

# THE LINUX FILESYSTEM HIERARCHY

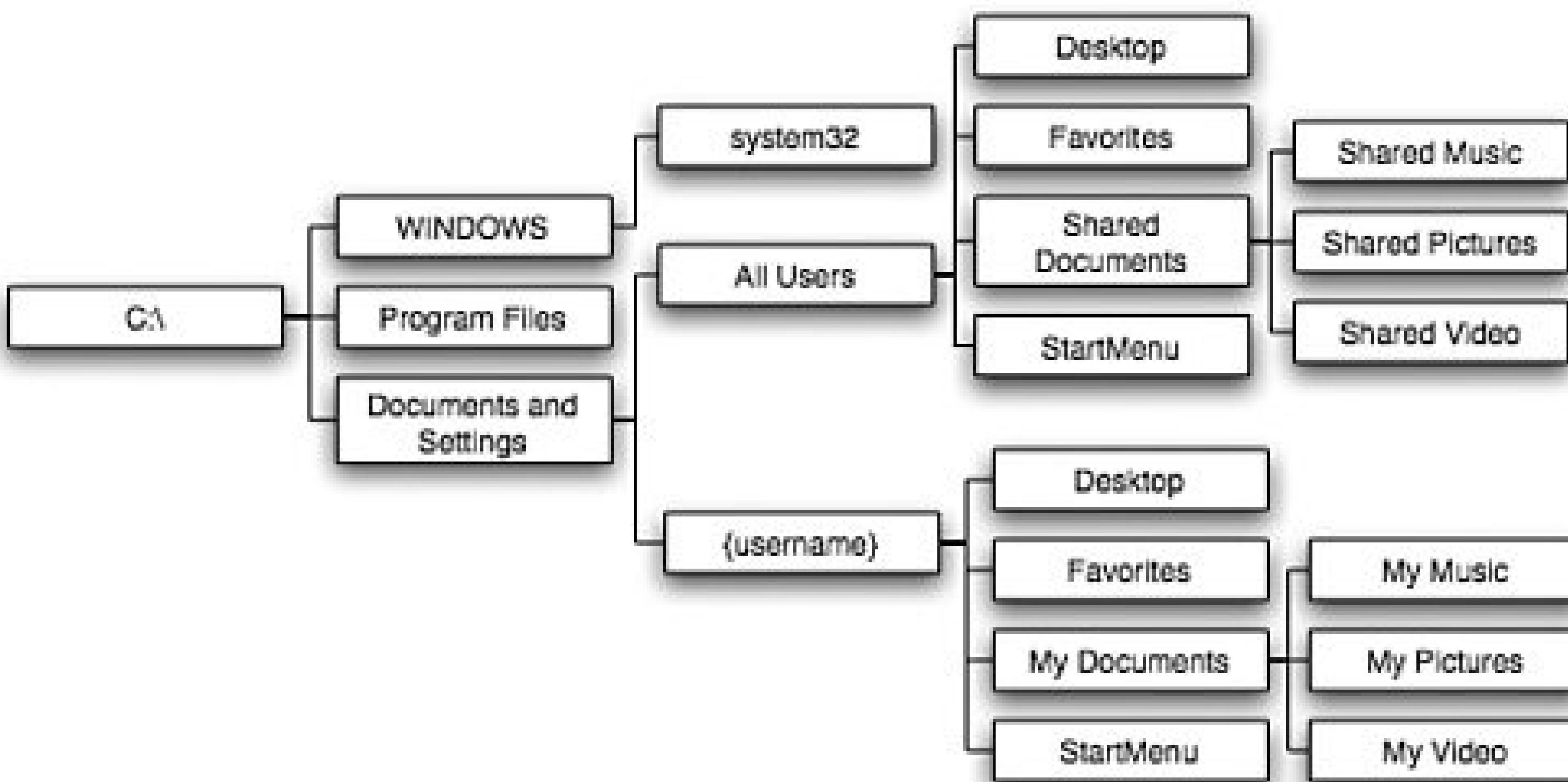
AN AWESOME EXPLANATION

# WHAT IS FILE AND FILE-SYSTEM?

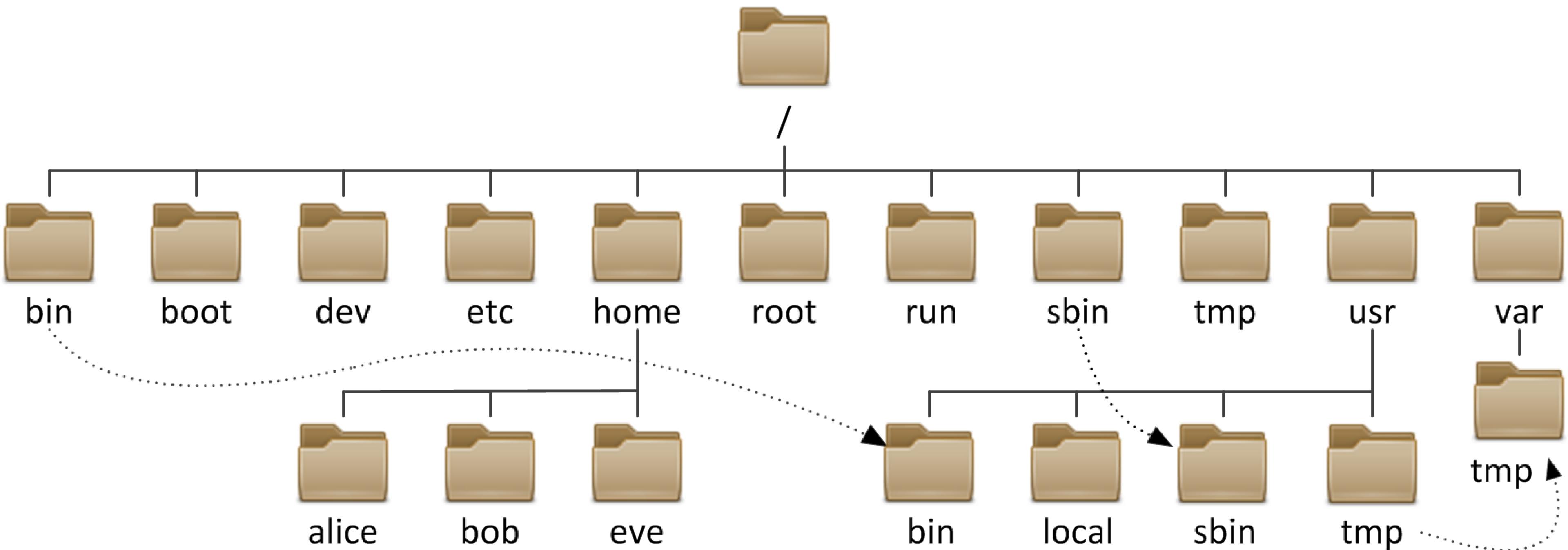
A file is an object that has capacity to store information.

A file system is the method that different files are structured in a system using directories and different name convention.

# Filesystem of Windows Operating System



# The Linux File-System Hierarchy in an Overview



**/** itself is called the root  
directory, it is mounted to the  
system on boot

# /boot

**Contains Static files of the bootloader,  
responsible for booting a computer.**

# /boot/EFI

This partition is responsible to boot system that use UEFI(Unified Extensible Firmware Interface) instead of traditional BIOS(legacy).

It stores the boot-loader and necessary files, like GRUB (Grand Unified Bootloader).

# /swap

**Swap memory is a virtual part of RAM. Essentially, it stores all the suspended applications in the device drive and frees ram for the ongoing process**

# /bin

- Stores essential User Commands and raw Binaries.
- Commands used by all the users of the system are located here e.g. ps, ls, ping, grep, cp

# **/dev**

**Contains device files: all the hardware attached to your device will be listed here as a file. In linux everything is a file.**

# /etc

- Contains configuration files required by all programs.
- This also contains startup and shutdown shell scripts used to start/stop individual programs.

# /home

All user's and personal Documents, Downloads,  
Files are stored in this directory.

# /lib

**Stores shared libraries, programs that help run other applications access and run smoothly.**

# /media

**Removable devices that are mounted to  
the system appear here.**

# /mnt

**Mounted filesystem, similar to /media, but used generally to mount Network file-system, and another drive's file-system.**

# /opt

opt stands for optional; here, different optional applications are stored.

# /sbin

In this directory, system binaries are stored.  
System binaries are those binaries that perform critical tasks in an operating system.

# /run

**It is a temporary file system, which is used to store runtime data. It is cleared every time when the system is reboot . It also creates temporary sockets for database.**

# /var

**var** stands for **variable**. In this directory, the data and files stored are considered to be a variable such that they change overtime. It keeps dynamic data away from /bin or /sbin where things are static. It also contains log, hence it's an integral part.

# **/tmp**

**Think of tmp as temporary directory, which is cleared out on every log-out of the system. This is useful to store temporary files.**

**THANK  
YOU VERY  
MUCH!**