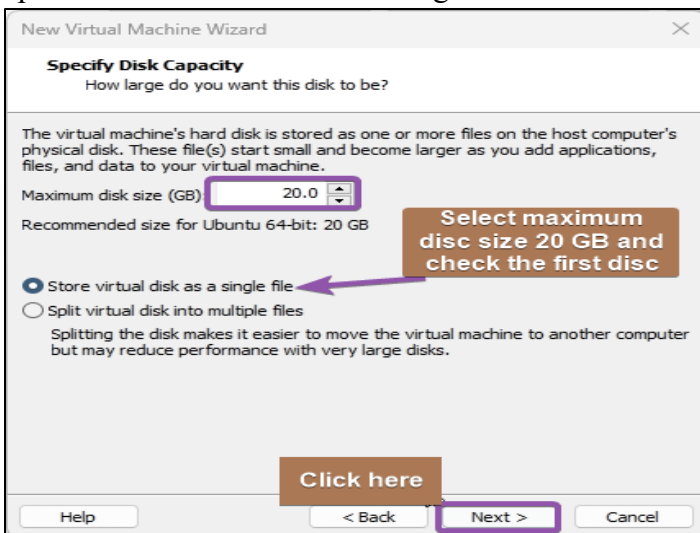
5.Now, choose **Linux** as a Guest Operating System, and after that select **Ubuntu 64-bit** in the **version** option.



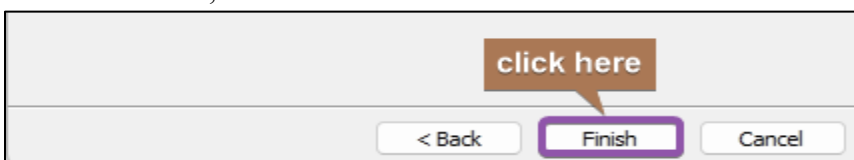
6.At this moment, assign a Virtual Machine Name and hit the **Next** button.



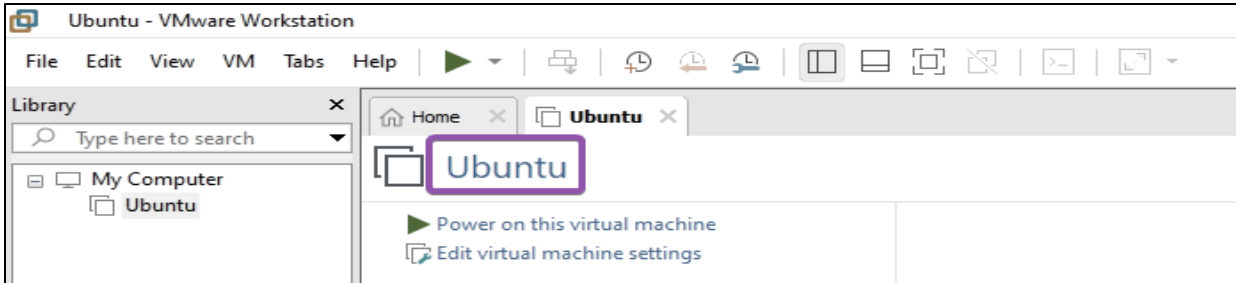
7.To specify disk capacity, set **20 GB** at least as the **maximum disk size** (recommended) and also select the option “Store virtual desk as a single file”. Then click on **Next** to move forward.



