Cloud Computing
Lab 5

Name : Inshal Nasir

Section: A

Roll No: 38

Task 1:

Task 2:

```
[sudo] password for hajra:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
hajra@ubuntu-lab:~$
```

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  default-jre-headless fonts-dejavu-extra libatk-wrapper-java libatk-wrapper-java-jni libgif7 libxcb-shape0 libxft2 libxv1 libxxf86dga1 openjdk-21-jre
  openjdk-21-jre-headless x11-utils
Suggested packages:
  libnss-mdns fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei fonts-indic mesa-utils
Recommended packages:
  luit
The following NEW packages will be installed:
  default-jre default-jre-headless fonts-dejavu-extra libatk-wrapper-java libatk-wrapper-java-jni libgif7 libxcb-shape0 libxft2 libxv1 libxxf86dga1
  openjdk-21-jre openjdk-21-jre-headless x11-utils
0 upgraded, 13 newly installed, 0 to remove and 20 not upgraded.
Need to get 49.0 MB of archives.
After this operation, 212 MB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 openjdk-21-jre-headless amd64 21.0.8+9~us1-0ubuntu1~24.04.1 [46.4 MB]
Get:2 http://archive.ubuntu.com/ubuntu noble/main amd64 default-jre-headless amd64 2:1.21-75+exp1 [3,094 B]
Get:3 http://archive.ubuntu.com/ubuntu noble/main amd64 libgif7 amd64 5.2.2-1ubuntu1 [35.2 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 openjdk-21-jre amd64 21.0.8+9~us1-0ubuntu1~24.04.1 [228 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble/main amd64 default-jre amd64 2:1.21-75+exp1 [922 B]
Get:6 http://archive.ubuntu.com/ubuntu noble/main amd64 fonts-dejavu-extra all 2.37-8 [1,947 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble/main amd64 libxcb-shape0 amd64 1.15-1ubuntu2 [6,100 B]
Get:8 http://archive.ubuntu.com/ubuntu noble/main amd64 libxft2 amd64 2.3.6-1build1 [45.3 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble/main amd64 libxv1 amd64 2:1.0.11-1.1build1 [10.7 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble/main amd64 libxxf86dga1 amd64 2:1.1.5-1build1 [11.6 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble/main amd64 x11-utils amd64 7.7+6build2 [189 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble/main amd64 libatk-wrapper-java all 0.40.0-3build2 [54.3 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble/main amd64 libatk-wrapper-java-jni amd64 0.40.0-3build2 [46.4 kB]
Fetched 49.0 MB in 6s (8,240 kB/s)
Selecting previously unselected package openjdk-21-jre-headless:amd64.
(Reading database ... 143263 files and directories currently installed.)
Preparing to unpack .../00-openjdk-21-jre-headless_21.0.8+9~us1-0ubuntu1~24.04.1_amd64.deb ...
Unpacking openjdk-21-jre-headless:amd64 (21.0.8+9~us1-0ubuntu1~24.04.1) ...
```

```
hajra@ubuntu-lab:~$ java --version
openjdk 21.0.8 2025-07-15
OpenJDK Runtime Environment (build 21.0.8+9-Ubuntu-0ubuntu124.04.1)
OpenJDK 64-Bit Server VM (build 21.0.8+9-Ubuntu-0ubuntu124.04.1, mixed mode, sharing)
hajra@ubuntu-lab:~$
```
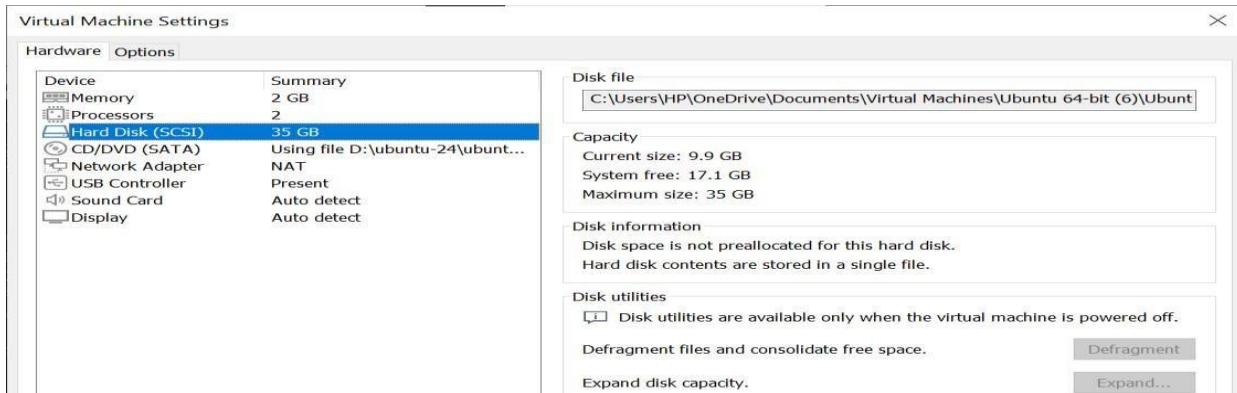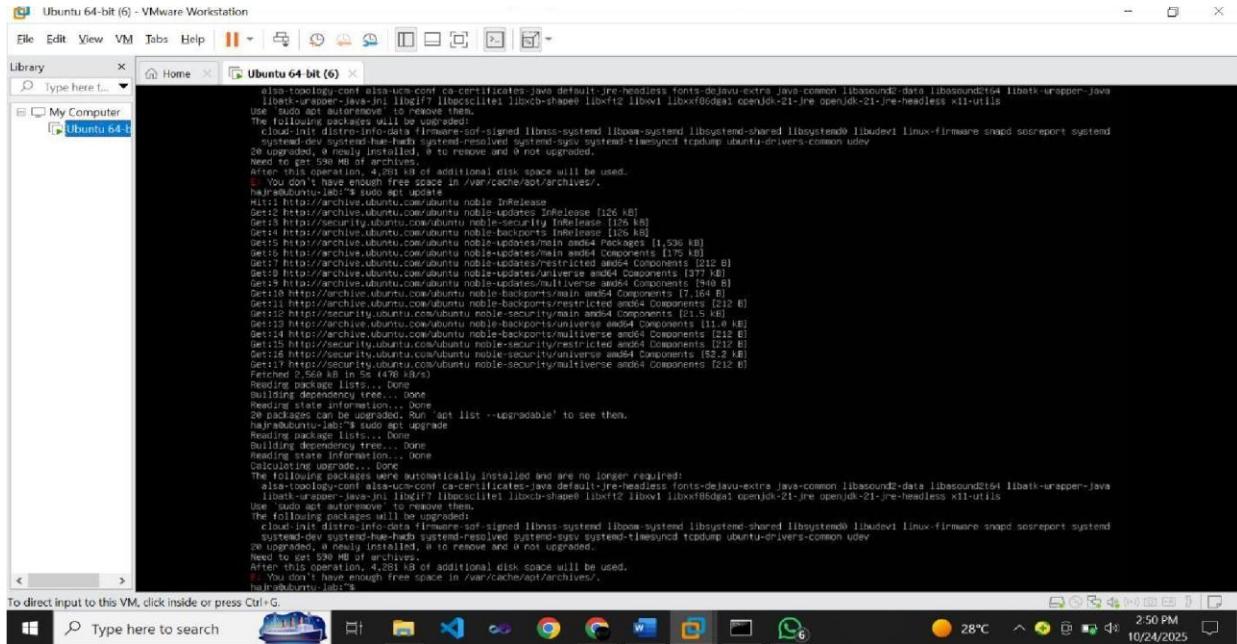
```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  alsa-topology-conf alsa-ucm-conf ca-certificates-java default-jre-headless fonts-dejavu-extra java-common libasound2-data libasound2t64 libatk-wrapper-java
  libatk-wrapper-java-jni libgif7 libpcsclite1 libxcb-shape0 libxft2 libxv1 libxxf86dga1 openjdk-21-jre openjdk-21-jre-headless x11-utils
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
  default-jre
0 upgraded, 0 newly installed, 1 to remove and 20 not upgraded.
After this operation, 6,144 B disk space will be freed.
(Reading database ... 143707 files and directories currently installed.)
Removing default-jre (2:1.21-75+exp1) ...
hajra@ubuntu-lab:~$
```

