

# A friendly introduction to Open Source Linux

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# Can someone answer this?

The difference between Linux and Ubuntu is \_\_\_\_\_  
Ubuntu uses \_\_\_\_\_ kernel while windows use \_\_\_\_\_  
kernel

Therefore there is a need to know what linux kernel is

The kernel manages input, output, memory, and processing. The collection of utilities and interfaces is called a distribution.

# Can someone answer this?

The difference between Linux and Ubuntu is **Linux is the name of the core component of the operating system. It is called a kernel. Ubuntu is one distribution that uses the Linux kernel.**

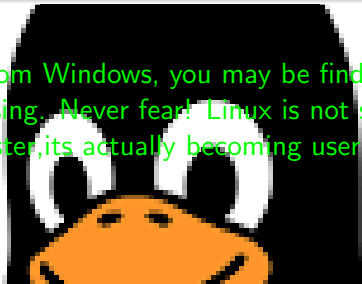
Ubuntu uses **linux** kernel while windows use **hybrid NT kernel** kernel

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The kernel manages input, output, memory, and processing. The collection of utilities and interfaces is called a distribution.

# Why Linux?

If you're a refugee from Windows, you may be finding the Linux world slightly confusing. Never fear! Linux is not some scary, difficult to use monster, it's actually becoming user friendly every day.



## Linux is everywhere

Linux is used from smartphones to cars, supercomputers and home appliances. It runs most of the Internet, the supercomputers making scientific breakthroughs, and the world's stock exchanges. But before Linux became the platform to run desktops, servers, and embedded systems across the globe, it was (and still is) one of the most reliable, secure, and worry-free OS available.

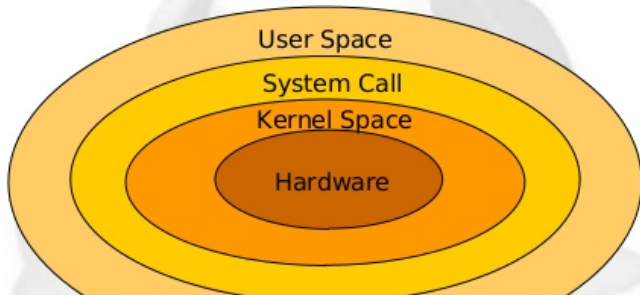
# But What is Linux?

- 1 An operating system is an interface between the user of a computer and the computer hardware.
- 2 Linux is a family of free and open-source software OS based on the Linux kernel,an OS kernel first released on September 17, 1991 by Linus Torvalds.
- 3 It is written majorly in the C language

## Kernel Architecture Overview



- User Space
- Kernel Space



# Explaining Kernel

- A The kernel is the core part of the operating system, which is responsible for all the major activities of the LINUX operating system.
- B The kernel offers the required abstraction to hide application programs or low-level hardware details to the system.
- C The types of Kernel are:
  - ❶ Monolithic Kernel
  - ❷ Micro kernels
  - ❸ Exo kernels
  - ❹ Hybrid kernels



# Describing Components

Table: Other Linux components

Component	Description
System library	used to implement the functionality of the OS
Utilityprogram	do individual, and specialized-level tasks
Hardwarelayer	peripheral devices such as RAM, HDD, CPU
Shell	take command from user and executes kernel functions

# Features of Linux

- 1 Portable (Multiplatform)
- 2 Open Source
- 3 Multiuser
- 4 MultiProgramming
- 5 Hierarchical File System
- 6 Shell
- 7 Security

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# Thank you



Figure: Thank you