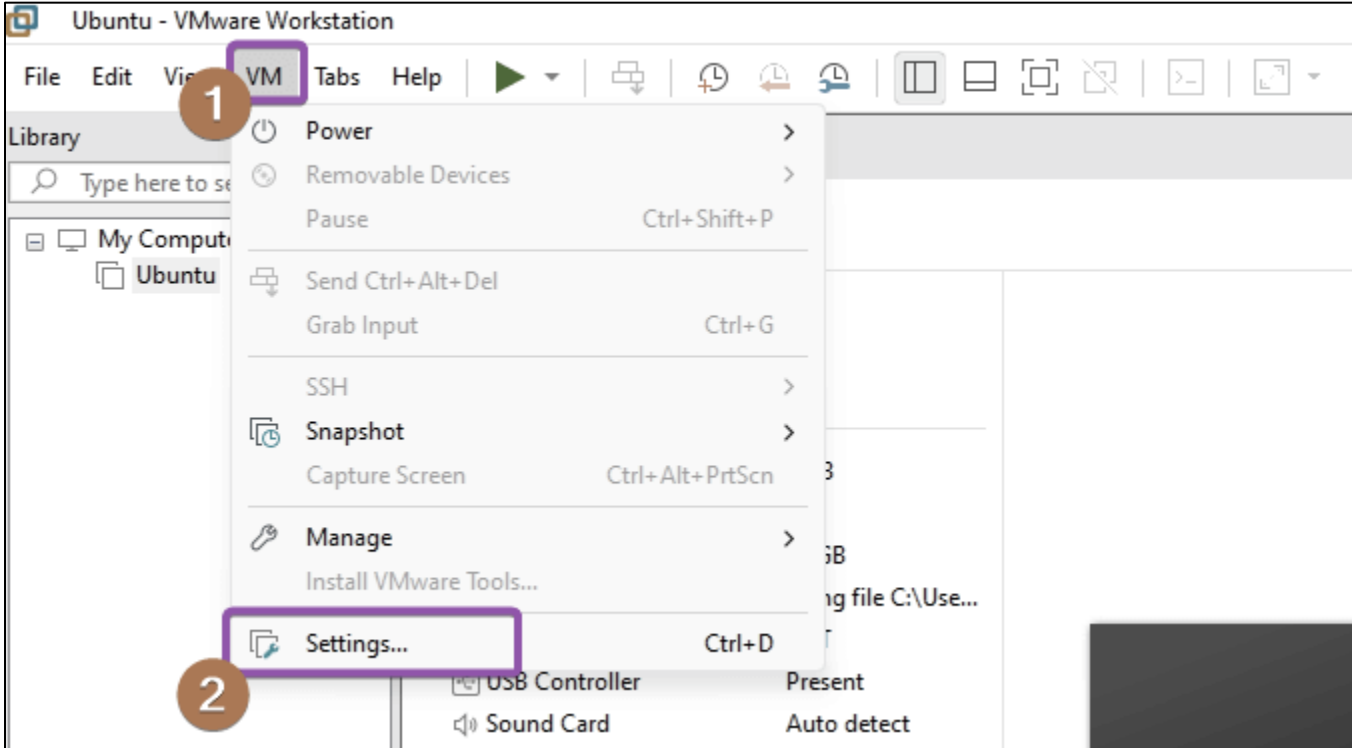
8. In this instant, click **Finish**



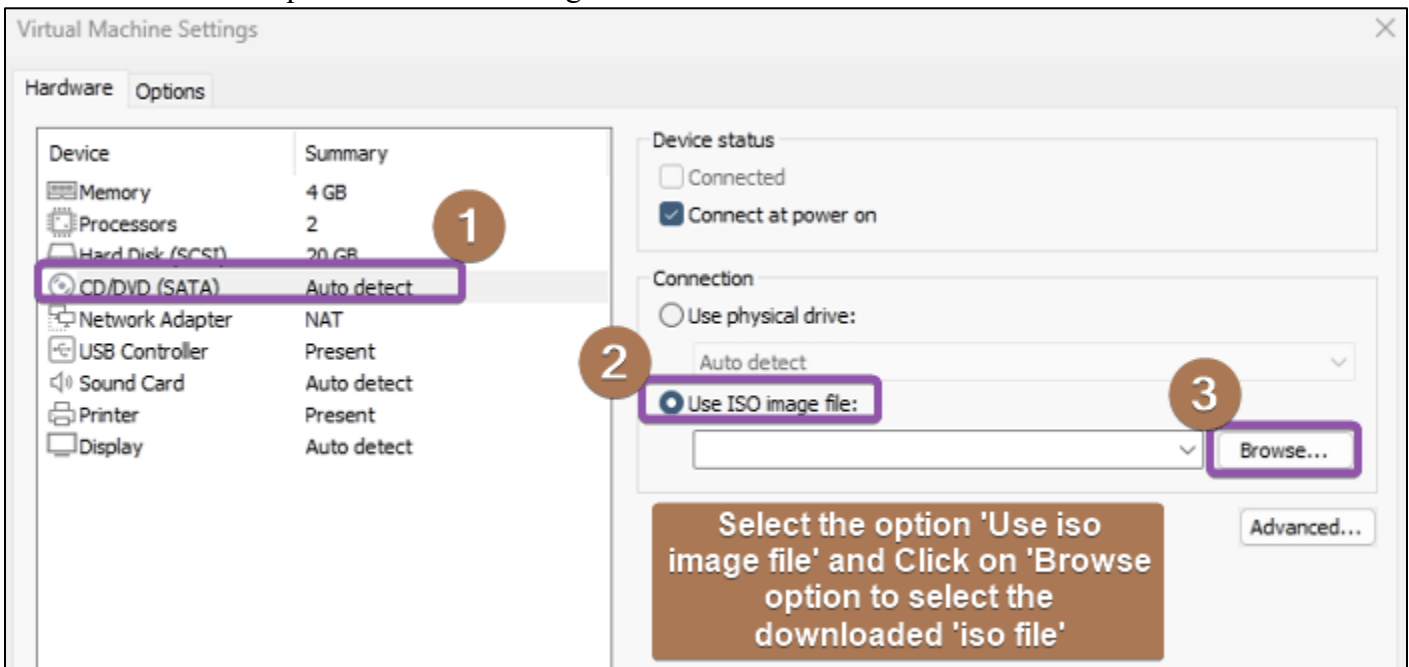
9. After completing all the steps mentioned above, a virtual machine will be created as below.