```
        -verbose:[class|module|gc|jni]
                      enable verbose output for the given subsystem
        -version      print product version to the error stream and exit
        --version     print product version to the output stream and exit
        -showversion  print product version to the error stream and continue
        --show-version
                      print product version to the output stream and continue
        --show-module-resolution
                      show module resolution output during startup
        -? -h -help
                      print this help message to the error stream
        --help        print this help message to the output stream
        -X            print help on extra options to the error stream
        --help-extra  print help on extra options to the output stream
        -ea[:<packagename>...|:<classname>]
        -enableassertions[:<packagename>...|:<classname>]
                      enable assertions with specified granularity
        -da[:<packagename>...|:<classname>]
        -disableassertions[:<packagename>...|:<classname>]
                      disable assertions with specified granularity
        -esa | -enablesystemassertions
                      enable system assertions
        -dsa | -disablesystemassertions
                      disable system assertions
        -agentlib:<libname>[=<options>]
                      load native agent library <libname>, e.g. -agentlib:jdwp
                      see also -agentlib:jdwp=help
        -agentpath:<pathname>[=<options>]
                      load native agent library by full pathname
        -javaagent:<jarpath>[=<options>]
                      load Java programming language agent, see java.lang.instrument
        -splash:<imagepath>
                      show splash screen with specified image
                      HiDPI scaled images are automatically supported and used
                      if available. The unscaled image filename, e.g. image.ext,
                      should always be passed as the argument to the -splash option.
                      The most appropriate scaled image provided will be picked up
                      automatically.
                      See the SplashScreen API documentation for more information
        @argument files
                      one or more argument files containing options
        --disable-@files
                      prevent further argument file expansion
        --enable-preview
                      allow classes to depend on preview features of this release
To specify an argument for a long option, you can use --<name>=<value> or
--<name> <value>.
```

Task 3:

Hit:1 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
20 packages can be upgraded. Run 'apt list --upgradable' to see them.
hajra@ubuntu-lab:~$

Ubuntu 64-bit (6) - VMware Workstation

Virtual Machine Settings

Hardware | Options

Device	Summary
Memory	2 GB
Processors	2
Hard Disk (SCSI)	35 GB
CD/DVD (SATA)	Using file D:\ubuntu-24\ubunt...
Network Adapter	NAT
USB Controller	Present
Sound Card	Auto detect
Display	Auto detect

Disk file
C:\Users\HP\OneDrive\Documents\Virtual Machines\Ubuntu 64-bit (6)\Ubunt

Capacity
Current size: 9.9 GB
System free: 17.1 GB
Maximum size: 35 GB

Disk information
Disk space is not preallocated for this hard disk.
Hard disk contents are stored in a single file.

Disk utilities
Disk utilities are available only when the virtual machine is powered off.

Defragment files and consolidate free space.   Defragment
Expand disk capacity.   Expand...

Filesystem	Size	Used	Avail	Use%	Mounted on
tmpfs	192M	1.6M	191M	1%	/run
/dev/mapper/ubuntu--vg-ubuntu--lv	12G	11G	303M	98%	/
tmpfs	960M	0	960M	0%	/dev/shm
tmpfs	5.0M	0	5.0M	0%	/run/lock
/dev/sda2	2.0G	192M	1.6G	11%	/boot
tmpfs	192M	20K	192M	1%	/run/user/1000
shm	64M	0	64M	0%	/var/snap/microk8s/common/run/containerd/io.containerd.grpc.v1.cri/sandboxes/483fff25e3b712de4439962c13861cbd9b245ecd1ccd07a3a337a95 328491b2a/shm
shm	64M	0	64M	0%	/var/snap/microk8s/common/run/containerd/io.containerd.grpc.v1.cri/sandboxes/15a028bbbbf29088005fa373e0fbe59796cbf11b1c57575fa448e3e 3d6f0eda35/shm
shm	64M	0	64M	0%	/var/snap/microk8s/common/run/containerd/io.containerd.grpc.v1.cri/sandboxes/183356de05a5db846eb9bafa5c6f530418c6a565183b35b0422032a 47fed3330/shm

