

# Linux Fundamentals

What you need to know

# Today

- Difference between the OS and the kernel
- Run through the filesystem.
- Do some handy command line stuff.

# What is Linux?

- a family of operating systems.
- more specifically it's an operating system kernel.
- hopefully after today you'll understand the difference.



# The kernel, the shell and the operating system.

- Think of an operating system as a seed.
- The "kernel" of the seed is the core of the operating system, providing operating system services to applications programs.
- All of this, is surrounded by the shell of the seed which is what users see from the outside. This is called "userspace".

# Kernel

- interacts with CPU, handles memory and manages system hardware devices
- all distributions use the same “Linux” kernel, though you’ll find variations here and there.

# Operating System

- An operating system is the kernel plus userspace applications that enable users to get something done.
- These include your compilers, text-editors, GUI, etc.
- The differences you find between distros is on this level.



# Shell

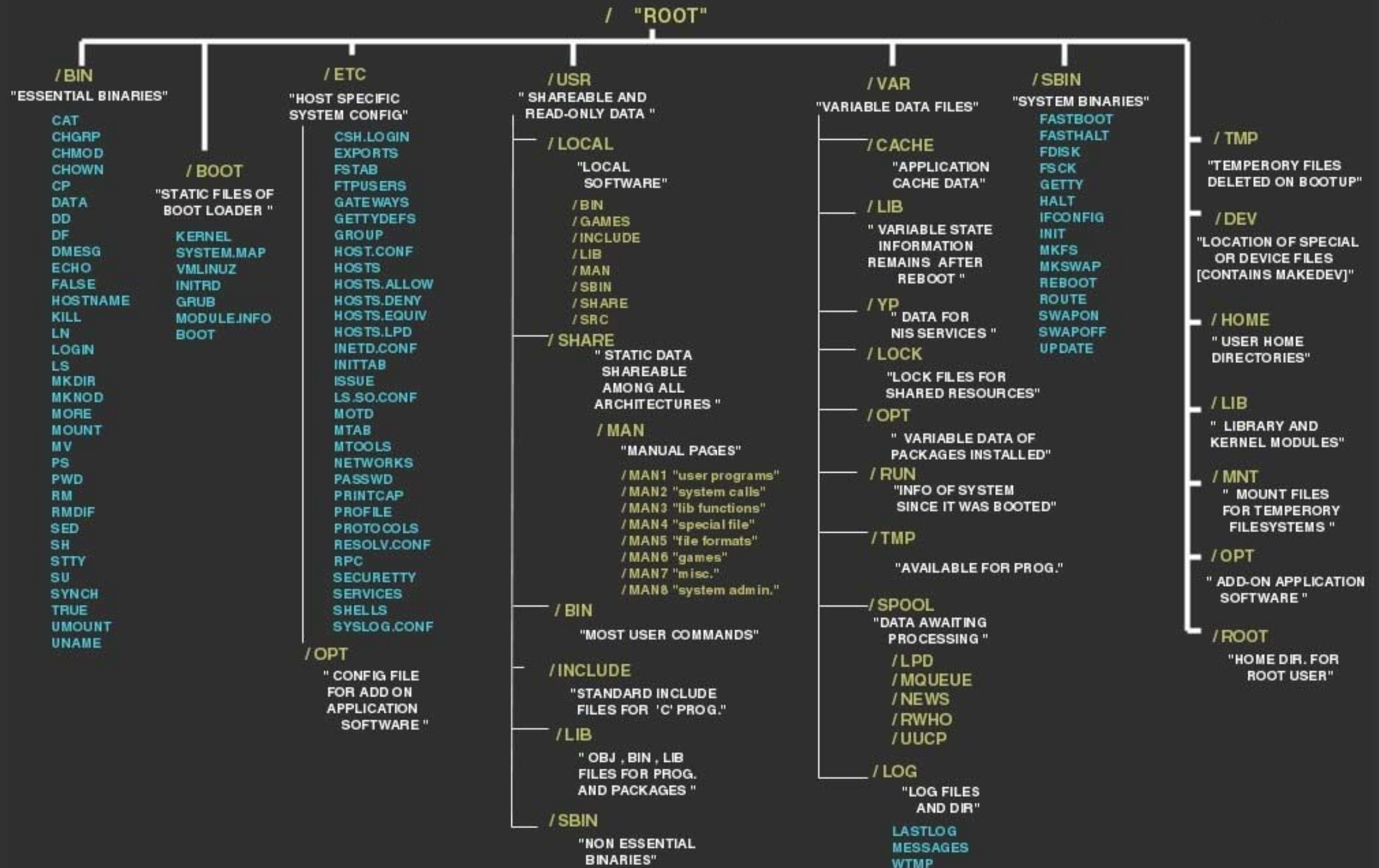
- provides an interface between the user and the operating system.
- Shell != BASH