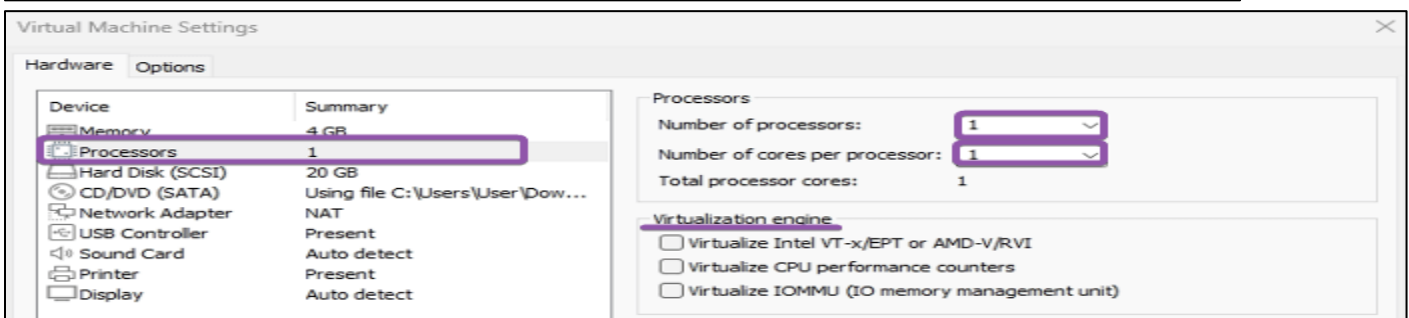
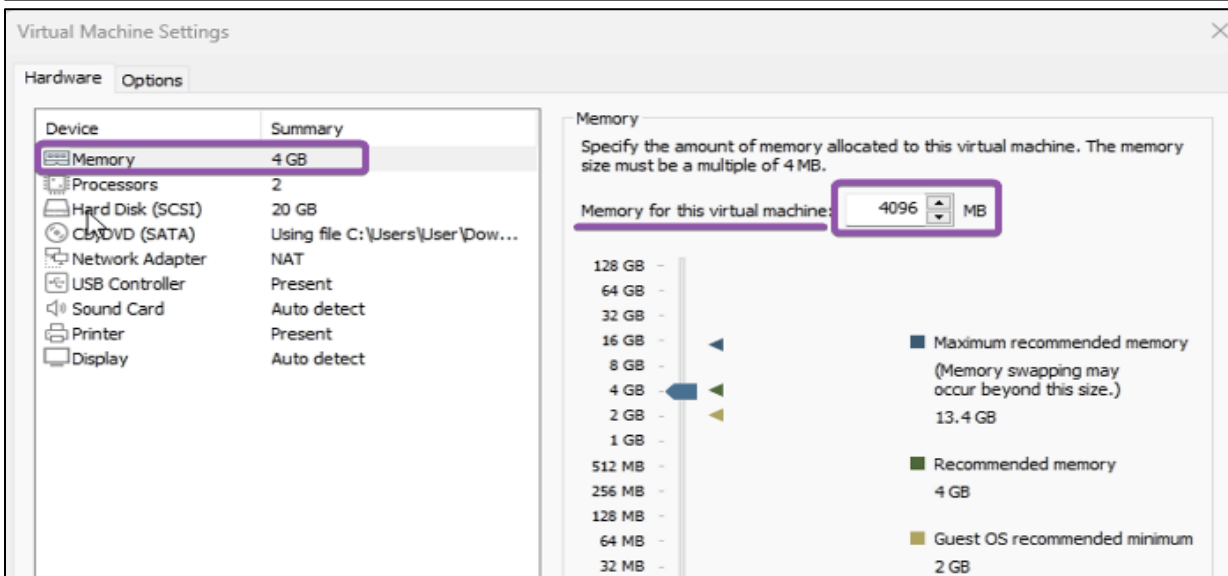
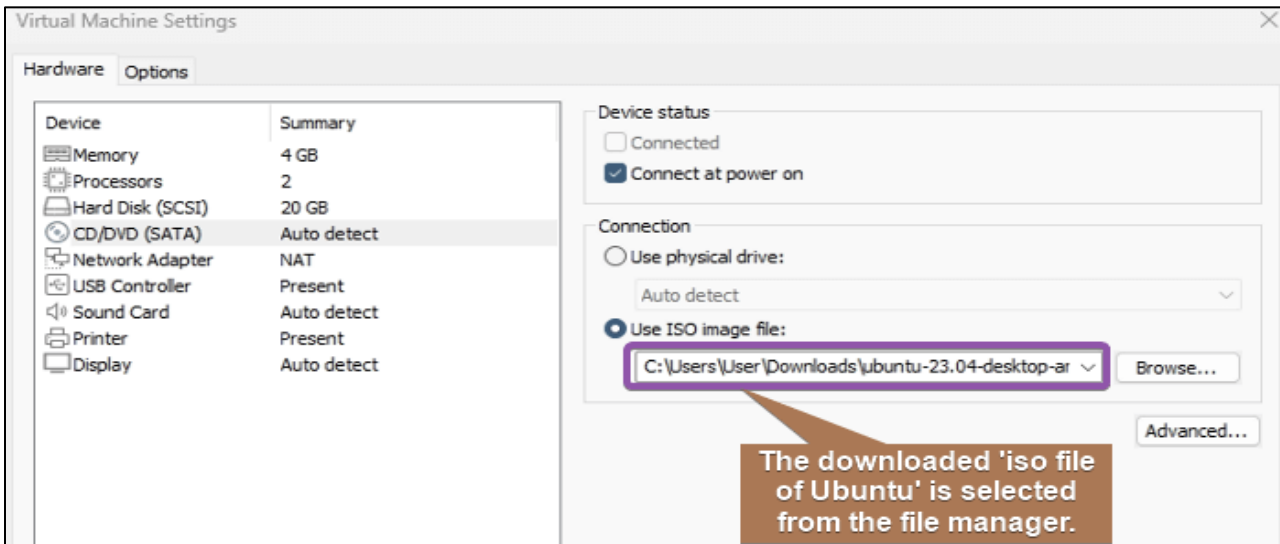