```
[sudo] password for hajra:
NAME                        MAJ:MIN RM    SIZE RO TYPE MOUNTPOINTS
loop0                         7:0    0   52.2M  1 loop /snap/aws-cli/1668
loop1                         7:1    0   52.2M  1 loop /snap/aws-cli/1672
loop2                         7:2    0   55.5M  1 loop /snap/core18/2952
loop3                         7:3    0   63.8M  1 loop /snap/core20/2669
loop4                         7:4    0   73.9M  1 loop /snap/core22/2133
loop5                         7:5    0   66.8M  1 loop /snap/core24/1196
loop6                         7:6    0   73.9M  1 loop /snap/core22/2139
loop7                         7:7    0  140.6M  1 loop /snap/docker/3265
loop8                         7:8    0   66.8M  1 loop /snap/core24/1225
loop9                         7:9    0   44.1M  1 loop /snap/doctl/2263
loop10                        7:10   0  420.3M  1 loop /snap/google-cloud-sdk/608
loop11                        7:11   0   44.1M  1 loop /snap/doctl/2275
loop12                        7:12   0  164.3M  1 loop /snap/microk8s/8511
loop13                        7:13   0  118.3M  1 loop /snap/lxd/35624
loop14                        7:14   0   22.7M  1 loop /snap/keepalived/3093
loop15                        7:15   0  118.4M  1 loop /snap/lxd/36153
loop16                        7:16   0   95.7M  1 loop /snap/kata-containers/2446
loop17                        7:17   0    336M  1 loop /snap/nextcloud/50464
loop18                        7:18   0   76.6M  1 loop /snap/powershell/313
loop19                        7:19   0  164.2M  1 loop /snap/microk8s/8355
loop20                        7:20   0    3.1M  1 loop /snap/mosquitto/1006
loop21                        7:21   0   50.9M  1 loop /snap/snapd/25577
loop22                        7:22   0   76.6M  1 loop /snap/powershell/316
loop23                        7:23   0   13.9M  1 loop /snap/slcli/2957
loop24                        7:24   0   50.8M  1 loop /snap/snapd/25202
loop25                        7:25   0   23.2M  1 loop /snap/wormhole/509
sda                           8:0    0     35G  0 disk
├─sda1                        8:1    0      1M  0 part
├─sda2                        8:2    0      2G  0 part /boot
└─sda3                        8:3    0     23G  0 part
  └─ubuntu--vg-ubuntu--lv   252:0    0   11.5G  0 lvm  /
sr0                          11:0    1   1024M  0 rom
```

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
The following packages will be upgraded:
  cloud-init distro-info-data firmware-sof-signed libnss-systemd libpam-systemd libsystemd-shared libsystemd0 libudev1 linux-firmware snapd sosreport systemd systemd-dev systemd-hwe-hwdb
  systemd-resolved systemd-sysv systemd-timesyncd tcpdump ubuntu-drivers-common udev
20 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
Need to get 590 MB of archives.
After this operation, 4,281 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libnss-systemd amd64 255.4-1ubuntu8.11 [159 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 systemd-dev all 255.4-1ubuntu8.11 [106 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 systemd-timesyncd amd64 255.4-1ubuntu8.11 [35.3 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 systemd-resolved amd64 255.4-1ubuntu8.11 [296 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libsystemd-shared amd64 255.4-1ubuntu8.11 [2,076 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libsystemd0 amd64 255.4-1ubuntu8.11 [434 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 systemd-sysv amd64 255.4-1ubuntu8.11 [11.9 kB]
Get:8 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libpam-systemd amd64 255.4-1ubuntu8.11 [235 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 systemd amd64 255.4-1ubuntu8.11 [3,475 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 udev amd64 255.4-1ubuntu8.11 [1,874 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 libudev1 amd64 255.4-1ubuntu8.11 [176 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 ubuntu-drivers-common amd64 1:0.9.7.6ubuntu3.4 [65.8 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 distro-info-data all 0.60ubuntu0.5 [6,934 B]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 systemd-hwe-hwdb all 255.1.6 [3,684 B]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 tcpdump amd64 4.99.4-3ubuntu4.24.04.1 [479 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 firmware-sof-signed all 2023.12.1-1ubuntu1.10 [7,382 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 linux-firmware amd64 20240318.git3b128b60-0ubuntu2.19 [538 MB]
Get:18 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 snapd amd64 2.71+ubuntu24.04 [33.9 MB]
Get:19 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 sosreport amd64 4.9.2-0ubuntu0~24.04.1 [372 kB]
Get:20 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 cloud-init all 25.2-0ubuntu1~24.04.1 [625 kB]
fetched 590 MB in 4min 36s (2,135 kB/s)
Preconfiguring packages ...
(Reading database ... 142510 files and directories currently installed.)
Preparing to unpack .../0-libnss-systemd_255.4-1ubuntu8.11_amd64.deb ...
Unpacking libnss-systemd:amd64 (255.4-1ubuntu8.11) over (255.4-1ubuntu8.10) ...
Preparing to unpack .../1-systemd-dev_255.4-1ubuntu8.11_all.deb ...
Unpacking systemd-dev (255.4-1ubuntu8.11) over (255.4-1ubuntu8.10) ...
Preparing to unpack .../2-systemd-timesyncd_255.4-1ubuntu8.11_amd64.deb ...
Unpacking systemd-timesyncd (255.4-1ubuntu8.11) over (255.4-1ubuntu8.10) ...
Preparing to unpack .../3-systemd-resolved_255.4-1ubuntu8.11_amd64.deb ...
Unpacking systemd-resolved (255.4-1ubuntu8.11) over (255.4-1ubuntu8.10) ...
Preparing to unpack .../4-libsystemd-shared_255.4-1ubuntu8.11_amd64.deb ...
Setting up udev (255.4-1ubuntu8.11) ...
Setting up systemd-hwe-hwdb (255.1.6) ...
Setting up systemd-resolved (255.4-1ubuntu8.11) ...
Setting up snapd (2.71+ubuntu24.04) ...
Installing new version of config file /etc/apparmor.d/usr.lib.snapd.snap-confine.real ...
snapd.failure.service is a disabled or a static unit not running, not starting it.
snapd.gpio-chardev-setup.target is a disabled or a static unit not running, not starting it.
snapd.snap-repair.service is a disabled or a static unit not running, not starting it.
Setting up systemd-sysv (255.4-1ubuntu8.11) ...
Setting up ubuntu-drivers-common (1:0.9.7.6ubuntu3.4) ...
Setting up libnss-systemd:amd64 (255.4-1ubuntu8.11) ...
Setting up libpam-systemd:amd64 (255.4-1ubuntu8.11) ...
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...
Processing triggers for rsyslog (8.2312.0-3ubuntu9.1) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for dbus (1.14.10-4ubuntu4.1) ...
Processing triggers for initramfs-tools (0.142ubuntu25.5) ...
update-initramfs: Generating /boot/initrd.img-6.8.0-86-generic
Scanning processes...
Scanning candidates...
Scanning linux images...

Running kernel seems to be up-to-date.

Restarting services...
 systemctl restart fwupd.service multipathd.service open-vm-tools.service polkit.service snap.keepalived.daemon.service ssh.service udisks2.service upower.service

Service restarts being deferred:
 systemctl restart ModemManager.service
 /etc/needrestart/restart.d/dbus.service
 systemctl restart systemd-logind.service
 systemctl restart unattended-upgrades.service

No containers need to be restarted.

User sessions running outdated binaries:
 hajra @ session #1: login[1532]
 hajra @ session #3: apt[211349], sshd[11122]
 hajra @ user manager service: systemd[2562]

No VM guests are running outdated hypervisor (qemu) binaries on this host.
hajra@ubuntu-lab: $
```

```
$ nano ~/apt_update_vs_upgrade.md
```

.

```
The command `sudo apt update` refreshes the list of available packages from online repositories. It does not install or remove anything; it just updates the local index.
On the other hand, `sudo apt upgrade` actually installs the new versions of already-installed packages using the updated index.
Earlier, I faced issues where updates failed due to low disk space, and I had to extend the partition (`/dev/sda3`) using `growpart` to fix it. After fixing the partition, both apt update a
nd upgrade ran successfully.
Without running apt update first, apt upgrade would not know about the latest versions available.
This process ensures the system stays up-to-date and secure.
```

Task 4:

```
code 7d842fb8 from Visual Studio Code (vscode) installed

Name    Version    Rev    Tracking         Publisher    Notes
code    7d842fb8   211    latest/stable    vscode       classic
```

```
1.105.1
7d842fb85a0275a4a8e4d7e040d2625abbf7f084
x64
```

```
name:      code
summary:   Code editing. Redefined.
publisher: Visual Studio Code (vscode )
store-url: https://snapcraft.io/code
contact:   https://twitter.com/code
license:   unset
description: |
  Visual Studio Code is a new choice of tool that combines the
  simplicity of a code editor with what developers need for the core
  edit-build-debug cycle.
commands:
  - code
  - code.url-handler
snap-id:      Ht0aUHi7ofh9Fbwh6m7jUN2pAy6kzBiu
tracking:     latest/stable
refresh-date: today at 20:41 UTC
channels:
  latest/stable:    7d842fb8 2025-10-15 (211) 346MB classic
  latest/candidate: ↑
  latest/beta:      ↑
  latest/edge:      ↑
installed:          7d842fb8         (211) 346MB classic
```

Task 5:

```
The authenticity of host '192.168.161.129 (192.168.161.129)' can't be established.
ED25519 key fingerprint is SHA256:M5unwK7+jxUhr6KM3bbMPRkghlGd+Kq5uspTQZ5Up3w.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
```

```
Warning: Permanently added '192.168.161.129' (ED25519) to the list of known hosts.
hajra@192.168.161.129's password:
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-84-generic x86_64)

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

 System information as of Sat 27 Sep 10:28:45 UTC 2025

  System load:  1.46                Processes:             276
  Usage of /:   70.2% of 11.21GB    Users logged in:       1
  Memory usage: 57%                 IPv4 address for ens33: 192.168.161.129
  Swap usage:   9%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
```

```
Hit:1 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```

```
aspell-autobuildhash: processing: en [en-variant_2].
aspell-autobuildhash: processing: en [en-w_accents-only].
aspell-autobuildhash: processing: en [en-wo_accents-only].
aspell-autobuildhash: processing: en [en_AU-variant_0].
aspell-autobuildhash: processing: en [en_AU-variant_1].
aspell-autobuildhash: processing: en [en_AU-w_accents-only].
aspell-autobuildhash: processing: en [en_AU-wo_accents-only].
aspell-autobuildhash: processing: en [en_CA-variant_0].
aspell-autobuildhash: processing: en [en_CA-variant_1].
aspell-autobuildhash: processing: en [en_CA-w_accents-only].
aspell-autobuildhash: processing: en [en_CA-wo_accents-only].
aspell-autobuildhash: processing: en [en_GB-ise-w_accents-only].
aspell-autobuildhash: processing: en [en_GB-ise-wo_accents-only].
aspell-autobuildhash: processing: en [en_GB-ize-w_accents-only].
aspell-autobuildhash: processing: en [en_GB-ize-wo_accents-only].
aspell-autobuildhash: processing: en [en_GB-variant_0].
aspell-autobuildhash: processing: en [en_GB-variant_1].
aspell-autobuildhash: processing: en [en_US-w_accents-only].
aspell-autobuildhash: processing: en [en_US-wo_accents-only].
Processing triggers for sgml-base (1.31) ...
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...
Scanning processes...
Scanning candidates...
Scanning linux images...

