

## Experiment - 1

Title: Linux Operating system & Installation of Linux

Q1. Define Operating system? State purpose of OS? Give 5 examples.

→ An Operating System (OS) is a resource allocator that manages all resources & decides between conflicting requests for efficient & fair resource use. It is also a control program that controls the execution of programs to prevent errors & improper use of the computer.

The purpose of OS is:

- \* Memory management
- \* Processor management
- \* Device management
- \* File management
- \* Security
- \* Network management
- \* Control over system performance
- \* Error detecting aids
- \* Job accounting
- \* Co-ordination between other softwares & users.

Examples:

- ① Microsoft Windows: widely used OS for computers & laptops
- ② MAC OS: OS for Apple's Mac computers
- ③ LINUX: open-source OS used in servers, desktops, etc.
- ④ Android: Linux based OS for smartphones & tablets
- ⑤ iOS: OS for Apple's mobile iPhones & iPads.



Q2. Which version of Linux is installed in Lab.  
→ "24.04.1 LTS (Noble Numbat)"

Q3. Give the configuration of computer in which  
linux is installed.  
→

pick



Q4. What is minimum configuration need for Linux OS

→ The minimum configuration depends on :

For Ubuntu :

→ CPU : 2GHz dual-core processor

→ RAM : 4GB

→ Storage : 25GB

→ Graphics : VGA capable of 1024 X 768 screen resolution.

Q5. List different families of LINUX OS

→

1. Debian-based : Ubuntu, Linux Mint, Kali Linux
2. Red Hat-based : Fedora, CentOS, RHEL
3. Arch-based : Arch Linux, Manjaro
4. Slackware-based : Slackware, Salix
5. Independent : openSUSE, Solus.

Q6. What is Distro ? Give example :

→

A Linux distribution (distro) is a complete operating system made from a Linux kernel and software packages. It includes a package manager, utilities, and application tailored to the needs of users.

Example : Ubuntu, Fedora, Arch Linux.



Q7. Who Invented Linux & in which year?

→ Linux was invented by Linus Torvalds in 1991.

Q8. State major difference between Linux & Unix.

→ ① Source & Cost: Linux is open-source and free, while Unix is mostly proprietary & requires a paid license.

② Usage & Compatibility: Linux ~~test~~ runs on various hardware platforms & is widely used in personal & enterprise systems, whereas Unix is mainly used in high-end servers & specific hardware.

③ Customization & Support: Linux allows extensive customization with strong community support, while Unix is more standardized & relies on vendor support.

Q9. State main difference between Windows, MAC & LINUX.

	Window	MAC	LINUX
Source	Closed-source	Closed-source	Open-source
Cost	Paid	Apply-only	mostly free
Customization	Limited	Minimal	highly customizable
Security & Stability	More vulnerable to malware	More secure than Windows	Highly secure stable



Q10. What is shell in linux? List different types of shell with their prompt.

→ A shell in linux is a command-line interface that allows users to interact with the operating system by executing commands.

Different types:

- ① Bash (Bourne Again Shell): \$
- ② Zsh (Z shell): %
- ③ Ksh (Korn Shell): \$
- ④ Tsh (TENEX C shell): %
- ⑤ Fish (Friendly Interactive Shell): >