10. At first, go to the **VM** option and then click on the **Settings**.

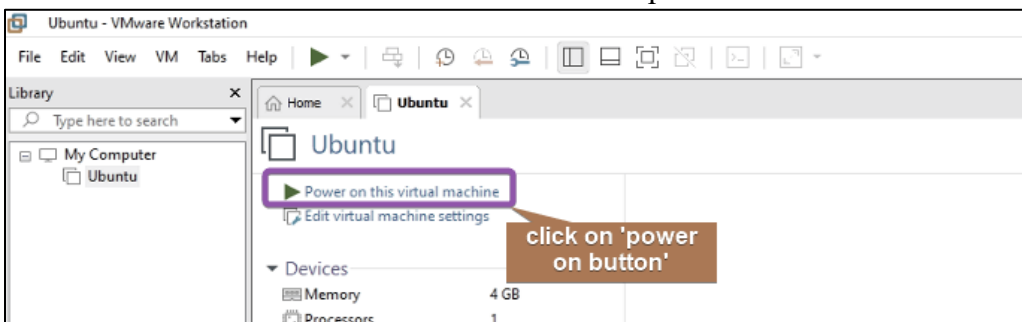


11. do the series of steps show in below images.

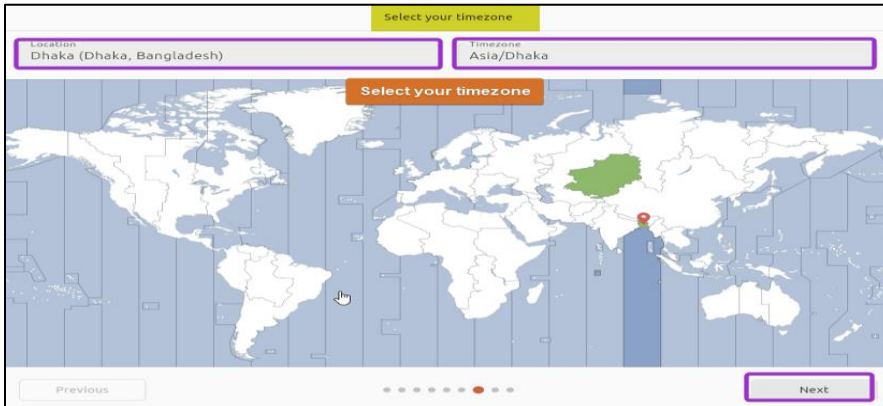




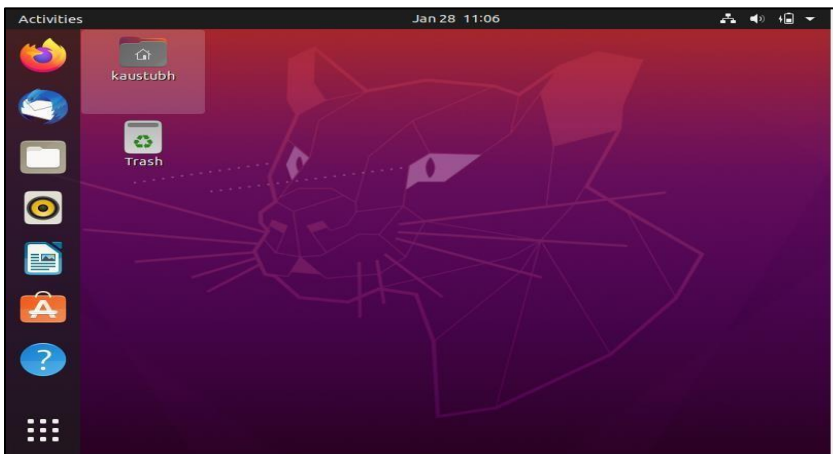
12. Click on the **Power on this virtual machine** option.



13.Choose your timezone and go to **Next**.



14.To set up your account, provide your **name**, and **computer's name** and pick a **password** at your convenience. Then click on the **Next**.