Running kernel seems to be up-to-date.

Restarting services...

Service restarts being deferred:
 /etc/needrestart/restart.d/dbus.service
 systemctl restart systemd-logind.service
 systemctl restart unattended-upgrades.service

No containers need to be restarted.

User sessions running outdated binaries:
 hajra @ session #1: login[1532]
 hajra @ session #3: sshd[11122]
 hajra @ user manager service: systemd[2562]
```

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libfuse2t64 libpipewire-0.3-modules-xrdp pipewire-module-xrdp xorgxrdp
Suggested packages:
  pipewire-bin guacamole
The following NEW packages will be installed:
  libfuse2t64 libpipewire-0.3-modules-xrdp pipewire-module-xrdp xorgxrdp xrdp
0 upgraded, 5 newly installed, 0 to remove and 0 not upgraded.
Service restarts being deferred:
 /etc/needrestart/restart.d/dbus.service
 systemctl restart systemd-logind.service
 systemctl restart unattended-upgrades.service

No containers need to be restarted.

User sessions running outdated binaries:
 hajra @ session #1: login[1532]
 hajra @ session #3: sshd[11122]
 hajra @ user manager service: systemd[2562]
No VM guests are running outdated hypervisor (qemu) binaries on this host.
```

```
● xrdp.service - xrdp daemon
     Loaded: loaded (/usr/lib/systemd/system/xrdp.service; enabled; preset: enabled)
     Active: active (running) since Fri 2025-10-24 21:03:34 UTC; 3min 27s ago
       Docs: man:xrdp(8)
             man:xrdp.ini(5)
   Main PID: 464810 (xrdp)
      Tasks: 1 (limit: 2210)
     Memory: 936.0K (peak: 1.6M)
        CPU: 72ms
     CGroup: /system.slice/xrdp.service
             └─464810 /usr/sbin/xrdp

Oct 24 21:03:33 ubuntu-lab systemd[1]: Starting xrdp.service - xrdp daemon...
Oct 24 21:03:33 ubuntu-lab xrdp[464808]: [INFO ] address [0.0.0.0] port [3389] mode 1
Oct 24 21:03:33 ubuntu-lab xrdp[464808]: [INFO ] listening to port 3389 on 0.0.0.0
Oct 24 21:03:33 ubuntu-lab xrdp[464808]: [INFO ] xrdp_listen_pp done
Oct 24 21:03:33 ubuntu-lab systemd[1]: xrdp.service: Can't open PID file /run/xrdp/xrdp.pid (yet?) after start: No such file or directory
Oct 24 21:03:34 ubuntu-lab systemd[1]: Started xrdp.service - xrdp daemon.
Oct 24 21:03:35 ubuntu-lab xrdp[464810]: [INFO ] starting xrdp with pid 464810
Oct 24 21:03:35 ubuntu-lab xrdp[464810]: [INFO ] address [0.0.0.0] port [3389] mode 1
Oct 24 21:03:35 ubuntu-lab xrdp[464810]: [INFO ] listening to port 3389 on 0.0.0.0
Oct 24 21:03:35 ubuntu-lab xrdp[464810]: [INFO ] xrdp_listen_pp done
```
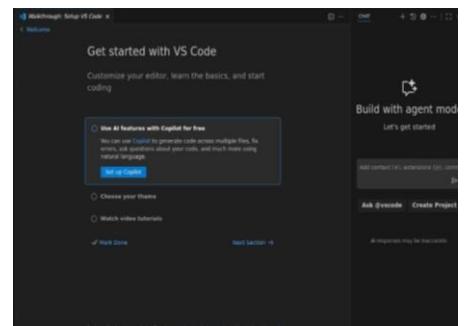
```
$ echo xfce4-session > ~/.xsession
$ _
```

Remote Desktop Connection

Remote Desktop Connection

Computer: 192.168.161.129

User name: None specified

You will be asked for credentials when you connect.

Show Options   Connect   Help
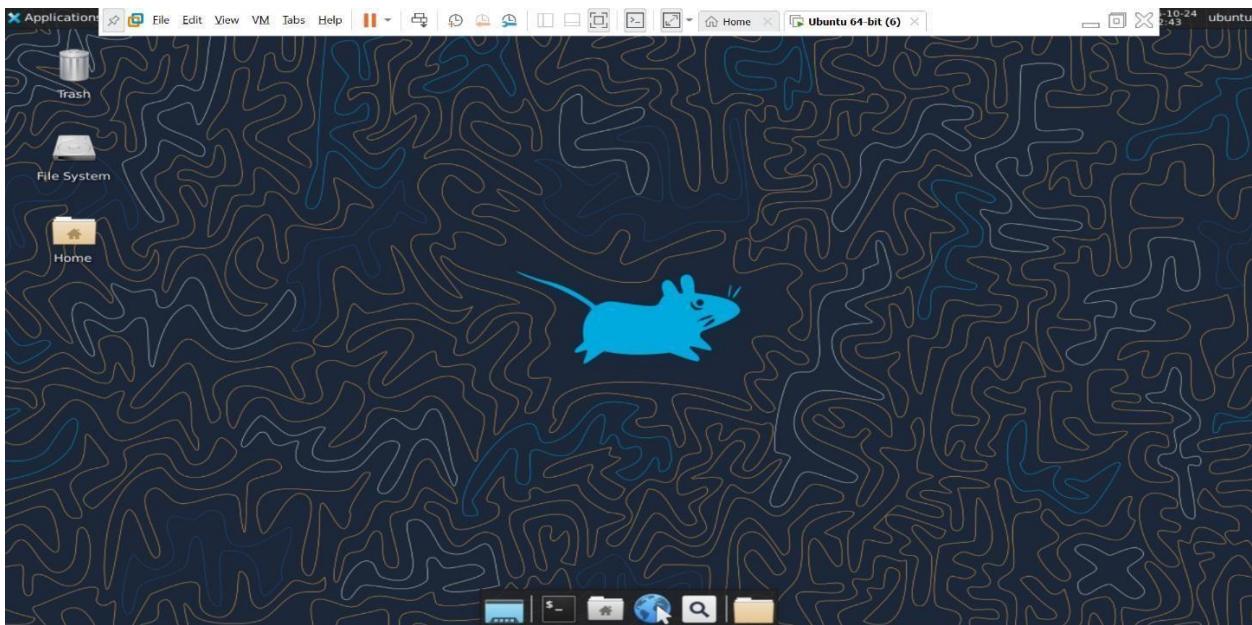
Task 6:

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
lightdm is already the newest version (1.30.0-0ubuntu14).
lightdm set to manually installed.
The following additional packages will be installed:
  gnome-accessibility-themes gnome-themes-extra gnome-themes-extra-data gtk2-engines-pixbuf
The following NEW packages will be installed:
  gnome-accessibility-themes gnome-themes-extra gnome-themes-extra-data gtk2-engines-pixbuf lightdm-gtk-greeter
0 upgraded, 5 newly installed, 0 to remove and 0 not upgraded.
```

```
Synchronizing state of lightdm.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable lightdm
The unit files have no installation config (WantedBy=, RequiredBy=, UpheldBy=,
Also=, or Alias= settings in the [Install] section, and DefaultInstance= for
template units). This means they are not meant to be enabled or disabled using systemctl.

