

# Introduction to Linux



# Why do we have to work in Linux?

Let's go here to find out!

<https://top500.org/statistics/overtime/>

# At the beginning...

## Bell Lab & Others

### OS MULTICS (1964-1985)

SHELL (command line interface)

Multi-level folder

Hierarchical filesystem (Trunk)

Folder permission

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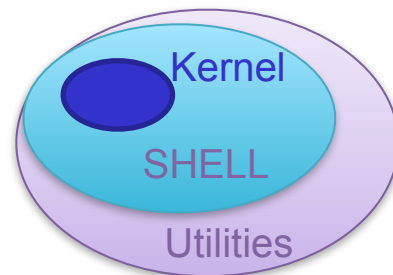
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1970's: Write an OS simple  
with only one functionality...

### UNICS

Invent C language from  
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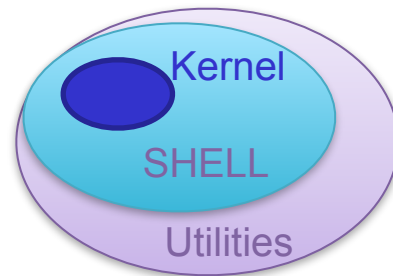
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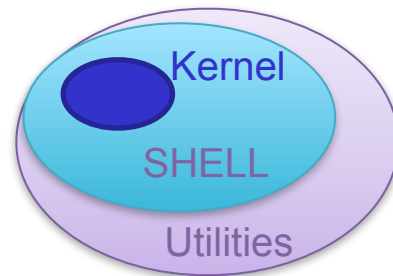
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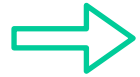
# Open Source Spirit



1984: GNU Project

Open Source OS project

**R. Stallman**



Open Source program: **cd**, **cp**, **ls**, ...

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1991: LINUX Kernel

**L. Torvalds**

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# A bit of history

From: torvalds@klaava.Helsinki.FI (Linus Benedict Torvalds)  
Newsgroups: comp.os.minix  
Subject: What would you like to see most in minix?

Hello everybody out there using minix -

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready. I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).

I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

Read more at <https://www.cs.cmu.edu/~awb/linux.history.html>

# A bit of history

*A reply from Tanenbaum:*

I still maintain the point that designing a monolithic kernel in 1991 is a fundamental error. Be thankful you are not my student. You would not get a high grade for such a design :-)

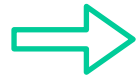
# A bit of history

- 1992: The Linux kernel is relicensed under the GNU GPL. The first Linux distributions are created.
- 1993 the kernel is adapted to the GNU environment. The Debian project is established.
- 1994: version 1.0 of Linux is released. Commercial Linux distribution (Red Hat and SUSE) appear
- 2023: more than 300 distributions are actively maintained, current (stable release) kernel version is 6.4.12

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# Main Linux features

- Portable
- Scalable
- Open source
- Multi-user
- Multi-tasking
- hierarchical file system (type “man hier” to see)



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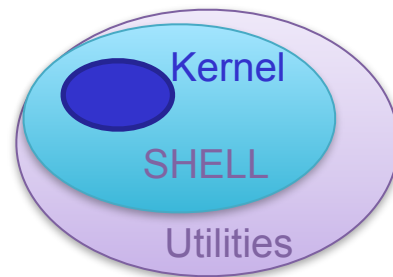
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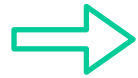
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