A screenshot of the 'Set up your account' window in the Ubuntu installer. It contains several input fields: 'Your name' with 'Auhona', 'Your computer's name' with 'Ubuntu', 'Pick a username' with 'auhona', 'Choose a password', and 'Confirm your password'. There are green checkmarks next to the first three fields. Below these are two checkboxes: 'Require my password to log in' (checked) and 'Use Active Directory' (unchecked). A 'Next' button is at the bottom right, and a 'Previous' button is at the bottom left. A progress bar with 10 dots is at the bottom center, with the 5th dot being filled.

Restart > Login with same credentials > Screen will appear as shown above.

Right click on screen>open in terminal >write following commands.

1. **#sudo apt update**

```
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

student@student-virtual-machine:~/Desktop$ sudo apt update
[sudo] password for student:
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease
[129 kB]
Get:2 http://security.ubuntu.com/ubuntu jammy-security/main i386
Packages [567 kB]
Hit:3 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease
[128 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease
[127 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu jammy-updates/main i386
```

```
Get:31 http://in.archive.ubuntu.com/ubuntu jammy-backports/universe DEP-11 64x64 Icons [31.0 kB]
Get:32 http://in.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 DEP-11 Metadata [212 B]
Get:12 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1,177 kB]
Get:19 http://in.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [287 kB]
Fetched 9,855 kB in 33s (301 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
353 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

## 2. #sudo apt install qemu qemu-kvm

```
student@student-virtual-machine:~/Desktop$ sudo apt install qemu qemu-kvm
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package qemu-kvm
student@student-virtual-machine:~/Desktop$
```

## 3. #sudo apt install virt-manager

```
student@student-virtual-machine:~/Desktop$ sudo apt install virt-manager
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  cpu-checker dmeventd gir1.2-ayatanaappindicator3-0.1 gir1.2-gtk-vnc-2.0
  gir1.2-libosinfo-1.0 gir1.2-libvirt-glib-1.0 gir1.2-spiceclientglib-2.0
  gir1.2-spiceclientgtk-3.0 i965-va-driver ibverbs-providers
  intel-media-va-driver ipxe-qemu ipxe-qemu-256k-compatible-efi-roms jq libaio1
  libburn4 libcacard0 libdaxctl1 libdecor-0-0 libdecor-0-plugin-1-cairo
  libdevmapper-event1.02.1 libfdt1 libgfbapi0 libgfrpc0 libgfxdr0 libglusterfs0
  libgovirt-common libgovirt2 libgtk-vnc-2.0-0 libgvnc-1.0-0 libibverbs1
  libigdgmm12 libiscsi7 libisoburn1 libisofs6 libjq1 libjte2 liblvm2cmd2.03
  libndctl6 libnss-mymachines libonig5 libosinfo-1.0-0 libphodav-2.0-0
  libphodav-2.0-common librpm1 librpmobj1 librados2 librbd1 librdmacm1
  libSDL2-2.0-0 libslirp0 libspice-client-glib-2.0-8 libspice-client-gtk-3.0-5
  libspice-server1 libtpms0 liburing2 libusbredirhost1 libusbredirparser1
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for shared-mime-info (2.1-2) ...
Processing triggers for install-info (6.8-4build1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu3) ...
Processing triggers for initramfs-tools (0.140ubuntu13.2) ...
update-initramfs: Generating /boot/initrd.img-6.8.0-49-generic
Processing triggers for hicolor-icon-theme (0.17-2) ...
Processing triggers for gnome-menus (3.36.0-1ubuntu3) ...
Processing triggers for libglib2.0-0:amd64 (2.72.4-0ubuntu2.2) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Processing triggers for man-db (2.10.2-1) ...
```

## 4. #sudo grep -c "svm\|vmx" /proc/cpuinfo

```
student@student-virtual-machine:~/Desktop$ sudo grep -c "svm\|vmx" /proc/cpuinfo
0
```

## 5. #sudo apt-get install qemu-kvm libvirt-bin bridge-utils virt-manager