Possible reasons for having these kinds of units are:
• A unit may be statically enabled by being symlinked from another unit's
  .wants/, .requires/, or .upholds/ directory.
• A unit's purpose may be to act as a helper for some other unit which has
  a requirement dependency on it.
• A unit may be started when needed via activation (socket, path, timer,
  D-Bus, udev, scripted systemctl call, ...).
• In case of template units, the unit is meant to be enabled with some
  instance name specified.
hajra@ubuntu-lab:~$ sudo systemctl set-default graphical.target
Created symlink /etc/systemd/system/default.target → /usr/lib/systemd/system/graphical.target.
hajra@ubuntu-lab:~$
```

```
Ubuntu 24.04.3 LTS ubuntu-lab tty1

ubuntu-lab login: hajra
Password:
Welcome to Ubuntu 24.04.3 LTS (GNU/Linux 6.8.0-86-generic x86_64)

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

 System information as of Wed 22 Oct 12:09:53 UTC 2025

  System load:  0.96              Processes:             270
  Usage of /:   86.9% of 11.21GB  Users logged in:       1
  Memory usage: 57%               IPv4 address for ens33: 192.168.161.129
  Swap usage:   9%

  => / is using 86.9% of 11.21GB

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

6 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

hajra@ubuntu-lab:~$
```
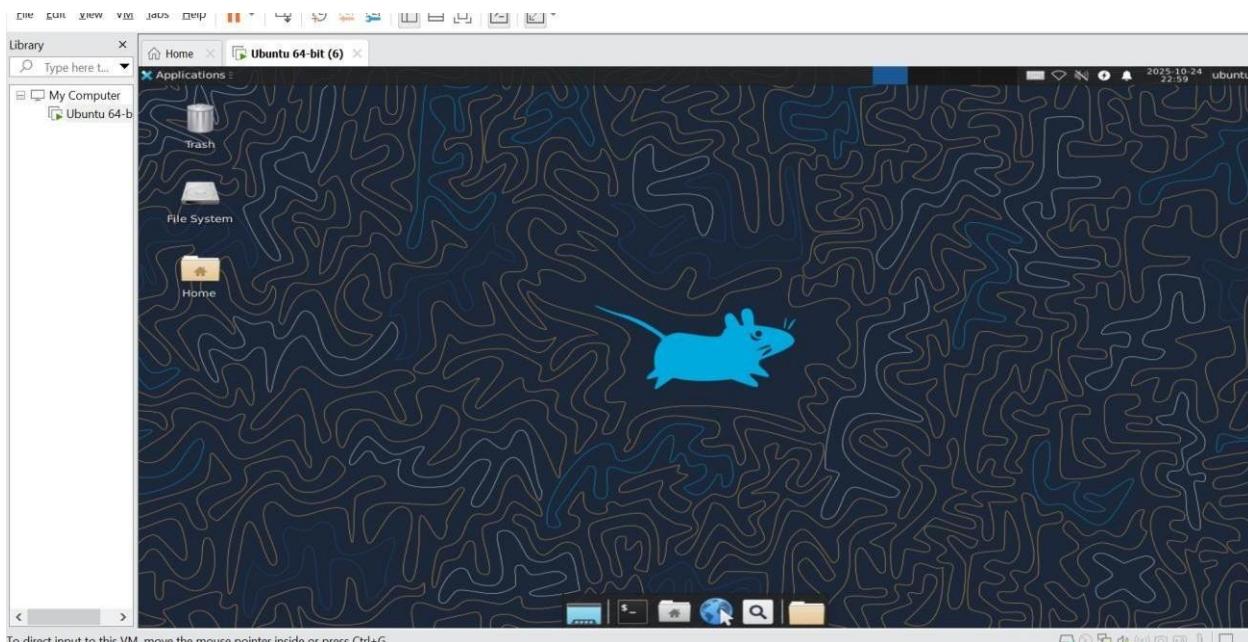
```
sudo systemctl stop lightdm
```

Task 7:

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
E: Unable to locate package google-chrome-stable
```

```
total 48
drwxr-xr-x   9 root root  4096 Sep 26 21:06 .
drwxr-xr-x 147 root root 12288 Oct 24 21:25 ..
drwxr-xr-x   2 root root  4096 Oct 24 20:19 apt.conf.d
drwxr-xr-x   2 root root  4096 Mar 31  2024 auth.conf.d
drwxr-xr-x   2 root root  4096 Mar 31  2024 keyrings
drwxr-xr-x   2 root root  4096 Aug  5 17:14 preferences.d
drwxr-xr-x   2 root root  4096 Aug  5 17:14 preferences.d.save
-rw-r--r--   1 root root    70 Sep 26 21:24 sources.list
drwxr-xr-x   2 root root  4096 Sep 26 21:24 sources.list.d
drwxr-xr-x   2 root root  4096 Aug  5 17:01 trusted.gpg.d
```

```
Types: deb
URIs: http://archive.ubuntu.com/ubuntu
Suites: noble noble-updates noble-backports
Components: main restricted universe multiverse
Signed-By: /usr/share/keyrings/ubuntu-archive-keyring.gpg

Types: deb
URIs: http://security.ubuntu.com/ubuntu/
Suites: noble-security
Components: main restricted universe multiverse
Signed-By: /usr/share/keyrings/ubuntu-archive-keyring.gpg
```

```
Types: deb
URIs:
Suites: noble noble-updates noble-backports
Components: main restricted universe multiverse
Signed-By: /usr/share/keyrings/ubuntu-archive-keyring.gpg

Types: deb
URIs:
Suites: noble-security
Components: main restricted universe multiverse
Signed-By: /usr/share/keyrings/ubuntu-archive-keyring.gpg



















Types: deb
URIs:
Suites: stable
Components: main
Architectures: amd64
Signed-By: /etc/apt/keyrings/google.gpg
```

```
^G Help        ^O Write Out   ^W Where Is   ^K Cut       ^T Execute    ^C Location    M-U Undo   M-A Set Mark   M-] To Bracket   M-Q Previous   ^B Back
^X Exit        ^R Read File   ^\ Replace    ^U Paste     ^J Justify    ^/ Go To Line  M-E Redo   M-6 Copy       ^W Where Was     M-W Next       ^F Forward
```

```
Get:1 http://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:3 http://archive.ubuntu.com/ubuntu noble InRelease
Get:4 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:5 http://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,217 B]
Get:6 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.6 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:9 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.3 kB]
Get:10 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 B]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1,541 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble-updates/main Translation-en [292 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [2,170 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [489 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:17 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [377 kB]
Get:18 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:19 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7,128 B]
Get:20 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [216 B]
Get:21 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [11.0 kB]
Get:22 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 5,521 kB in 9s (608 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
```

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  fonts-liberation fonts-liberation-sans-narrow
The following NEW packages will be installed:
  fonts-liberation fonts-liberation-sans-narrow google-chrome-stable
0 upgraded, 3 newly installed, 0 to remove and 0 not upgraded.
Need to get 122 MB of archives.
After this operation, 401 MB of additional disk space will be used.
Get:1 http://dl.google.com/linux/chrome/deb stable/main amd64 google-chrome-stable amd64 141.0.7390.122-1 [120 MB]
Get:2 http://archive.ubuntu.com/ubuntu noble/main amd64 fonts-liberation all 1:2.1.5-3 [1,603 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble/main amd64 fonts-liberation-sans-narrow all 1:1.07.6-4 [197 kB]
Fetched 122 MB in 1min 11s (1,725 kB/s)
```

```
Processing triggers for bamfdaemon (0.5.6+22.04.20220217-0ubuntu5) ...
Rebuilding /usr/share/applications/bamf-2.index...
Processing triggers for desktop-file-utils (0.27-2build1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
hajra@ubuntu-lab: $
```

Task 8:

