

# Linux

## What Is Linux

Linux is an open-source operating system like other operating systems such as Microsoft Windows, Apple Mac OS, iOS, Google android, etc.

#### What is an Operating system?

An operating system is a software that enables the communication between computer hardware and software. It conveys input to get processed by the processor and brings output to the hardware to display it. This is the basic function of an operating system.

Linux is around us since the mid-1990s . It can be used from wristwatches to supercomputers. It is everywhere in our phones, laptops, PCs, cars and even in refrigerators. It is very much famous among developers and normal computer users.

#### **Evolution of Linux OS**

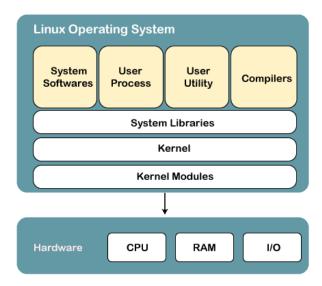


The Linux OS was developed by Linus Torvalds in 1991, to improve the UNIX OS. He suggested improvements but was rejected by UNIX designers. Therefore, he thought of launching an OS, designed in a way that could be modified by its users.

## Structure Of Linux Operating System

An operating system is a collection of software, each designed for a specific function.

#### Linux OS has following components:



### Why use Linux?

There are various features of Linux systems that make it completely different and one of the most used operating systems. Linux may be a perfect operating system *if you want to get rid of viruses, malware, slowdowns, crashes, costly repairs,* and many more. Further, it provides various advantages over other operating systems, and we don't have to pay for it.

Let's have a look at some of its special features that will attract you to switch your operating system.

- 1. Free & Open Source Operating System
- 2. It is secure
- **3.** Favorable choice of Developers : it supports almost all of the most used programming languages such as C/C++, Java, Python, Ruby, and more
- 4. A flexible operating system:

It can be used for desktop applications, embedded systems, and server applications. It can be used from wristwatches to supercomputers. It is everywhere in our phones, laptops, PCs, cars and even in refrigerators.

## Advantages of Linux

- 1. Open source
- 2. Secure
- 3. Free
- 4. Lightweight
- 5. Stability
- 6. Performance
- 7. Flexibility
- 8. Software Updates
- 9. Distributions / Distros
- 10. Live CD/USB

- 11. GUI
- 12. Suitable for Programmers
- 13. Community support
- 14. Privacy
- 15. Networking
- 16. Compatibility
- 17. Quick Installation
- 18. Multiple desktop Support
- 19. Multitasking
- 20. Heavily documented for beginners

#### What are linux commands?

Linux commands are just simple programs like a program in windows. Typing command is like clicking an icon in windows.

A command can also be called as Program/ Application /software/ App depending on the situation where it is used.

#### NOTE: Linux commands and File names are case sensitive

Command	Description	Example
ls	list directory contents	\$ ls
	Options: -a,all -d,directory list directories themselves, not their contents -l long listing -r reverse listing (list in reverse sorted order)	Ls -a ls -d ls -l ls -r
clear	clear the terminal screen	clear ctrl + L also clears the screen
mkdir	Create the DIRECTORY(ies), if they do not already exist.	mkdir July28 mkdir d1 d2 This command create two directories d1,d2
rmdir	remove empty directories. If the directory is not empty it will not remove.	rmdir d1 (No file should be in d1)
cd	Change directory to the specified directory	cd d2 cd Go to the parent directory

		cd Go to the HOME directory
cat > filename	Create a file and store the content we type in the in the terminal. To save the file press CTRL+d	cat > courses CPP Linux OS MM BEE CTRD+d
Cat filename	To view the content of a file	cat filename cat course
ср	cp file1 file2 Copy file1 to file2 The content of file1 is copied to the newly created file file2	cp course course-new
mv	Move a file or rename a file	mv course subject The file name course is renamed to subject
rm	Remove or delete a file	rm subject
touch	It is used to create an empty file. Just the file will be created with no content. You can create multiple file using touch at the same time	touch a will create a touch a b c will create a, b, c – 3 files

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ravindhren@ravindhren:~/LinuxClass/July28 _ _ u x

File Edit View Search Terminal Help
[ravindhren@ravindhren July28]$ cat

What is a variable? Variable is a name that represents a data.
what is a variable? Variable is a name that represents a data.
Give example for variable:
Give example for variable:
a
a
abc
abc
abc
abc
abc
123
abc 123
abc 123
abc 123
abc 123
abc 123
acc 123
ac
```

```
ravindhren@ravindhren:~/LinuxClass/July28
                                                                                                          _ _ ×
 File Edit View Search Terminal Help
 [ravindhren@ravindhren July28]$ cat
FOr Linux installation
FOr Linux installation
1) Bootable CD -- CD drive
1) Bootable CD -- CD drive
2) Bootable pendrive2) Bootable pendrive
3)rufus
3)rufus
you make a bootable pendrive
you make a bootable pendrive
TO learn LINUX you need NOT to install Linux
TO learn LINUX you need NOT to install Linux
You an use LIVE CD or LIVE USB
You an use LIVE CD or LIVE USB
Without experience if you install LINUX in your computer you will loose the data
Without experience if you install LINUX in your computer you will loose the data
It is not advisable to install Linux by your own without previsous experience
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 [ravindhren@ravindhren July28]$
```