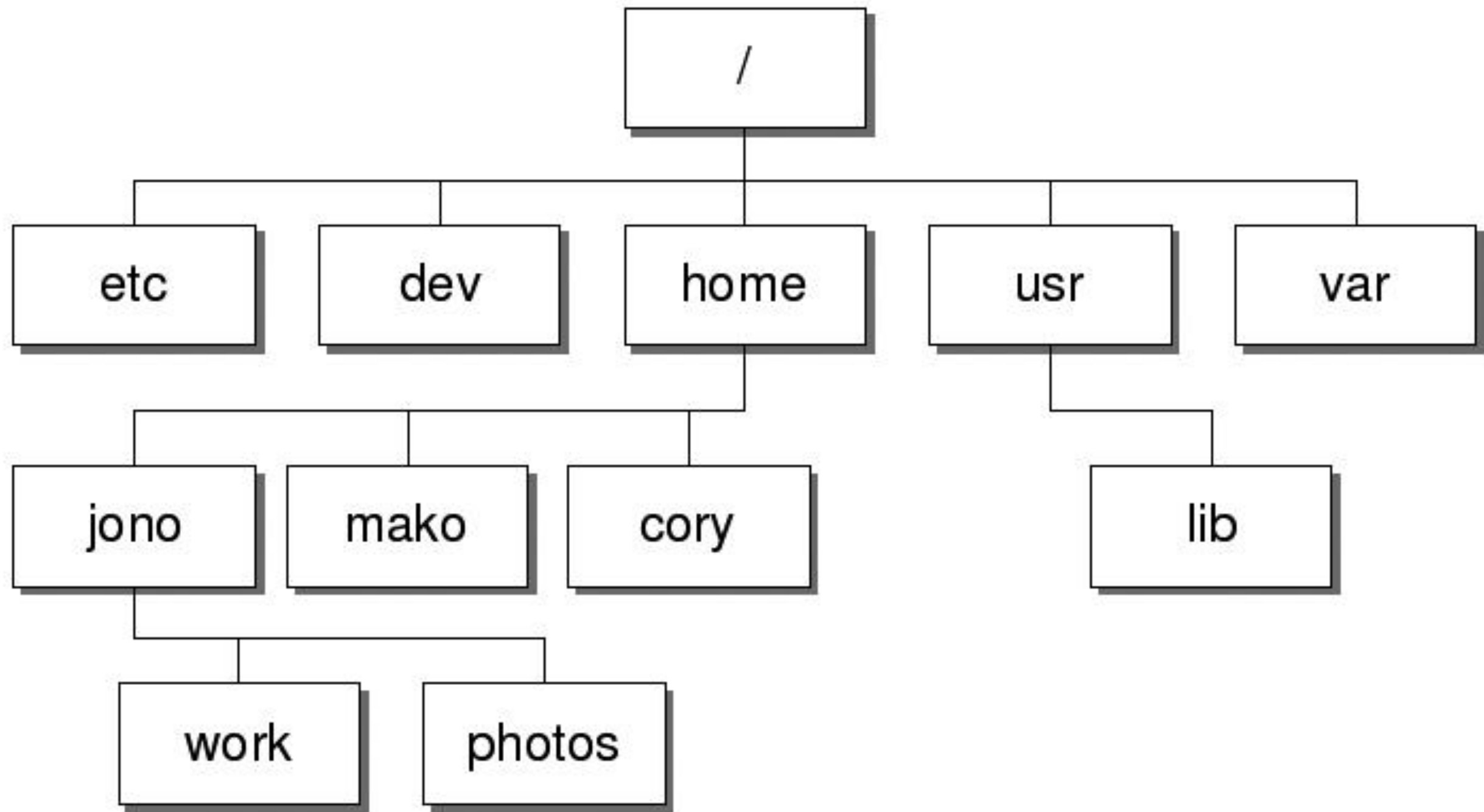
If you are not already booted into Linux you should do that now



# Filesystem

- FHS - File Hierarchy System
- On a UNIX system, everything is a file; if something is not a file, it is a process.







# Command Line Time