```
                            VIM - Vi IMproved

                            version 9.1.697
                          by Bram Moolenaar et al.
                    Modified by team+vim@tracker.debian.org
                    Vim is open source and freely distributable

                         Sponsor Vim development!
              type  :help sponsor            for information

              type  :q                       to exit
              type  :help           or       for on-line help
              type  :help version9            for version info
```

```
$ vim k8s-sample.yaml
```

```
apiVersion  v1
kind  Pod
metadata
    name  nginx-pod
  spec
      containers
        - name  nginx
          image  nginx:1.19
          ports
            - containerPort
              restartPolicy  Always
```

Task 9:

```
cd ~/Lab5
vim k8s-sample.yaml
```

```
apiVersion  v1
kind  Pod
metadata
  annotations
      lab  lesson11
```

```
apiVersion: v1
kind: Pod
metadata:
  annotations:
      lab: lesson11
    name: nginx-pod
    spec:
        containers:
           - name: nginx
                image: nginx:1.19
                     ports:
                         - containerPort: 80
                             restartPolicy: Always
```

```
kind  Pod
metadata
  annotations
      lab  lesson11
    name  nginx-pod
    spec
        containers
           - name  nginx
                image  nginx:1.19
                     ports
                         - containerPort  80
                             restartPolicy  Always
```

```
apiVersion  v1
kind  Pod
metadata
  annotations
      lab  lesson11
    name  nginx-pod
    spec
        containers
           - name  nginx
                image  nginx:1.19
                     ports
                         - containerPort  80
                             restartPolicy  Always
                         # temp: do-not-keep
```

```
 vim k8s-sample.yaml
```

```
apiVersion: v1
kind: Pod
metadata:
  annotations:
      lab: lesson11
    name: nginx-pod
    spec:
        containers:
           - name: nginx
                image: nginx:1.19
                     ports:
                         - containerPort: 80
                             restartPolicy: Always
                         # temp: do-not-keep
```

Task 10:

```
$ cd ~/Lab5
$ vim k8s-sample.yaml
```

```
    - name  nginx
        image   nginx:1.19
            ports
```

```
  - name   nginx
           ports
```

```
    - name  nginx
        image  nginx:1.19
            ports
```

```
apiVersion   v1
kind   Pod
metadata
```

```
 annotations
    lab   lesson11
   name   nginx-pod
   spec
       containers
```

```
apiVersion   v1
kind   Pod
metadata
```

```
                          restartPolicy   Always
                  # temp: do-not-keep
```

```
         restartPolicy   Always
       # temp: do-not-keep
```

```
                          # temp: do-not-keep
```

```
  vim k8s-sample.yaml
```

Task 11:

```
 $ cd ~/Lab5
      $ vim k8s-sample.yaml
```

```
                          restartPolicy   Always
```

```
 name   nginx-pod
```

```
metadata:
  annotations:
     lab: lesson11
   name: nginx-pod
   spec:
       containers:
           - name: nginx
               image: nginx:1.19
                   ports:
                       - containerPort: 80
                          restartPolicy: Always
                      # temp: do-not-keep
                       # nginx added for testing
                       # # another nginx line
```

```
apiVersion   v1
kind   Pod
metadata
  annotations
     lab   lesson11
   name   nginx-pod
   spec
       containers
           - name   nginx
               image   nginx:1.19
                   ports
                       - containerPort
                          restartPolicy   Always
                       # temp: do-not-keep
```

```
vim k8s-sample.yaml
```

Docker desktop Installation:

```
Get:1 http://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Get:3 http://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,215 B]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:5 https://ppa.launchpadcontent.net/obsproject/obs-studio/ubuntu noble InRelease
Get:6 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:7 https://ppa.launchpadcontent.net/ubuntuhandbook1/audacity/ubuntu noble InRelease
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [208 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:12 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1,542 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [175 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [377 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:18 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [7,124 B]
Get:19 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [212 B]
Get:20 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [11.0 kB]
Get:21 http://archive.ubuntu.com/ubuntu noble-backports/multiverse amd64 Components [212 B]
Fetched 2,569 kB in 34s (76.0 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
```

```
sudo mkdir -p /etc/apt/keyrings
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg
```

```
Get:1 https://download.docker.com/linux/ubuntu noble InRelease [48.5 kB]
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:3 https://download.docker.com/linux/ubuntu noble/stable amd64 Packages [33.3 kB]
Hit:4 http://dl.google.com/linux/chrome/deb stable InRelease
Hit:5 http://archive.ubuntu.com/ubuntu noble InRelease
Get:6 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:7 https://ppa.launchpadcontent.net/obsproject/obs-studio/ubuntu noble InRelease
Hit:8 https://ppa.launchpadcontent.net/ubuntuhandbook1/audacity/ubuntu noble InRelease
Hit:9 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1,541 kB]
Fetched 1,749 kB in 12s (143 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
```

```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  docker-ce-rootless-extras libslirp0 pigz slirp4netns
Suggested packages:
  cgroupfs-mount | cgroup-lite docker-model-plugin
The following NEW packages will be installed:
  containerd.io docker-buildx-plugin docker-ce docker-ce-cli docker-ce-rootless-extras docker-compose-plugin libslirp0 pigz slirp4netns
0 upgraded, 9 newly installed, 0 to remove and 0 not upgraded.
Need to get 105 MB of archives.
After this operation, 437 MB of additional disk space will be used.
Get:1 https://download.docker.com/linux/ubuntu noble/stable amd64 containerd.io amd64 1.7.28-1~ubuntu.24.04~noble [31.9 MB]
Get:2 http://archive.ubuntu.com/ubuntu noble/universe amd64 pigz amd64 2.8-1 [65.6 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble/main amd64 libslirp0 amd64 4.7.0-1ubuntu3 [63.8 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble/universe amd64 slirp4netns amd64 1.2.1-1build2 [34.9 kB]
Get:5 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce-cli amd64 5:28.5.1-1~ubuntu.24.04~noble [16.5 MB]
Get:6 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce amd64 5:28.5.1-1~ubuntu.24.04~noble [19.7 MB]
Get:7 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-buildx-plugin amd64 0.29.1-1~ubuntu.24.04~noble [15.9 MB]
Get:8 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-ce-rootless-extras amd64 5:28.5.1-1~ubuntu.24.04~noble [6,481 kB]
Get:9 https://download.docker.com/linux/ubuntu noble/stable amd64 docker-compose-plugin amd64 2.40.2-1~ubuntu.24.04~noble [14.3 MB]
Fetched 105 MB in 47s (2,228 kB/s)
Selecting previously unselected package containerd.io.
(Reading database ... 187553 files and directories currently installed.)
Preparing to unpack .../0-containerd.io_1.7.28-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking containerd.io (1.7.28-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-ce-cli.
Preparing to unpack .../1-docker-ce-cli_5%3a28.5.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce-cli (5:28.5.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-ce.
Preparing to unpack .../2-docker-ce_5%3a28.5.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce (5:28.5.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package pigz.
Preparing to unpack .../3-pigz_2.8-1_amd64.deb ...
Unpacking pigz (2.8-1) ...
Selecting previously unselected package docker-buildx-plugin.
Preparing to unpack .../4-docker-buildx-plugin_0.29.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-buildx-plugin (0.29.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-ce-rootless-extras.
Preparing to unpack .../5-docker-ce-rootless-extras_5%3a28.5.1-1~ubuntu.24.04~noble_amd64.deb ...
Unpacking docker-ce-rootless-extras (5:28.5.1-1~ubuntu.24.04~noble) ...
Selecting previously unselected package docker-compose-plugin.
Preparing to unpack .../6-docker-compose-plugin_2.40.2-1~ubuntu.24.04~noble_amd64.deb ...
```