```
student@student-virtual-machine:~/Desktop$ sudo apt-get install qemu-kvm libvirt-bin bridge-utils virt-manager
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'qemu-system-x86' instead of 'qemu-kvm'
Package libvirt-bin is not available, but is referred to by another package.
This may mean that the package is missing, has been obsoleted, or
is only available from another source

E: Package 'libvirt-bin' has no installation candidate
```



#### 6. #sudo adduser <<username>>

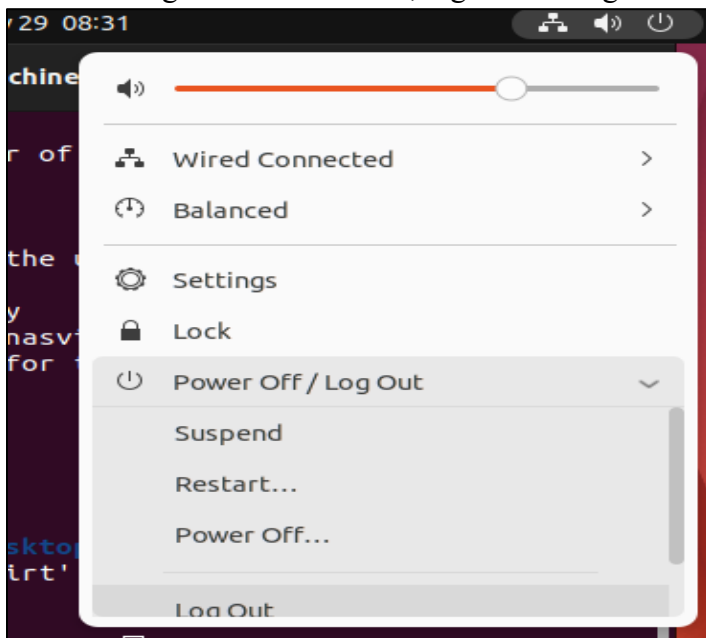
```
student@student-virtual-machine:~/Desktop$ sudo adduser rishi1
[sudo] password for student:
Adding user `rishi1' ...
Adding new group `rishi1' (1002) ...
Adding new user `rishi1' (1002) with group `rishi1' ...
Creating home directory `/home/rishi1' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for rishi1
Enter the new value, or press ENTER for the default
  Full Name []: 
```

```
Changing the user information for rishi1
Enter the new value, or press ENTER for the default
  Full Name []: RUSHIKESH MHASKE
  Room Number []: 0711
  Work Phone []: 9987653421
  Home Phone []: 8844562134
  Other []: 7897892345
Is the information correct? [Y/n] Y
```

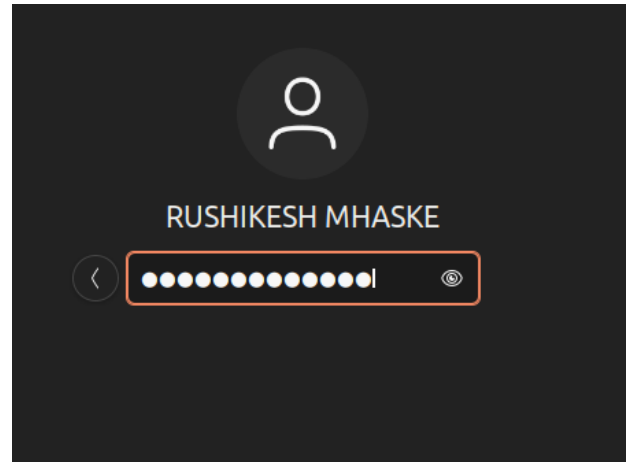
#### 7. #sudo adduser tom libvirt

```
student@student-virtual-machine:~/Desktop$ sudo add
user rishi1 libvirt
Adding user `rishi1' to group `libvirt' ...
Adding user rishi1 to group libvirt
Done.
student@student-virtual-machine:~/Desktop$ S
```

After running above commands, log out and log back in as tom



Login as RUSHIKESH MHASKE



# virt-manager