```
systemctl --user start docker-desktop
```

```
● docker.service - Docker Application Container Engine
     Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: enabled)
     Active: active (running) since Sat 2025-10-25 16:34:38 UTC; 10min ago
TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
   Main PID: 768054 (dockerd)
      Tasks: 9
     Memory: 21.7M (peak: 97.0M swap: 18.7M swap peak: 18.9M)
        CPU: 1.027s
     CGroup: /system.slice/docker.service
             └─768054 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Oct 25 16:34:36 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:36.979378298Z" level=info msg="detected 127.0.0.53 nameserver, assuming systemd-resolved, so using resolv.conf: /run/syst>
Oct 25 16:34:37 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:37.056151433Z" level=info msg="Creating a containerd client" address=/run/containerd/containerd.sock timeout=1m0s
Oct 25 16:34:37 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:37.139148920Z" level=info msg="Loading containers: start."
Oct 25 16:34:38 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:38.110602097Z" level=info msg="Loading containers: done."
Oct 25 16:34:38 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:38.179496347Z" level=info msg="Docker daemon" commit=f8215cc containerd-snapshotter=false storage-driver=overlay2 version>
Oct 25 16:34:38 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:38.180289680Z" level=info msg="Initializing buildkit"
Oct 25 16:34:38 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:38.257145265Z" level=info msg="Completed buildkit initialization"
Oct 25 16:34:38 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:38.270917845Z" level=info msg="Daemon has completed initialization"
Oct 25 16:34:38 ubuntu-lab dockerd[768054]: time="2025-10-25T16:34:38.271223404Z" level=info msg="API listen on /run/docker.sock"
Oct 25 16:34:38 ubuntu-lab systemd[1]: Started docker.service - Docker Application Container Engine.
```
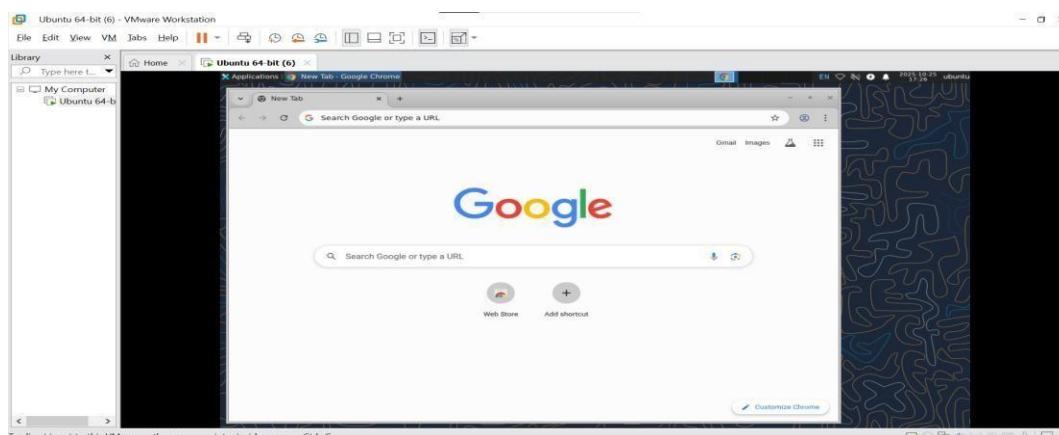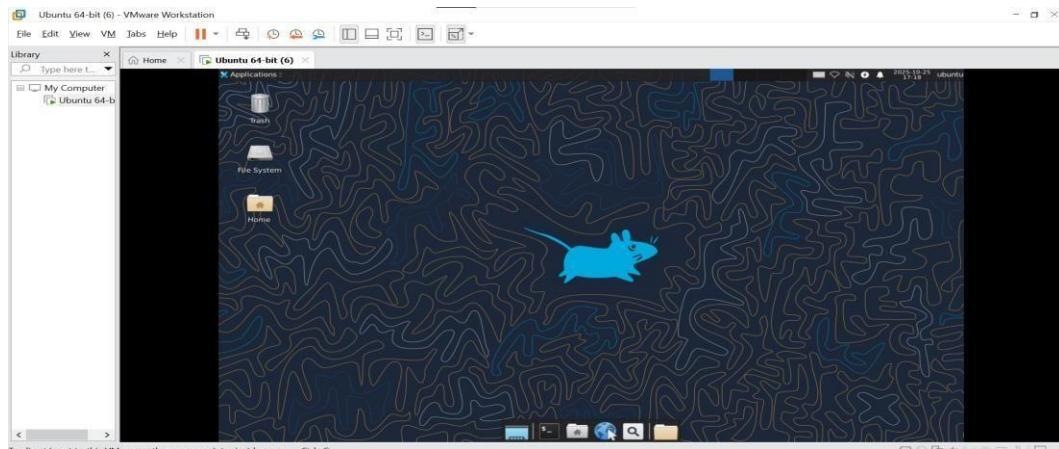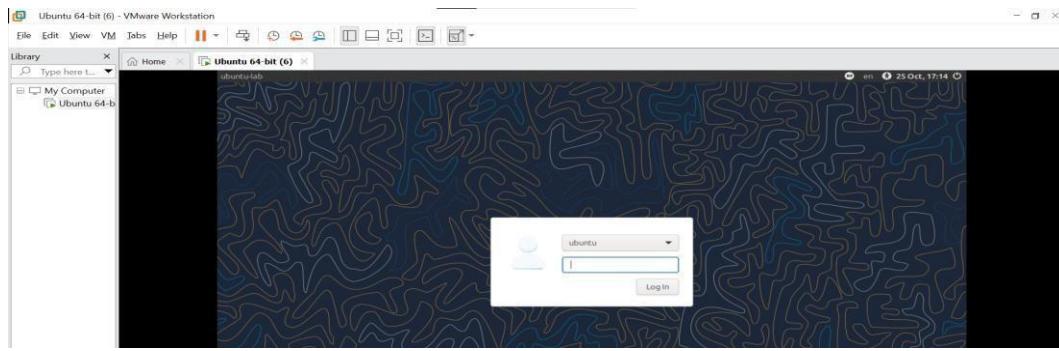
```
Client: Docker Engine - Community
 Version:           28.5.1
 API version:       1.51
 Go version:        go1.24.8
 Git commit:        e180ab8
 Built:             Wed Oct  8 12:17:26 2025
 OS/Arch:           linux/amd64
 Context:           default

Server: Docker Engine - Community
 Engine:
  Version:          28.5.1
  API version:      1.51 (minimum version 1.24)
  Go version:       go1.24.8
  Git commit:       f8215cc
  Built:            Wed Oct  8 12:17:26 2025
  OS/Arch:          linux/amd64
  Experimental:     false
 containerd:
  Version:          v1.7.28
  GitCommit:        b98a3aace656320842a23f4a392a33f46af97866
 runc:
  Version:          1.3.0
  GitCommit:        v1.3.0-0-g4ca628d1
 docker-init:
  Version:          0.19.0
  GitCommit:        de40ad0
```
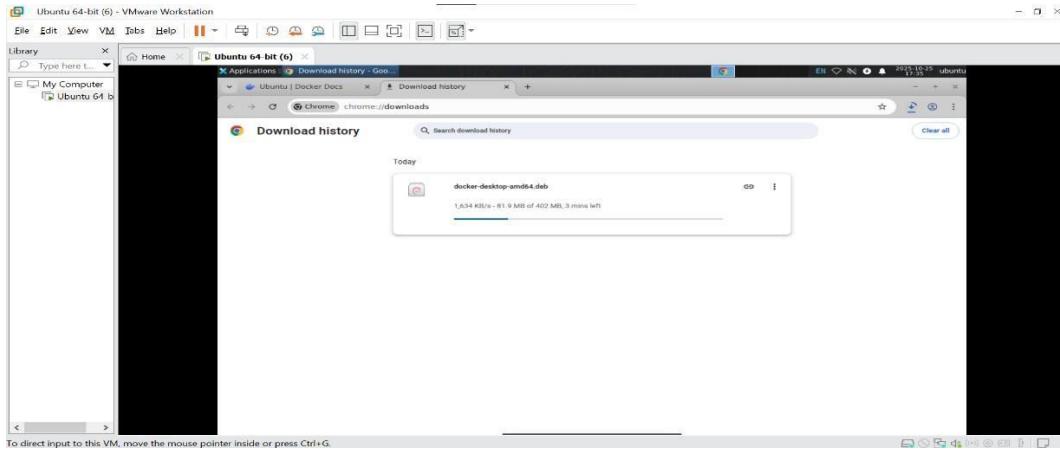
```
Client: Docker Engine - Community
 Version:    28.5.1
 Context:    default
 Debug Mode: false
 Plugins:
  ai: Docker AI Agent - Ask Gordon (Docker Inc.)
    Version:  v1.9.11
    Path:     /home/hajra/.docker/cli-plugins/docker-ai
  buildx: Docker Buildx (Docker Inc.)
    Version:  v0.29.1-desktop.1
    Path:     /home/hajra/.docker/cli-plugins/docker-buildx
  compose: Docker Compose (Docker Inc.)
    Version:  v2.40.2-desktop.1
    Path:     /home/hajra/.docker/cli-plugins/docker-compose
  debug: Get a shell into any image or container (Docker Inc.)
    Version:  0.0.45
    Path:     /home/hajra/.docker/cli-plugins/docker-debug
  desktop: Docker Desktop commands (Docker Inc.)
    Version:  v0.2.0
    Path:     /home/hajra/.docker/cli-plugins/docker-desktop
  extension: Manages Docker extensions (Docker Inc.)
    Version:  v0.2.31
    Path:     /home/hajra/.docker/cli-plugins/docker-extension
  init: Creates Docker-related starter files for your project (Docker Inc.)
    Version:  v1.4.0
    Path:     /home/hajra/.docker/cli-plugins/docker-init
  mcp: Docker MCP Plugin (Docker Inc.)
    Version:  v0.24.0
    Path:     /home/hajra/.docker/cli-plugins/docker-mcp
  offload: Docker Offload (Docker Inc.)
    Version:  v0.5.1
    Path:     /home/hajra/.docker/cli-plugins/docker-offload
  sandbox: Docker Sandbox (Docker Inc.)
    Version:  v0.3.1
    Path:     /home/hajra/.docker/cli-plugins/docker-sandbox
  sbom: View the packaged-based Software Bill Of Materials (SBOM) for an image (Anchore Inc.)
    Version:  0.6.0
    Path:     /home/hajra/.docker/cli-plugins/docker-sbom
  scout: Docker Scout (Docker Inc.)
    Version:  v1.18.3
    Path:     /home/hajra/.docker/cli-plugins/docker-scout

Server:
 Containers: 0
  Running: 0
  Paused: 0
  Stopped: 0
 Images: 0
 Server Version: 28.5.1
 Storage Driver: overlay2
  Backing Filesystem: extfs
  Supports d_type: true
  Using metacopy: false
  Native Overlay Diff: true
  userxattr: false
 Logging Driver: json-file
 Cgroup Driver: systemd
 Cgroup Version: 2
 Plugins:
  Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local splunk syslog
 CDI spec directories:
  /etc/cdi
  /var/run/cdi
 Swarm: inactive
 Runtimes: io.containerd.runc.v2 runc
 Default Runtime: runc
 Init Binary: docker-init
 containerd version: b98a3aace656320842a23f4a392a33f46af97866
 runc version: v1.3.0-0-g4ca628d1
 init version: de40ad0
 Security Options:
  apparmor
  seccomp
   Profile: builtin
  cgroupns
 Kernel Version: 6.8.0-86-generic
 Operating System: Ubuntu 24.04.3 LTS
 OSType: linux
 Architecture: x86_64
 CPUs: 2
 Total Memory: 1.875GiB
 Name: ubuntu-lab
 ID: 49239b75-fc34-402c-82ab-b6e673409f02
 Docker Root Dir: /var/lib/docker
```
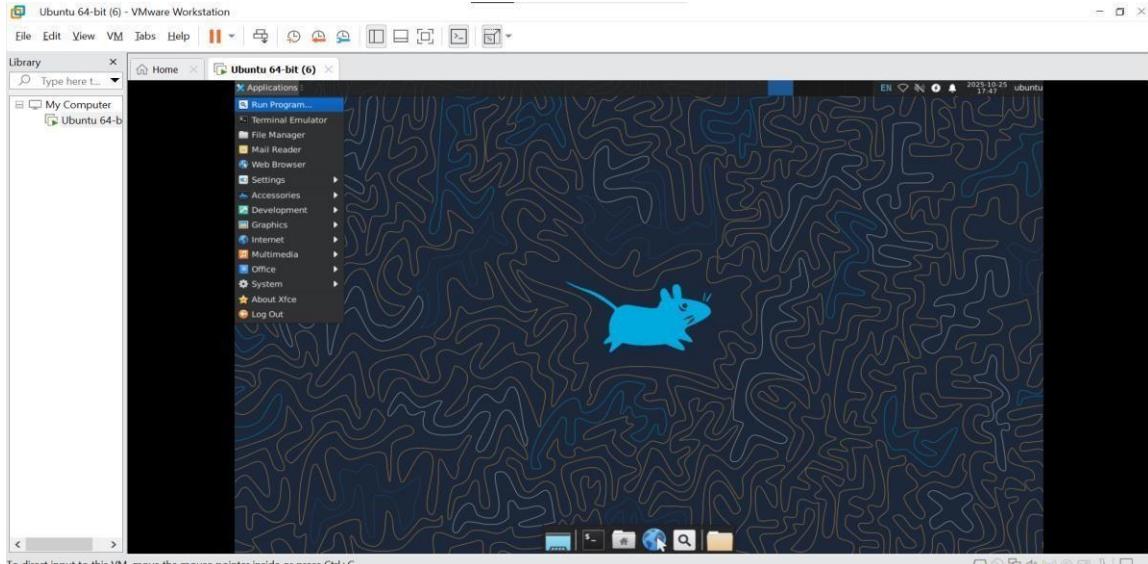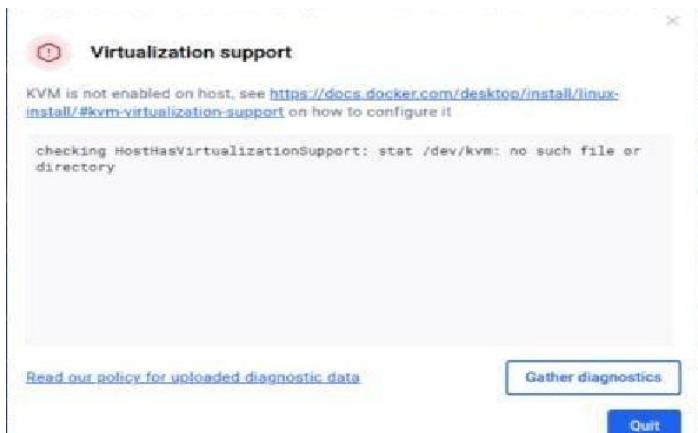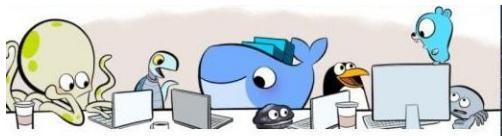
```
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Note, selecting 'docker-desktop' instead of './docker-desktop-amd64.deb'
docker-desktop is already the newest version (4.49.0-208700).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
```


Virtualization support

KVM is not enabled on host, see https://docs.docker.com/desktop/install/linux-install/#kvm-virtualization-support on how to configure it

checking HostHasVirtualizationSupport: stat /dev/kvm: no such file or directory

Read our policy for uploaded diagnostic data   Gather diagnostics

Quit

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